1st International Conference on

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Transforming Library
2017

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PREFACE

Central Institute of technology (CIT) Kokrajharis located atKokrajhar district of Bodoland Territorial Council (BTC) in Assam. It is a centrally funded institute under MHRD, GOI. The institute was established on the 19th of December 2006. The institute is an autonomous body registered under the Societies Registration Act, 1860 and functions under a Board of Governors (BOG).

The Central Library of CIT spread over 19000 sq. feet. area with independent building. The library is the liveliest place in the campus providing a safe, comfortable and friendly environment that enables learning and advancement of knowledge, and promotes discovery and scholarship. The mission of the Library is to facilitate creation of new knowledge through acquisition, organization and dissemination of knowledge resources and providing for value added services. At present, the library has a collection of more than 90000 Physical books and other resources like E-Books, E-Journals, CDs, News Papers etc. It also subscribes important daily newspapers and 1365 magazines. Library has subscribed IEEE (IEL-Online Level -II), five Subject Collection Science Direct with Complementary Access to Food Engineering Books, ASME, ASCE, ACM, Springer, Taylor & Francis, for accessing E-Journals and E-Books. Central Library has also purchased Knimbus-Elibrary and Knimbus- Mobile application for providing remote access of the subscribed resources.

The library is fully automated using RFID technology with the help of SOUL 2.0 software developed by the INFLIBNET center Ahmedabad. It is the first library in Assam and one of the few libraries in North East India fully automated using RFID technology enabling self-issue and return facility and dual lane gate security system. The library is also equipped with CCTV for the surveillance purpose. It has successfully launched dedicated Web OPAC with separate server. Users can search its holdings from anywhere anytime. After launching Web OPAC, the library has become the one of the few libraries in NE India providing such facilities. The library is dedicated to serve the users with highest degree of professionalism and upgrades with the technological advancement frequently. The library provides separate conference room, teachers study room, digital library facility with latest computers for the users. Central library also provides Android application for the members of library to access library facilities easily. 260 users can sit and study at the time excluding teachers reading facility and digital library section.

Innovative services like "Library on Demand" where problems of the users are solved through telephone and Campus Delivery System of the reading materials has been introduced which has received tremendous support from all sections. Community Outreach programme are being conducted through our Career Counselling Cell of the Library. Numbers of such programs have already been organised.

Dept of Lib &Inf Science, Gauhati University has successfully completed its 50 years of existence and now a one year long programme is chalked out to celebrate the Golden Jubilee year during 2016/ 17 with different academic and professional programmes. Accordingly, a Golden Jubilee Celebration Committee is formed with Dr Mridul Hazarika, Hon'ble Vice Chancellor, Gauhati University as the Patron and Professor Narendra Lahkar, Dept of Library and Information Science, GU as the Chairman with Prof Sanjay Kumar Singh as the Organizing Secretary of the programmes. The 1st ICTL- 2017 is organised jointly by the CIT Kokrajhar and the Department of Library and Information Science, Gauhati University. This event is a part of Golden Jubilee Celebration of the department.

The ICTL – 2017 put forwarded a great opportunity for LIS professionals from India and abroad in general and North East Region of India in particular to get acquainted with the transforming libraries. LIS is the only subject which is changing very fast as result of technological revolution in ICT at global level. The ICTL- 2017 is organised for three days from July 8-10, 2017. The first two days are dedicated to conference in which the LIS experts in their individual area are invited for deliberation from India and abroad. The main theme of the conference is Transforming Libraries. A number of issues will be discussed under the different subthemes which are Application of innovative ideas in the library, Best Practices in the library, Development of Information and Knowledge Services, Electronic Resource Management, Impact of ICTS in librarianship, Institutional repositories, Knowledge networking and consortia, Library automation, Library design, Library Management (human resources, finance, materials and operations), Library orientation/information literacy in the digital age, LIS Education, Research and Training, Marketing of library and information services and products, Mobile applications in the library, Preparing Library for Tomorrow, Resource sharing and its feasibility, Technology & Innovations in Libraries and Impact Measurement, Technology applications in libraries, Users and their information seeking behaviour, And any other relevant area related library and information services.

The invited experts of LIS, delegates and participants willtry to peep into the past, present and future, discuss and deliberate on tools and techniques to handle information, strategic approaches, etc. The discussions and deliberations will be held on all aspects of library and information services and technology from traditional to modern *viz* e-environment, open access, open source, e-learning, etc.

The conference had record response to our request for submission of papers. In the first ICTL- 2017, we have received more than 140 papers, after carefulprocess of editing/referring 111 full length papers (including Keynote papers and Invited papers) were selected for publications in the pre-conference proceedings, where the papers of budding professionals are also given place just to encourage them to come forward and make themselves up-to-date in this challenging world. We would like to acknowledge all the papers submitted to the 1st ICTL- 2017 which was subjected for similarity check using *Urkund Software* provided by the INFLIBNET Centre. The paper published in the proceedings cover entire area of topics, which are under main theme and subtheme. 19 papers are also selected for Poster presentation.

This is for the first time in the history of LIS conference/ Seminar that the best paper presenter will get a cash prize of Rs.50,000/- (Rupees fifty thousand) only along with a citation on Best Paper Presenter Award. This will certainly encourage the up-coming library professionals of the country.

We would like to thank the Chief Patrons Dr Mridul Hazarika,Vice Chancellor, Gauhati University and Prof. DebkumarChakrabarti, Director, CIT Kokrajhar&Prof. IIT Guwahati.; PatronsMr.Kamal Kr BrahmaPrincipal, Bineswar Brahma Engineering College, Kokrajhar and Dr.SubungBasumataryPrincipal, Janata College, Serfanguri, Kokrajhar Assam; besides the faculties, officers and staff of CIT Kokrajhar and Department of Library and Information Science, Gauhati University for their help and support in organising the 1st ICTL- 2017. We would like to thank the members of the organising committee and various committees who have contributed a great deal to the success of 1st ICTL- 2017. Thanks are also due to all the LIS professionals who are directly or indirectly associated with this first mega professional events jointly organised by CIT Kokrajhar and DLIS Gauhati University (to mark the Golden Jubilee Celebration- 1966/67 – 2016/17)

The keynote speakers/ Theme Paper speakers of ICTL- 2017 deserves our special thanks. We are grateful to all our invited guests, invited speakers, Seminar Director, Rapporteur General, Chairmen, Co-chairmen, delegates, etc. We are thankful to all our sponsors for their financial support to bring this

CONTENTS

A PROPOSAL FOR DESIGN AND DEVELOPMENT OF AGRICULTURE LIBRARIES NETWORK OF TRIPURA

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Abstract

The present paper discusses about a proposal for design and development of Agriculture Library Network of Tripura . As we know that , many library networks at national and regional levels have been established in India and a couple of them such as INFLIBNET, DELNET etc have been functioning successfully and some of them are like ADINET, MALIBNET, MYLIBNET BOMNET , CALIBNET are not so functional and active. But their main purpose was to involve in active resources sharing and library cooperation in terms of resources, equipments, manpower etc. All these library networks are mainly associated with academic and technical / special libraries. Despite the enormous development in the field of ICTs/ digital technologies , the agricultural libraries have not come at par with other university and institutional libraries. Although few Agricultural libraries located at New Delhi, Central Agricultural Universities located in many states have transformed themselves a ICT enabled libraries and they are using modern facilities and subscribing to many e-resources viz e-journals, e-books and online/ offline databases extensively.

But the scenario of Agricultural Libraries located in Tripura are much behind their counterparts located in other states in North and South India. Therefore , the present study has been taken as an attempt to study the status of Agricultural Libraries of Tripura with special reference to Agartala. On the basis of the ICT infrastructure , library learning resources and manpower, I has been felt to propose a proposal to design and develop the Agriculture Library Network of Tripura with special Reference to Agartala. This study put forwarded the suggestions for designing the Agriculture Library Network (AGRILIBNET) for resources sharing among the member libraries and covers the many aspects as suggested in INFLIBNET Centre network and DELNET to develop databases of the learning resources and Inter-Library Loan (IL) facilities to be provided to the library users.

Key Words: *Agricultural Libraries, Agriculture Library Network –Tripura, Agartala- Tripura.*

1.0 Introduction

Tripura is one of the eight states in the North Eastern part of India located between 22º 56′ and 24º 32′ N latitude and between 90º 09′ and 92º 20′ E longitude. It is bounded on the North, West, South and South-East by Bangladesh whereas in the East it has a common boundary with Assam and Mizoram (*"Economic Review of Tripura, 2010-11"*). There is a common belief that the name of the State has originated from "**Tripura Sundari**" - the presiding deity of the land which is famous as one of the 51 pethas of Hindu Pilgrims. Apart from this traditional view, it is believed that originally the land was known as "*Tuipura*" meaning a land adjoining the water.

The history of Tripura as an administrative unit dates back to the days of Maharajas when the territory was a native State. The former princely state of Tripura was ruled by Maharajas of Manikya dynasty. After independence of India, an agreement of merger of Tripura with the Indian Union was signed by the Regent Maharani on September 9, 1947 and the administration of the state was actually taken over by the Govt. of India on October 15, 1949. Tripura became a Union Territory without legislature with effect from November 1, 1956 and a popular ministry was installed in Tripura on July 1, 1963. On January 21, 1972 Tripura attained statehood. (Tripura at a glance, Department of Agriculture, govt. of Tripura (Retrieved from http://agri.tripura.gov.in/tripura.htm accessed on 06.06.2014).

Agartala is the capital of Tripura state in North-East India and is the second largest city after Guwahati in North-East India, both in terms of municipal area and population. Agartala is a component of two words, namely **Agar**, a kind of oily valuable perfume tree + suffix **tala**, a store house. Agar i.e, Agaru tree was plenty in entire North-East. The city is governed by the Agartala Municipal Council (AMC), Agartala lies on the bank of Haora River and is located 2 km from Bangladesh (http://en.wikipedia.org/wiki/Agartalaaccessed on 6.8.2014). The city is situated along 23º 45′ - 23º 55′ N latitude and 91º 15′- 91º 20′ E longitude in the flood plains of the Howrah River. Total area of Agartala city is 58.84 sq km. As per Census of India 2011, Population of Agartala city is 400004 and literacy rate is 94.45%. The National Highway (NH)-44 connects Agartala with Silchar, Guwahati and other towns of Assam. Agartala is connected by Air & Rail links to rest of the country. Agartala is located on the major corridors of movement, in the West Tripura District of Tripura.

1.1 Agriculture in Tripura

As per the report of the "*Economic Review of Tripura, 2010-11*", Agriculture and allied activities has been remained as the backbone of the State's economy. The agriculture has an important potential demand base for both industry and services sectors, in addition to being the supply base for food and raw materials. The better performance of the agriculture has a direct and multiplier effect across the economy. Agriculture sector plays the key role in the State's economy. The economy of Tripura is agrarian and rural based. Agriculture and allied sectors in the economy of Tripura primarily refers to cultivation, animal husbandry, pisiculture, horticulture and floriculture.

1.11 Agricultural Libraries in Agartala

Several types of Agricultural libraries are found in research stations, government agencies and academic institutions in Agartala. Each type of library was developed to meet a different need and to serve a different group of users. At present in Agartala, there are 2(two) Agricultural Colleges, 1(one) Veterinary College and 3(three) Research Stations Institutes functioning for agricultural education research. These Agricultural Colleges/ Institutes are *College of Fisheries, Lembuchera. (**A campus of Central Agricultural   University, Manipur, Imphal**); College of Agriculture, Lembuchera; College of Veterinary Sciences and Animal Husbandry,*

Agartala; Indian Council of Agricultural Research (ICAR) station, Lembuchera; State Agricultural Research Station, Arundhatinagar; Horticultural Research Station, Nagichara. In Agartala, a College of Fisheries under Central Agricultural University has also been established in 3rd Oct. 1998. The place is well connected with the capital city Agartala and located about 12 km north of the capital city. The College of Agriculture at Lembucherra, Agartala was established in the year 2007 with an affiliation to the Tripura University (A Central University), Suryamaninagar. The ICAR Research Complex for NEH Region, Tripura Centre was established on 1975 at Lembucherra, 12km away from the capital town, Agartala. This Research Station has been established to promote the study, teaching, research, training and extension in Agriculture. The institutes and their libraries generate and disseminate agricultural information or knowledge to agricultural extension workers, researchers, teachers, students and farmers as well as policy makers in Government. Research and Development (R&D) works related to Agriculture have been looked after by the State Agricultural Research Station (Erstwhile Research-Cum-Demonstration Farm) of Department of Agriculture, Government of Tripura since 1961. The Research Station is located at Arundhatingar. Horticulture Research Complex was established on 1981 at Nagicherra, about 10 km, away from state capital Agartala in the West Tripura district having an area of 47 ha. In 2009 the College of Veterinary Sciences & Animal Husbandry, has been established at R.K. Nagar, Agartala, West Tripura about 8 Km from the capital town Agartala. The Basic Agricultural School was established at Lembucherra in 1957 for imparting one year training to the Village Level Workers (V.L.Ws). to have required trained manpower for working in Community Development Blocks. This centre was subsequently converted into Up-graded **Gram Sevak Training Centre** in 1962 and imparted two years Integrated Course to the selected candidates for appointment as Agricultural Assistant/V.L.W., besides various types of short course training to the official and non-officials (Sinha and Deb , 2016).

1.5 Agriculture: Theoretical Perspectives

Agriculture, also called **farming** or **husbandry**, is the cultivation of animals, plants, fungi, and other life forms for food, fiber, biofuel, medicinals and other products used to sustain and enhance human life (http://en.wikipedia. org/wiki/Agriculture accessed on 6.8.2014). In a broad definition of "Agriculture", one should now include any activity directly or indirectly involved in the production and distribution of food for the use of mankind. Agriculture is interpreted broadly to mean everything that goes into production of plants and animals that make food and fabric, all the way from the time the seed is sown until it reaches the consumer. Thus, the primary aim of agriculture is, to improve and develop production of plants and animals as source of fold and primary commodities of man. It is a means by which the resources of land and water are converted into those things needed by the people for food, fiber, shelter and recreation. To most people on the globe, farming is still a way of life. Agriculture is not only cultivation; it is a social and cultural phenomenon which provides bedrock to the entire process of socio-economic development (Renuka, 2009).

1.6 Agricultural Education & Research

In order to sustain, diversify and realize the potential of agriculture sectors, it is necessary to develop skilled human resources. Education is the single most important factor to develop human resources of a country. Agricultural human resource development is a continuous process undertaken by agricultural universities. Agricultural universities impart education in the various disciplines of agriculture viz Agriculture, Agricultural Engineering, Forestry, Horticulture, Veterinary and Animal Husbandry, Dairy Science, Food Technology, Fisheries Science, Agriculture Information Technology, Agri Business Management etc. In India University Grants Commission (UGC) take essential steps for the encouragement and synchronisation

of higher education. The UGC is also empowered to cater to the financial requirements, allocation, and disbursement of grants, recommend measures for improving standards and ensure the follow-up with the institutions of higher education in the country. Till early sixties, the UGC was discharging all these responsibilities for higher agricultural education and research in India as most of the institutions were associated to general universities. After the reorganization of the Indian Council of Agricultural Research (ICAR) and the creation of the Department of Agricultural Research and Education (DARE) under Ministry of Agriculture, Government of India, the responsibilities for higher agricultural education, research, extension, and libraries in the entire field of agricultural sciences including veterinary sciences were transferred to the ICAR in 1965 (Sinha and Deb , 2016).

1.7 Agricultural Libraries and Information Systems

In fact, 'Library' is an equally important tool as compared to laboratory in carrying out effective research, 'The collection of all pertinent embodies thought" as defined by the father of library science Late Dr. S. R. Ranganathan. Libraries, being a part and parcel of the education and research system, are playing a vital role. They provide information support and function as a nerve centre for research affairs around which the progress of the country is spiraling high. Libraries form one of the most important organizations for acquisition, organization and dissemination of information. Several types of Agricultural libraries are found in research stations, government agencies, academic institutions, corporations and professional associations. Each type of library was developed to meet a different need and to serve a different group of users (Renuka, 2009). The ever growing population, depletion of natural resources and the constraints in food production have become major problems in many developing countries. These problems in many of the developing countries can be overcome by means of developing sustainable agriculture leading to adoption of new agro-technologies by farmers in rural areas. There are three systems that are emerged in the recent past on international scene are Agricultural Online Access (AGRICOLA), International Information systems for Agricultural Sciences and Technology (AGRIS) and CABI, which all together cater information needs of researchers, agribusiness industry and farmers.

2.0 Brief Account of Library Networks : An Introduction

Considerable progress has been made in the areas of library networking in India. Several local, metropolitan, regional and national level library networks have already been established in India for resource sharing. A number of library and information networks have been established in India during the late 1980s and early 1990s. Gradually many national, regional and metropolitan /city library and information networks like INFLIBNET, DELNET, ADINET, CALIBNET, MALIBNET, MYLIBNET, BOMNET, PUNENET, CSIRNET, and other general networks for e-governance and higher education are NICNET and ERNET which have started coming up. These networks are playing an important role in collection, organization of information and their retrievals and dissemination. Due to financial crisis and resource crunch in Government as well as in private sector emphasis was given on the idea of resource sharing among the libraries and information centers (Sinha and Sahay, 2006, Sinha, 2008). A proposal has been suggested for developing Regional Agricultural Library and Information Network of Tripura for automation and networking of college libraries for resource sharing and optimum utilization of resources available in those libraries. Recently Manoj, N.K. and Sinha , Manoj Kumar (2016) has proposed the establishment of Sikkim Library Network (SILIBNET) for resource sharing among the libraries located in the Sikkim State in particular and rest of North East / India in general.

2.1 Library Networks in India

On the basis of sponsoring agencies, following library and information networks can be categorized/ classified(Sinha and Sahay, 2006, Sinha, 2008):

General Network

NICNET :   National Informatics Centre Network, Planning Commisssion, Govt. of India.

INDONET   :   CMC, 1996.

COALNET   :   Coal India Ltd., 1993.

ERNET   :   Education and Research Network, Dept. of Electronics, Govt. of India connects Academic Institutes, IISC/ IITS, Dept. of Electronices, Delhi, National

Centre for   Software Technology (NCST) Bombay.

SIRNET   :   Scientific and Industrial Research Network. Connects Major National Research Laboratories under CSIR/ INSDOC.

NISSAT Sponsored Library and Information Networks

DELNET :   Delhi Library Network/ Developing Library Network, NISSAT, 1998-99.

CALIBNET   :   Calcutta Library Network, 1998-INSDOC Regional Centre, Calcutta.

PUNENET   :   Poona, 1992.

ADINET :   Ahmedabad Library Network. Ahmedabad, 1993.

MALINET   :   Madras Library Network, INSDOC, 1993.

BONET   :   Bombay Library Network, 1992, NCST NISSAT.

BALNET :   Bangalore Library Network, 1995.

MYLIBNET   :   Mysore Library Network,

UGC-Sponsored Library Network

INFLIBNET   :   Information & Library Network, Ahmedabad, 1988.

3.0 Agricultural Library Network : A Proposal

In the area Academic and Technical Libraries, a good number of library networks came into existence during 1980's and 1990's. Prominent among those library networks are INFLIBNET and DELNET which have grown considerably and contributed towards the development of ICT infrastructure and ICT based Library and Information Services across the country ranging from colleges, universities and institutional libraries of national importance. The development in the area of Agricultural Libraries was not at par with the college and university libraries in India. In the present study, an attempt has been taken to study the status of agricultural libraries and services and this paper proposed the establishment of Agricultural Library Network of Tripura which would cater to the needs of the agricultural library users, farmers and community people to have better fulfillment of information needs and users expectations from the agricultural libraries.

3.1 Name of Proposed Library Network

The proposed name of proposed Agricultural Library Network has been suggested as "**Tripura Agricultural Library and Information Network (TRAgLIBNET)**", which would be a registered society and would be a joint venture of Central Agricultural University , ICAR and Tripura State.

3.2 Need for Development of Agricultural Library Network for Resource Sharing among Agricultural

Libraries in Tripura

The main purpose of all these networks is to acquire reading materials collectively, avoid duplication, consortia approach for costly foreign journals and databases, maximum utilization of reading materials available in Agricultural Libraries of a particular locality or region by the users. Since no steps have been initiated to establish a Agricultural Regional Network covering entire the State Tripura of India, in the present paper an attempt has been taken to put forward a proposal for the design and development of Agricultural Library and Information Network to look into the sharing of resources and information amongst all Agricultural Libraries in Tripura state in particular and entire N E Region of India in general for the greater interest of the State Tripura. Although Tripura is one of the hilly State in North East Region where Library Science Course was introduced at Ramthakur College, Agartala under Tripura University in 2010. But the development of library science profession and library system is very poor in Tripura. If we look at the states of South India (Karnataka, Tamil Nadu, Andhra Pradesh, Kerala), West Bengal, Haryana, Punjab and other States of North East (Assam, Manipur, Mizoram) where Library Act has been enacted and considerable progress has been made in the area of development of library profession and library services in the states. Library Act was not introduced in the state of Tripura till now.

On the pattern of national, regional and local library network like INFLIBNET, DELNET, and CALIBNET etc. there is a proposal for design and development of the Library and Information Network for the economically backward state of Tripura.. Therefore there is a need for taking initiatives both from the library science professionals working within the state or outside the state and both the State Government for establishing regional library network of the State Tripura under the suggested name of TRAgLIBNET. The information infrastructure available in the Agricultural Colleges/Institutes libraries of Tripura states is very poor and except few institutions computerization has not started in most of the university/ institutional libraries. There is a lack of confidence and commitment among the library and information professionals working in the state of Tripura . Therefore the library and information professionals working in Tripura and working outside the state or belongs to the university/institutions of Tripura have to come forward and join the hand of local professionals to establish regional library and information network which will take care of resource sharing of documents, manpower and infrastructure for computerization of library activities of libraries located in Tripura. On the basis of the other national, regional, metropolitan, local library network the TRAgLIBNET can be established and the financial assistance may be sought from the NISSAT, Department of Science & Technology, Govt. of India, Ministry of Information Technology, Govt. of India, and the Ministry of Education, and Ministry of Science and Technology of respective State Govt. The professional assistance for manpower training may be had from the existing various library and information networks, library professional organizations like ILA, IASLIC, MALAI, SIS etc. for providing basic training to the library professionals on the application of Information and Communication Technology in library activities and services. On the basis of experience from other library networks the proposed library network TRAgLIBNET can be established which might be a part of national library network like INFLIBNET Centre or Regional Library Network of INFLIBNET. The network can better look after the computerised library and information activities of libraries located in Tripura. This network may also work under the guidance and financial assistance from the INFLIBNET and NISSAT. Although very recently INFLIBNET has established SOUL Coordinator on regional basis which has been extending support for data creation using SOUL software but this will be applicable to those libraries which have started developing necessary ICT infrastructure and creating databases of book, serials, theses and reports.

3.3 Objectives of TRAgLIBNET

On the basis of previous work undertaken by **Sinha(2014)**, the researcher has proposed the following objectives for the Agricultural Libraries of Agartala, Tripura:

To evolve a regional network, interconnecting various agricultural libraries and information centres associated with universities, deemed to be universities, institutions of national, regional importance and R & D institutions etc. in Tripura states for efficient sharing of information resources available with them and to improve capability of information handling and services;

To provide reliable access to document collection of libraries by creating online union catalogues of monographs, serials, and non-book materials (manuscripts, audio-visuals, computer media etc.) in various agricultural libraries of Tripura;

To provide better access to worldwide bibliographic information sources with citations and abstracts, such as periodical articles, conference papers, preprints, technical reports, standards and specifications, patents, monographs etc. through indigenously created databases and by establishing gateways for online accessing of international databases held by international information networks and centres;

To provide document delivery service by establishing resource centers in the agricultural libraries having rich collection of documents;

To optimize information resource utilization through shared cataloguing, inter- library loan service, catalogue production, collection development and avoiding duplication in acquisition to the extent possible;

To implement computerization of library operations of participating libraries following a uniform standards for data capturing;

To enable users to have access to information regarding books monographs, serials, theses, projects and experts by using new information and communication technologies;

To encourage co-operation among libraries, documentation centers and information centers in Tripura state or throughout the country with other networks, so that the resources can be pooled for the benefit of helping the weaker resource centers by well resourceful libraries;

To train and develop human resources in the field of computerized library operations and networking to participate in TRAgLIBNETprogramme;

To evolve standards and uniform guidelines in techniques, methods and procedures, hardware and software services in order to facilitate pooling, sharing and exchanging resources and facilities towards optimizations.

3.4 Headquarter of TRAgLIBNET Centre

The College of Fisheries, Lembuchera is funded by Central Agricultural University (CAU), Manipur, Imphal and its Library has good infrastructural facilities, library collections, staffing pattern, well equipments etc. Therefore, the proposed headquarter of TRAgLIBNET may be established as a Registered Society with its Governing Body Committee at College of Fisheries (COF) at Agartala, the capital city of Tripura.

3.5 Membership of TRAgLIBNET

All Agricultural College/Institutional libraries would be the member of the proposed library networks. Followings are the list of agricultural colleges/institutions located in Tripura for membership of TRAgLIBNET.

1. State Agricultural Research Station (SARS) (1961)
2. Gram Sevak Training Centre (1962)
3. Indian Council of Agricultural Research Complex (ICAR) (1975)
4. DivyodayaKrishiVigyan Kendra (DKVK) (1979)
5. Horticulture Research Complex (HRC) (1981)

6. KrishiVigyan Kendra (KVK),Birchandra Manu (1984)

7. College of Fisheries (COF) (1998)

8. KrishiVigyanKendra,Salema (2005)

9. KrishiVigyanKendra,Panisagar (2005)

10. College of Agriculture (COA (2007)

11. College of Veterinary Sciences and Animal Husbandry (COVSAH) (2009)

3.6 Formation of High Level Committee to Submit the Prospect and Feasibility of Establishing "TRAgLIBNET"

A high level committee should be established by the Government of Tripura comprising of eminent library and information professionals not only from the state of Tripura rather than also from the other parts of the country, members from the other library networking agencies, NISSAT, NISCAIR, INFLIBNET, and UGC, member from Higher Education Department of these two States, Librarians of the participating universities to make a draft proposal for feasibility study.

3.61 Feasibility Study and Report

The high Level Committee will make proposal for Feasibility Study and after going in details covering all aspects, the report will be submitted to the Government of Tripura for its implementation.

3.62 Source of Financial Assistance

Financial Assistance can be made available from the Department of Higher Education of Tripura, ICAR, MHRD/ UGC / INFLIBNET, NISSAT (Department of Scientific and Industrial Research, DSIR), from public enterprises, donation from the professionals and library science students.

3.63 Proposed Activities of TRAgLIBNET

On the basis of other library networks like INFLIBNET, DELNET, CALIBNET etc. the researcher has suggested the following activities of agricultural library networks:

 Information Infrastructural Development of Member Libraries

 Development of Databases of Member Libraries

 Resource Sharing and Inter-Library Loan

 Union catalogue of different types of documents like

    Books

    Serials

    Theses and Dissertations

    Non-Book Materials

    Specialized Databases of Tripura

    Expert Databases

 Awareness Training for Information Technology Application in Libraries

 Professional Development/Human Resource Development/Manpower Development by organizing workshop, training, conference, seminar and lecture.

3.64 Proposed Services of TRAgLIBNET

The researcher has suggested the following Services of agricultural library networks:

 Union Catalogue based Bibliographic Services

 Database Services

 Provision of Access of Internet Services.

 Promotion of computerization of Library Services

3.7 Implementation of the Programme of TRAgLIBNET

TRAgLIBNET should be a Registered Society and the Act of Tripura States should create this Library Networking Agency. There may be Headquarter, at College of Fisheries, Agartala.

3.8 Participation and Motivation of Library and Information Professionals

For successful implementation of the TRAgLIBNETProgramme, library and information professionals of the these states should come forward and take initiatives for creation of this library networking agency and also they should try for enactment of Library Legislation.

4.0 Suggestions and Recommendations

⬜ This should be the joint initiatives of Govt. of Tripura ;

⬜ The LIS Professionals both at senior and junior level should be consulted and their feedback should be taken into consideration;

⬜ The financial support from many Corporate houses like Tata and Birla Groups and many other industries should be sought for the establishment of TRAgLIBNET;

⬜ This Network Should be established on the line of National Networks like INFLIBNET and DELNET and their expert opinion should be taken;

5.0 Conclusion

From the study, it has been understood that there is dire need of establishing the Regional Library Network "TRAgLIBNET" for the implementation of computerization of agricultural library operations and services. This proposal is at its nascent stage, which should get support from the library professionals of Tripura and also from other parts of the country. The same plan for Regional Library Network can be applicable for other state, which is lagging behind in the areas of computerization of library activities and services. Because, the country like India, it would be difficult for any single agency to look after the computerization of library services of entire country.

Therefore the national network should open its Regional Network or help establishing local or regional networks for smooth computerization and networking of library for resource sharing and optimum utilization of the available resources both printed and electronic by the academic community of the state. The author expects positive and quick action from the various stake holders like the LIS professionals, Library organizations, industrialist and the Government from the state of Tripura for early implementation of the proposal. A copy of the suggested model may be sent to State Governments of Tripura for necessary action at appropriate level.

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APPLICATION AND INITIATIVES OF ICT IN NAVSARI AGRICULTURAL UNIVERSITY, NAVSARI

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Abstract

This paper discusses application of ICT Initiatives at the University and Subjective of research and development on agriculture and related areas have caused an information explosion in agricultural sector. Huge quantum of information on agriculture is generating during the activities of thousand of research institutions and universities existing in the countries. The study provides crystal picture about information services and ICT applications provided in the Navsari Agricultural University, Navsari.

Keywords : ICTs, E-Resources, Navsari Agricultural University Library

1. Introduction

Information and communication technology (ICT) has brought metamorphic changes in information products, information seeking behavior of the users, and the overall information organization. Information and Communication technology has changed academic library in a profound way. It has impacted on every sphere of academic library activity. The main function of a library is to acquire information from various sources and arrange, process, disseminate them to satisfy the needs of the the users. The libraries have found it very difficult to acquire, arrange, process and disseminate information in traditional ways. So librarians are compelled to plan, organize and communicate the huge information according to the needs of users with the help of Information and Communication Technologies.

The use of ICT in libraries has tremendously increased because it provides enhanced user satisfaction, cost effectiveness, rapid responses and easier operational procedures. Electronic information resources are available in static physical forms such as CD-ROM, DVD-ROM, External Hard Disk, Pan Drive or in fluid

form like the internet. Libraries need to adopted a renewed approach for managing and accessing various retrieval tools available. It needs a good understanding and assessment of users needs as well as evaluation of electronic information resources. The value of electronic information is that it can be easily shared, distributed, updated, manipulated and rapidly searched. A feature of the current electronic environment is the apparently seamless way in which resources are networked and accessed across different computing platforms, and a substantial research and development effort is being concentrated in this direction. The World Wide Web currently represents the single most important common interface to access diverse range of information.

ICT has developed to such a stage that it has given access to information at fingertips. Convergence of computer and communication technologies and their subsequent application to library and information activities has changed the philosophy of information from unitary to universal access. Over the past few decades development in information and communication technology have brought many changes to university library services and infrastructures.

2. About Navsari Agricultural University Library System

The Navsari Agricultural University Library System is having 17 libraries in its fold apart from University Library located at head quarters in Navsari. The main mandatory function of the library is to provide all kinds of scientific and technical databases ,information especially in the fields of agriculture, horticulture, forestry, veterinary, biotechnology, agribusiness management,   Agri-engineering as well as other basic and allied sciences to the students, scientist, teachers, researcher and extension workers and readers of all types. University library holds rich collection in Agriculture and allied sciences comprises of Books, Periodicals, Back Volumes, Reports etc. Apart from print resources the e-resources are being made available through online. The University library Starting as college library of N. M. College of Agriculture in the year 1965, it was renamed as campus library by newly established Gujarat Agriculture University in the year 1972. Again it renamed as University Central Library in the year 1988 with inclusion of new faculty of Horticulture and Forestry.

  University Library System is having 17 libraries in its fold apart from University Library located at head quarters in Navsari.

  University Library is also extending library services to the Scientists, Extension Specialist and other staff working in 19 Research Stations, 09 Extension centres.

 The main motto of the library is to provide all kinds of scientific and technical databases, information especially in the fields of agriculture, horticulture, forestry, veterinary, biotechnology, agribusiness management, Agri-engineering as well as other basic and allied sciences to the students, scientist, teachers, researcher and extension workers and readers of all types.

3. Objectives

  Acquire, organize and make available all types of documents in the core areas of agriculture and allied subjects of interest to the university.

  Interact with the sister institutes in the state of effective resource sharing and document delivery.

  Function as a clearing house of information on the ongoing research and development in agriculture and allied areas in the university.

  Participate in agricultural library and information networking at the Regional, National and

International levels.

4. Salient Infrastructure Facilities

⬜ The reading areas in the libraries are equipped with Air Conditioners, Ups etc. to attract the readers to utilize print resources effectively.

⬜ OPAC & WEB-OPAC service is Provided.

⬜ Digital Library with 48 computers.

⬜ e-Resources centre with latest systems, online printer etc.

⬜ Separate Reading Room for boys and girls

⬜ Reading Room facility in nights

⬜ Discuss Room Services

⬜ CCTV Camera facilities

Sr.No.	Library extension activity Programme	Trainees	Duration
1.	Library Orientations	All UG Students	Starting of the Course
2.	PGS-501 Non-credit Course	ALL 252 PG Students every year	One year
3.	User's Education	UG & PG Students	Two times in a year
4.	My Favourite Book Talk	UG & PG Students	First and Third Saturday Every Month

6. Application of Information and Communication technologies in Navsari Agricultural University
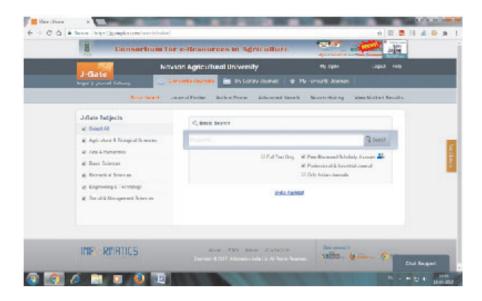
6.1 E-resources/Online Resources

The University Library, Navsari Agricultural University Subscribed e-Resources/online Resources to provide the latest information to the Teachers, Scientists, Extension Specialist, Students etc. to meet their research and educational information needs.

➢ Consortium for E-resources in Agriculture (CeRA)
➢ CAB Online Abstract services
➢ Indiastate database
➢ CMIE-Commodities Database
➢ Krishiprabha
➢ Agricat
➢ Krishikosh
➢ Astral E-books

6.2 Consortium for E-resources in Agriculture (CeRA)
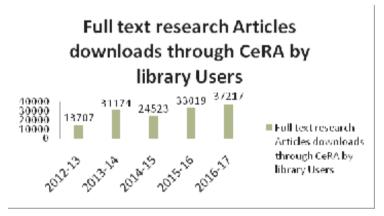
The ICAR has provided Consortium for E-resources in Agriculture called CeRA under NAIP project from 2008 onwards. It is providing access to nearly 3568 journals in agriculture and allied disciplines. It is IP authentic and use to all the colleges of the University, Research Stations and also to all the patrons of the university to utilize the e-resources effectively.

Full text research Articles downloads through CeRA during last five years

Year	Full text research Articles downloads through CeRA by library Users
2012-13	13707
2013-14	31174
2014-15	24523
2015-16	33019
2016-17	37217

(Sources : CeRA, DKMA, New Delhi)

Full text research Articles downloads through CeRA by library Users

6.3 CAB Online Abstract services

CAB Provides abstract and full text data from 1990 to present. Online CAB Abstracting services data is very useful in formulating technical programmes, research projects, writing Ph.D. and M.Sc. Thesis stc.

6.4 Indiastate database

Indiastat.com is an authentic storehouse for socio-economic statistics about india provides statistical data, current happening with astatistical approach, articles from scholars on subject of social and economic importance etc.

6.5 CMIE-Commodities Database
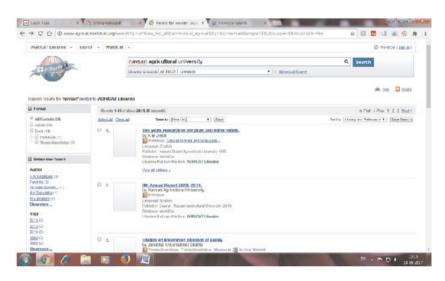
Commodities database is the most comprehensive and reliable sources of Indian Commodities Prices, Market intelligence, crop forecasts and time-series far agricultural commodities. India Harvest Database has been replaced with commodities database with editional resources.

6.6 Krishiprabha

Indian Agricultural Doctoral Dissertations Repository service. It provides access to the Ph.D. theses of all the state agricultural University and ICAR Institute in India from 2000 to 2007.

6.7 Agricat

AgriCat is the union catalogue of the holdings of 12 major libraries of the ICAR institutes and SAUs. It has been created with the partnership of OCLC worldcat. The Navsari Agriculture University Library is also a member library in Agricat/World and Contributed nearly 25,000 bibliographical records.

6.8 Krishikosh

Krishikosh is an Institute Repository under National Agricultural Research System (NARS). The repository of Knowledge in agriculture and aalied sciences, having collection of old and valuable books, records and various documents spread all over the country in different libraries of research Institutions and State Agricultural Universities.

Project Executed at Navsari Agricultural University Library

The Navsari Agricultural University Library has executed the following ICT based NAIP projects.
- ➢ CeRA : Consortium for E-resources in Agriculture
- ➢ Krishiprabha : - Database of Indian Agricultural Doctoral Dissertations.
- ➢ E-Granth : - Strengthening of Digital Library and Information Management under NARS.

6.9 Open Access Iniatives

The Navsari Agricultural University Library is always stood forefront in using open access resources and software. Access to open access resources has been included in user awareness and training programmes. Implemented KOHA Library Management and SOUL 2.0 Software all the library in-house operations.

6.10 Institute repositories

The present trends of knowledge society is to provide institutional repositories to the library users any time any where access. The Navsari Agricultural University Library has created institutional repositories using Dspace open source software and uploaded under Krishikosh institutional repositories maintained by Indian Agricultural Research Institutes, New Delhi. The repository of knowledge in agriculture and allied sciences, having collection of old and valuable books, records and various documents spread all over the country in different libraries of research Institutions and State Agricultural Universities.

7. Conclusion

The ICT and related technologies have large impact on library functions, services and dissemination of Information. The development of present day society is depends on timely access to Information. National Agricultural Research System Libraries in India are always standing in forefront in providing latest and timely information to the agriculture user community with the application of up-to-date and latest technologies applicable in Libraries and Knowledge management. Internet users simply expect to be able to access any information they want, from anywhere in the world, at any time.

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ACCESS TO LEGAL INFORMATION THROUGH WEB RESOURCES OF THE SUPREME COURT AND HIGH COURTS IN INDIA

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ABSTRACT

The paper decribed that the users of the court library are using web resources more frequently along with printed sources. It has been noted that online searches are most popular applications used by the users, whereas other services and applications are used moderately. It is a matter of concern, as presently, digital information sources and the web-resources are considered extremely important tools for effective learning and research. Therefore all the libraries need to review its policy on digital information resources.

The users depend upon a variety of information sources for research work, professional assignments, writing and other judicial functions. Most of the users often face the problem of the information overload on internet and lack of information skills to search. Therefore library staff should be trained to render quality services and train users to find the desired information on their own. To improve the facility and services of the court libraries, it is suggested that the court libraries shall adopt the practice of taking users feedback which will certainly help strength of the library services. It is also recommended that the library staff need to work in collaboration with the legal practitioners to influence users information needs by re-evaluating the collection development policy, online legal databases and e-resources based on the current needs of the legal fraternity.

KEYWORDS: Web-resources, High Courts, Court Libraries, Legal Information

1. INTRODUCTION

By the Indian High Courts Act passed by British Parliament in 1861, provision was made, not only for the replacement of the Supreme Courts of Calcutta, Madras and Bombay and for the establishment of High Courts in their places, but for the establishment of a High Court by Letters Patent in any other part of Her Majesty's territories not already included in the jurisdiction of another High Court. In the year 1866, the High Court of Judicature for the North-Western Provinces came into existence at Agra under Letters Patent of the 17th March, 1866, replacing the old Sudder Diwanny Adawlat.

Our country became an independent democratic republic in the year 1947 and its constitution is the supreme law, which came into force on 26th January 1950. The Constitution lays out a federal Union of the States and few union territories. The Union and the States have separate executive and legislative branches, whereas the union territories are ruled by national government. The Law adopted by the Union is superior to that of the States. The judiciary is independent and not federal in structure. The head of the Union executive is an elected President. The Prime Minister is head of the Union Council of Ministers and he is more politically powerful. India has a bicameral Parliament whose upper house is known as Rajya Sabha and lower house is Lok Sabha. The State executive is headed by a Governor and most have a unicameral legislative body called the Legislative Assembly, but some are bicameral with a Legislative Council as well. The highest appellate court of the judiciary is the Supreme Court, which often decides the legislative powers demarcated by the Constitution for Union and States. Prior to independence, the highest appellate court was the Privy Council and its decisions can still be binding unless overruled by the Supreme Court. The High Courts are situated in each State with subordinate criminal and civil courts.

1.1 Administration of Supreme Court

In India, the Supreme Court has original, appellate and advisory jurisdiction. Its exclusive original jurisdiction extends to any dispute between the Government of India and one or more States or between the Government of India and any State or States on one side and one or more States on the other or between two or more States, if and insofar as the dispute involves any question (whether of law or of fact) on which the existence or extent of a legal right depends. In addition, Article 32 of the Constitution gives an extensive original jurisdiction to the Supreme Court in regard to enforcement of Fundamental Rights. It is empowered to issue directions, orders or writs, including writs in the nature of habeascorpus, mandamus, prohibition, quo warranto and certiorari to enforce them. The Supreme Court has been conferred with power to direct transfer of any civil or criminal case from one State High Court to another State High Court or from a Court subordinate to another State High Court. The Supreme Court, if satisfied that cases involving the same or substantially the same questions of law are pending before it and one or more High Courts or before two or more High Courts and that such questions are substantial questions of general importance, may withdraw a case or cases pending before the High Court or High Courts and dispose of all such cases itself.

The appellate jurisdiction of the Supreme Court can be invoked by a certificate granted by the High Court concerned under various Articles of the Constitution in respect of any judgement, decree or final order of a High Court in both civil and criminal cases, involving substantial questions of law as to the interpretation of the Constitution. Appeals also lie to the Supreme Court in civil matters if the High Court concerned certifies :

(a) that the case involves a substantial question of law of general importance, and

(b) that, in the opinion of the High Court, the said question needs to be decided by the Supreme Court.

In criminal cases, an appeal lies to the Supreme Court if the High Court

(a) has on appeal reversed an order of acquittal of an accused person and sentenced him to death or to imprisonment for life or for a period of not less than 10 years, or

(b) has withdrawn for trial before itself any case from any Court subordinate to its authority and has in such trial convicted the accused and sentenced him to death or to imprisonment for life or for a period of not less than 10 years, or

(c) certified that the case is a fit one for appeal to the Supreme Court. Parliament is authorised to confer on the Supreme Court any further powers to entertain and hear appeals from any judgement, final order

or sentence in a criminal proceeding of a High Court. The Supreme Court has also a very wide appellate jurisdiction over all Courts and Tribunals in India in as much as it may, in its discretion, grant special leave to appeal under Article 136 of the Constitution from any judgment, decree, determination, sentence or order in any cause or matter passed or made by any Court or Tribunal in the territory of India.

The Supreme Court under the provisions of the Constitution has been vested with power to punish for contempt of Court including the power to punish for contempt of itself. In case of contempt other than the contempt referred to in Rule 2, Part-I of the Rules to Regulate Proceedings for Contempt of the Supreme Court, 1975, the Court may take action

(a) Suo motu, or

(b) on a petition made by Attorney General, or Solicitor General, or

(c) on a petition made by any person, and in the case of a criminal contempt with the consent in writing of the Attorney General or the Solicitor General.

1.2 Administration of High Courts

The High Court stands at the head of a State's judicial administration. There are 24 High Courts in the country, Six having jurisdiction over more than one State. Each High Court comprises of a Chief Justice and such other Judges as the President may, from time to time, appoint. The Chief Justice of a High Court is appointed by the President in consultation with the Chief Justice of India and the Governor of the State. The procedure for appointing additional Judge is the same except that the Chief Justice of the High Court concerned is also consulted. They hold office until the age of 62 years and are removable in the same manner as a Judge of the Supreme Court. To be eligible for appointment as a Judge one must be a citizen of India and have held a judicial office in India for ten years or must have practised as an Advocate of a High Court or two or more such Courts in succession for a similar period.

Each High Court has power to issue to any person within its jurisdiction directions, orders, or writs including writs which are in the nature of habeascorpus, mandamus, prohibition, qu-warranto and certiorari for enforcement of Fundamental Rights and for any other purpose. This power may also be exercised by any High Court exercising jurisdiction in relation to territories within which the cause of action, wholly or in part, arises for exercise of such power, notwithstanding that the seat of such Government or authority or residence of such person is not within those territories.

Each High Court has powers of superintendence over all Courts within its jurisdiction. It can call for returns from such Courts, make and issue general rules and prescribe forms to regulate their practice and proceedings and determine the manner and form in which book entries and accounts shall be kept. The following Table gives the seat and territorial jurisdiction of the High Courts.

Snapshot of Indian High Courts (http://indiancourts.nic.in)

	Name	Year	Territorial jurisdiction	Seat
1.	Allahabad	1866	Uttar Pradesh	Allahabad (Bench at Lucknow)
2.	Andhra Pradesh &Telangana (2014)	1956	Andhra Pradesh &Telangana	Hyderabad
3.	Bombay	1862	Maharashtra, Goa, Dadra and Nagar Haveli and Daman and Diu	Bombay (Benches at Nagpur, Panaji and Aurangabad)
4.	Calcutta	1862	West Bengal	Calcutta (Circuit Bench at Port Blair)
5.	Chhattisgarh	2000	Chhattisgarh	Bilaspur
6.	Delhi	1966	Delhi	Delhi

7.	Guwahati	1948	Assam, Nagaland,Mizoram and Arunachal Pradesh	Guwahati (Benches at Kohima, Aizwal, Itanagar)
8.	Gujarat	1960	Gujarat	Ahmedabad
9.	Himachal Pradesh	1971	Himachal Pradesh	Shimla
10.	Jammu & Kashmir	1928	Jammu & Kashmir	Srinagar & Jammu
11.	Jharkhand	2000	Jharkhand	Ranchi
12.	Karnataka	1884	Karnataka	Bangalore
13.	Kerala	1958	Kerala & Lakshadweep	Ernakulam
14.	Madhya Pradesh	1956	Madhya Pradesh	Jabalpur (Benches at Gwalior and Indore)
15.	Madras	1862	Tamil Nadu & Pondicherry	Madras
16.	Meghalaya	2013	Meghalaya	Shillong
17.	Manipur	2013	Manipur	Imphal
18.	Orissa	1948	Orissa	Cuttack
19.	Patna	1916	Bihar	Patna (Bench at Ranchi)
20.	Punjab & Haryana	1975	Punjab, Haryana & Chandigarh	Chandigarh
21.	Rajasthan	1949	Rajasthan	Jodhpur (Bench at Jaipur)
22.	Sikkim	1975	Sikkim	Gangtok
23.	Tripura	2012	Tripura	Agartala
24.	Uttarakhand	2000	Uttarakhand	Nainital

2. IMPACT OF ELECTRONIC RESOURCES

We are living in the age known as digital era. Major changes have been seen in the collection and storage of legal information, which have changed from manuscript to print. These changes are continuous and the current trends in publishing have are shifted from print to digital. These changes have also been accepted by the publishers, academicians, researchers, scholars etc. In present era electronic journals, books, World Wide Web as well as databases have gained more popularity due to the following factors :

- Application of new technology is more comfortable and affordable to provide better services.
- The information is available at any time and also accessible from any part of the world within a very short time.
- Information access is very convenient and easy .
- Saving of time, reduces of the physical space.
- Awareness of user community and understood both print and electronic access.
- Searching capabilities to get filtered information in print and digital formats.
- Information is made available at the user's desktop as per users requirement.
- Downloading and manipulating is possible.
- Low cost internet facility and fast transfer of information
- Availability of hyper linking and greater flexibility to access desired information.
- Possibilities to provide effective services using web-resources

It is seen that there is continuous growth in electronic publications. The Court libraries as well end users of the libraries also are welcomed the electronic format of information. The advancement of internet services and web resources has created a digital archive for the researcher scholars as well as academicians . The valuable information in various form including texts, images and sounds from many scholarly communities are available in digital format, which can be accessible from the internet. The use of web resources are

more popular among the information seekers. The Information Technology including computer and telecommunication have played major role in legal field also. These systems are facilitating the collection, storage, retrieval, communication and dissemination of information for the decision-makers including legal professionals. The Libraries are now expected to provide information more swifter in the increased volume than before to the users with the use of information technology applications of modern age.

3. TYPES OF ELECTRONIC RESOURCES

The following types of electronic resources are also available in the field of law-
- legal e-journals
- legal e-books
- online legal databases
- offline legal database
- Web resources

4. LEGAL RESOURCES

All of us live under a legal system and must confront the law of many aspects in our daily lives. A system of rules governing by human from the beginning of people lives together in societies; they have developed laws to regulate their relation with one another. In primitive communities the rules are based on religions, morals, manners and customs. Even in advanced civilizations there is a close connection between law, morals and customs. There are two major forms of legal information sources includes Legislation Law (statutory law) and Precedents (Case-Laws).

(a) Statutory law: Statute or statutory law is the accumulated body of laws decreed by rulers or passed by parliament or legislature. Such laws are usually systematised in a code and countries that follow the statute system are often called code nations. Statute can be voided or replaced by new laws.

(b) Precedents : These are well known as Court decisions. These are the foundation of common law that judges have made in the courts. The courts follow the doctrine known as stare decisions or let the decision stand. The Supreme Court and the High Court frame their own rules which may be modified from time to time.

5. INFORMATION TECHNOLOGY APPLICATIONS IN INDIAN COURTS

(a) Indian Courts

It provides a single point access to information related to the Supreme Court and any High Court in India. The Web Sites of the Supreme court and High Courts provide Litigant centric dynamic information like Judgments, Causelists, Case-status, etc. as well as static Information such as History, Jurisdiction, Rules, Past and present judges, etc.

(b) The Judgment Information system (JUDIS)

It consists of the Judgments of the Supreme court of India and several High Courts. In the case of the Supreme Court all reported Judgments which are published in SCR Journal, since its inception i.e. 1950 till date are available. The Judgments reported in SCR till 1993 also have head-notes. The judgments reported in SCR in 1994 and later have only text of judgments with out head-notes.

(c) Causelists

It is a list of schedule of cases to be heard by the courts on the particular day. The Cause lists of Supreme Court and almost all High Courts are available on this site. As the Supreme Court of India and all the High Courts and their Benches are fully computerised, all these courts generate Daily and Weekly Causelists from the computer servers. As soon as they generate the Cause lists immediately the are made
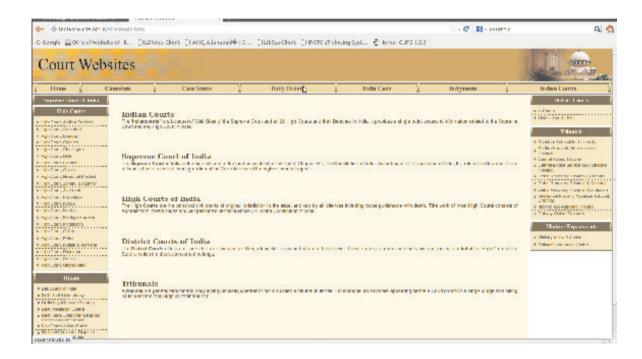
available on this website.

(d) Daily Orders

These are the orders of the Supreme Court of India and many High Courts can be accessed through this site. These orders are available as soon as the orders are signed by the court.

(e) Case Status

This site provides the latest status of a case either pending or disposed by the Supreme Court or any other High Court in the country. The required information is derived from the databases of the concerned courts.

5.1 SUPREME COURT COMPUTERISATION

(i) List of Business Information System (LOBIS)

It is about scheduling of cases to be heard by the courts on the following day. It enabled the Registries of Supreme Court and High Courts in eliminating manual process of Cause List generation thus any manipulation by vested interests. These databases contain details of fresh cases, disposed and pending cases. It is the backbone application of every Court. The impacts are as follows-

i. As Cause Lists are generated automatically by the computer manual intervention has been eliminated resulting in generation of Cause List in time with out any hassle

ii. Cases are listed strictly in chronological order of date of filing; eliminated irregularities

iii. All cases having the same law point(s) to be decided by the courts are bunched/grouped and posted before one bench. This has helped the courts in faster disposal of cases.

iv. It has become simpler to recall dismissed cases when review petitions are filed.

v. On the spot reliable and instantaneous statistical reports are generated

vi. It has helped Registry of Supreme Court in streamlining its day to day activities to achieve one of the main objectives of COURTIS Project.

(ii) Filing Counter

In all the courts including the Supreme Court and all High Courts fresh cases are filed before the computerized Filing Counters. As the advocates stand in queue for Filing cases before the counters, the data entry Operator enters preliminary details required for Registration such as Party names, advocate details, etc. The computer terminal at the query counter is used to attend to the quarries of the litigants on the spot. The defects, if any, are listed out and handed over to the litigants/advocates for rectification. Time limitation is also checked by the system automatically. The impacts are as follows-

- The filing process is made easy
- The advocates and litigants need not wait for a long time in the queue
- The amount collected towards Court fee in a day is automatically calculated thus saving the time of court official's time
- Query counter avoids the litigants go around the sections to find out the Filing status
- Filing process is orderly
- Saves time and efforts of advocates and court officials

(iii) COURTNIC

This is about providing Supreme Courts' pending case status information to litigants and advocates. The COURTNIC answers about two hundred queries of litigants/advocates per day all over the country on the status of their pending cases. It is available on nominal charges. Primarily COURTNIC information is available in all NIC-High Court Computer Cells and in some District Court. It has been in use since 1993.

The response to the COURTNIC from the public is over-whelming, as pending cases information is available at his/her District headquarters. It avoids the litigants to come all over to Delhi from their place. The litigants need not find the status of their pending cases on phone as is the usual practice. Probably this facility is first of its kind in the world.

(iv) JUDIS

It is the Judgement Information System (JUDIS) consisting of complete text of all judgement of the Supreme Court of India from 1950 to till Date and same for the High Courts also.

5.2 CAUSE LISTS (http://clists.nic.in)

The Cause lists are scheduling of cases to be heard by the courts on the following day. The Causelists of Supreme Court and many other High Courts are available on NIC Web Servers. As the Supreme Court of India and all the High Courts and their Benches are fully computerised, all these courts generate Daily and Weekly Causelists from the computer servers installed by NIC. The Causelist application is the backbone application of all courts as no court can function with out that day's Causelist. Hence this has become near time critical application in all the Courts.

Immediately after generation of the Cause list most of the courts cyclostyle the stencils cut from the printers attached to the servers for generating thousands of copies running into a few lakhs of pages every day. Due to this reason the courts take a lot of time for generation and supply of the Causelists to the advocates at their offices or residences. Usually the advocates receive the cyclostyled copies of a day's Cause List. Some High Courts send the Cause lists data on floppy to the Printers for printing thousands of copies. This process costs each High Courts lakhs of Rupees every year. By making the Cause lists available on Internet, no High Court is incurring any expenditure as they are using the already available infrastructure and the Software of NIC. The features are as follows-

- Availability through Internet
- Causelists of all High Courts can be accessed

- Advocates can generate their own Causelist consisting of his/her own cases
- Retrieval through the name of either petitioner or respondent
- Court wise list can be generated
- Judge wise list can be prepared
- Entire Causelist can be printed, if required
- Case no. wise access is possible

5.3 HIGH COURTS COMPUTERISATION

Under guidelines of Government of National Informatics Centre took up computerisation of all the High Courts and its Benches on the lines of Supreme Court's Computerisation. NIC implemented the List of Business Information in all High Court Courts. The Cause List of all the High Courts are also available through Internet. Many possible applications in all High Courts have been computerised. Most of the High Courts have opened query counters along with Filing Counters for providing pending cases information to the litigants and advocates.

The following online facilities are provided :
- Cause list is generated automatically
- Bunching and Grouping of cases
- Computer based Filing Counters
- Query counters are available
- JUDIS & COURTNIC
- Day to day Judgements and Orders are stored

5.4 WEB SITES OF HIGH COURTS -

In terms of accessibility of electronic information web links are available -

	Name of High Court	Official Website
1.	Allahabad	http://www.allahabadhighcourt.in
2.	Andhra Pradesh	http://hc.ap.nic.in
3.	Bombay	http://bombayhighcourt.nic.in
4.	Calcutta	http://calcuttahighcourt.nic.in
5.	Chhattisgarh	http://highcourt.cg.gov.in
6.	Delhi	http://delhihighcourt.nic.in
7.	Guwahati	http://ghconline.gov.in
8.	Gujarat	http://gujarathighcourt.nic.in
9.	Himachal Pradesh	http://hphighcourt.nic.in
10.	Jammu & Kashmir	http://jkhighcourt.nic.in
11	Jharkhand	http://jharkhandhighcourt.nic.in

12	Karnataka	http://karnatakajudiciary.kar.nic.in
13.	Kerala	http://highcourtofkerala.nic.in
14	Madhya Pradesh	http://mphc.gov.in
15.	Madras	http://www.hcmadras.tn.nic.in
16.	Meghalaya	http://meghalayahighcourt.nic.in
17.	Manipur	http://hcmimphal.nic.in
18.	Orissa	http://www.orissahighcourt.nic.in
19.	Patna	http://patnahighcourt.gov.in
20.	Punjab & Haryana	http://highcourtchd.gov.in
21.	Rajasthan	http://hcraj.nic.in/
22.	Sikkim	http://highcourtofsikkim.nic.in
23.	Tripura	http://www.thc.nic.in/
24.	Uttarakhand	http://highcourtofuttarakhand.gov.in

6. CONCLUSION

We are in the digital age, the age of automation and the age of information technology. The low cost of computers and the development of web-resources of legal information have introduced a revolution in the field of law. The modern trend has enabled low cost digital storage of legal information, rapid transmission of data across computer networks and processing of electronic documents and information.

The present generation also made use of texts in print but there was the expectation that wen sources would make their work easier. Apart from the formal legal reference sources, advocates also made use of internal office files, external electronic resources and professional colleagues in accomplishing their tasks. Portions of files from completed cases are kept and referred to at a later time when addressing a similar matter. On the use of professional colleagues, it is noted that advocates may be adversaries in court but they are also colleagues and they get information from each other, justifying the saying that advocates do not descend into the arena of conflict. One major problem identified was that of access to information resources and the advocates used for the study expressed a need for some kind of uniform classification to use in organizing internal files, tracking current cases and keeping files of completed cases for reference. They noted that electronic sources were just beginning to be used by advocates. The web-resources of information include e-mail and the online searches. Expert information was also identified as one of the information source that a advocate needs.

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ACADEMIC IMPORTANCE OF SOCIAL NETWORKING SITES: USAGE AND AWARENESS BY THE STUDENTS OF MANIPUR UNIVERSITY

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Abstract:

Purpose – Social networking sites taking very important part in today's society to communicate, share and disseminate information. This paper is an attempt to find out the importance of social networking sites for the academic purposes; usage and awareness of social networking sites by the students and researchers of Manipur University. It will explore the awareness of students about social networking tools. Moreover, it will help to find out the main purpose of using Social Networking Sites and also determine benefits of using it. This paper also will help to find out the main specialized social network use for academic purposes, main problems and risks face to use social network and users interest on library services if library as a part of social network, etc.

Design/methodology/approach – A survey was conducted through a well-structured and precise questionnaire circulated personally among 200 students studying in Manipur University.

Findings– (100%) students and researchers of Manipur University used and aware of social networking sites. The main purpose of using social network is to find useful information (96%), Communicating and interacting with family, friends & professionals (84%), Entertainment (Playing games, chatting) (72%), sharing experience (60%), etc. Among the social media site research gate (45%) used maximum number of users followed by Academia (27%) by the users for academic purposes. The main problems and risks faced by the students are unwanted attention from others (60%), data security (45%), etc.

Originality/value – The paper highlights the use of social networking sites for academic purpose and main problems and risk regarding the use of social network.

Keywords – Library Services, Social Network, Social Media, Social Networking Sites, Social Networking Tools.

Paper type – Case Study.

1. Introduction

The world more open and connected through social media and networking in today's environment and becoming the world only one community on the social media platform. Well connectivity is the major way to develop our social life. It will be able to share information/knowledge among the people or community. Here, main social networking tools comprises Facebook, WhatsApp, Twitter, Flicker, YouTube, LinkedIn, Instagram, Google+, Academia.edu, Research gate, Blogs, etc. through this tools will able to connect the

world very easily with the help of technology and to share their views, knowledge and information and their day to day life. On the other hand with the help of social networking sites not only connect the people but also connect educational institution specially libraries with their users any time anywhere. Moreover, using social networking sites is a new trend of today's society. So it will be very useful and positive impact if we are using such kind to effective communication and corporate the society, dissemination of information, alert service, saves the time to get new information, etc.

2. Social Network

Social network is a means of interacting among people in which they create, share and exchange information and ideas in virtual communities and networks. It is an internet based application that is built on the ideological and technological foundations that allow the creation and exchange of user generated content (Kaplan, 2012 in Balarabe, 2014). Social media sites let those who use them create personal profiles, while connecting with other users of the sites. Users can upload photographs, post what they are doing at any given time, and send personal or public messages to whomever they choose. In this "information age," social media sites seem to be growing in popularity rapidly, especially among young adults (Pempek, Yermolayeva, & Calvert, 2008). So, social media can be defined in different ways by different scholar but it is the connection of people among two individuals, group of friends, family, colleague, clients, institutions, etc. to contribute, share, collaborate and communicate over the communities.

2.1 Social Networking Tools and its uses

There are lots of social media/Networking tools to share different kind of media (i.e. multimedia) or information among the people, groups or communities, friends, clients, colleagues, etc. Some of the commonly used social media tools are as follows:

Social Media Tools

Uses and Functions

Facebook :   This is a free social networking site which allows users to create profiles, upload photos and videos, send and receive messages thereby remaining connected with friends, families and across the world. It is one of most used social media.

Twitter: This is another social network and micro blogging service that allows users to send and

receive/read short character messages known as "Tweets".

Whats App Messenger:
It is a cross-platform mobile messaging application that allows a person to exchange messages free of any SMS charge. This service is available and accessible via iphone, Blackberry, Android, windows phones and Nokia.

YouTube: This is used for posting videos especially in marketing business or clients.

Blog   It is an informational or discussion site on the worldwide web. It consists of posts (discrete

entries) where the most recent appears first

Google+:   It consists of group of friends/colleagues who are interested in thought leadership and technology and not purely friends or business contacts (as in facebook or LinkedIn respectively).

LinkedIn: This allows registered users to maintain a list of contact details of people with whom they

share some level of relationship or connections. The users can also invite other people (site

users or not) to be in the connection.

Instagram: It is one of the ruling visual images and photos platform that offers stylized filters for

photographs and images. (Usman and Katsina (2015)

2.2 Social Networking Sites for Academic Importance:

Some of the social networking sites for academic importance are given below:

Academia.edu: "Academia.edu is a platform for academics to share research papers."
A major benefit of academia.edu is scholars can upload various documents including publications and a CV, join conversations in scholarly communities and select from a range of interests to follow.

ResearchGate: "Built for scientists, by scientists, with the idea that science can do more when it's driven by collaboration." ResesracheGate provides an online platform for users to build an online portfolio, present their research, search a database of user publications, and lists scientific conferences

Mendeley: It is a free **reference manager** and **academic social network** that can help to organize our research, collaborate with others online, and discover the latest research." Mendeley lets users upload and share pdfs and encourages collaboration with a group feature in which members can share documents, follow updates, make comments and track progress within the groups they create

1.3 Uses of Social Networking Sites in Library

To provide better services to the user library can use social media in many ways. Library can use
- To mobilize their services;
- To advertise events and programmes;
- To update information;
- To access and share library resources;
- To connect with library users anytime anywhere, etc.

2. Objectives

The main objectives of the present study are to:

1. Examine the awareness of social networking sites by the students and research scholars of Manipur University.

2. Identify the different categories of social media/networking tools used by students (both Pg and researchers) of Manipur University.

3. Find out the main purpose of using social Network by the students.

4. To ascertain the frequency of social networking tools usage by the Manipur University students.

5. To determine benefits of using social networking sites and problem and risk face by them to access social media.

6. To identify the effects of social media sites on students' academic work.

3. Methodology

To achieve the objectives, a survey was conducted among the students and research scholars of Manipur University; total 250 questionnaires were distributed among the students/scholars of the Manipur University out of which 200 students responded. The study was conducted in between April 1st to April 20th, 2017. Each student was approached individually.

4. Review of Related Literature

Mehmood and Taswir (2013), investigates pedagogical impacts of social networking sites on undergraduate students at the College of Applied Sciences (CAS), Nizwa, Oman. Blogs, wikis, tweets, RSS feeds, discussion boards, podcasts are educational nodes in a huge network. The study tabulates the

usage of these web2.0 applications and their impact on linguistic and social behaviors of young learners and also examines the effectiveness of these social tools in knowledge sharing and general awareness of student communities. **Subramani, R. (2015),** investigates the communication and interaction between people using social media. **Sheikh, Arslan (2016),** explore the awareness, usage and feelings of CIIT faculty members about the five most famous ASNWs namely; ResearchGate, Acedemia.edu, LinkedIn, Mendeley and Zotero. Most of the respondents are members to more than one academic social network. Faculty members also revealed that they visit ASNWs twice in a week for half an hour. The respondents expressed that they mostly use these platforms for following purposes: interacting with experts, promotion/sharing of their research output, participation in discussions, to get ideas about the latest research trends and to get help in resolving research problems. The feelings of CIIT faculty members about using ASNWs were also found very positive.

Adebayo, Odunola Adefunke (2015), examined the awareness and use of social networking sites by the students of Library and Information Science in Federal Polytechnic, Offa. Nigeria. It revealed that majority of the respondents use social networking site to a large extent, especially facebook and they use it for various purposes such as connecting with friends, for academic work and so on. The study also confirmed that many of the respondents spend up to an hour or more to visit their social networking sites and many of the respondents use the sites several times in a day. The social networking sites enable the users to maintain contact with friends and also increase academic knowledge. However, some students reported that engaging in social networking reduces the time they spend on reading and also cause distractions in classroom. The study recommends among others that, students should minimize time spend on social networking and they should make meaningful use of the sites. **Hamade, Samir N. (2013),** in this study showed a heavy use of Twitter and Facebook among university students who were viewing their sites more frequently than posting. The most positive impacts were better relation with family, relatives, and friends and more involvement in social, political and cultural activities. Neglecting study/work and the time consumed are the two major drawbacks. **Zhu, Qiandong (2016),** introduce the implementation of the official WeChat account, the most popular mobile social media site in China, to share Jinan University Library collections and services to students, faculty and staff. The implementation, experience and issues have implications for academic libraries and other institutions to run and improve social media tools. The official WeChat account has already engaged a population of followers who are able to directly access library resources and service via their mobile device. The social media tool is an effective approach to promote library services and to enhance relationships between the library and its users. The issues appear during the process of WeChat implementation and promotion, which requires WeChat's provider, third-party application vendors and the library to work together to solve. **Ngonidzashe, Zanamwe (2013),** examined many instructors and students in higher education are using social media and research has shown that social media is useful in education. However, little is known about the challenges posed to students who use social media in education. Furthermore, very few studies have explored the learners' perceptions towards use of social media in higher education in the context of a developing nation like Zimbabwe. This research therefore explored the challenges and perceptions towards use of social media in Zimbabwe. An analysis of the results seems to suggest that the main challenges being faced by students in higher education as regards use of social media are security, unproductive behavior/wastes time, misuse of tools during instructional time and antisocial behavior in that order. It was also found out that the students in higher education have a favorable perception towards use of social media in higher education.

Al-Sharqi, L. and others (2015), in their study social media has become pervasive, impacting the social and cultural fabric of our society. It has revolutionized the way we communicate, interact and socialize. This study investigates differences and similarities of King Abdulaziz University (KAU) Arts and Science

students' perceptions of social media impact on social behavior. Research outcome indicates that students are familiar with and are immersed in social media use with Arts students being the heavier users of social media. Findings support the advantages of social media use on students' social behavior and do not indicate any obvious disadvantages. The findings include identification of dominant discipline-based and common perceptions. Differentiating factors include the Science group having interest in respecting opinions of others and the Arts group emphasizing on freedom of expression. Common perceptions on advantages include the ability to learn about people's different thinking styles, connect to others and communities improve open-mindedness; and alleviate routineness and boredom. Common concerns include physical inactivity, exposure to negative ideas and bad company, unproductivity and distraction, introversion and mental dullness. These findings can help in providing solutions to mitigate concerns relating to the use of social media. **Nandel and Borrego, (2013)**, analyze various aspects of an academic social network: the profile of users, the reasons for its use, its perceived benefits and the use of other social media for scholarly purposes.

5. Data Analysis and Discussion
5.1 Gender Wise Response

Table 1 shows the gender wise distribution of respondent. In this table indicate that out of the total

Table 1: Gender Wise Response

Gender Distribution	Number
Male	108 (54%)
Female	92 (46%)
Total	100 (100%)

5.1 Awareness of Social Media

In this table 2 reveal the user awareness about the social media. In this table shows that 100% population of respondents (both PG & researchers) aware about social media.

Table 2: Awareness of Social Media by Students

Aware of Social Media	No. of Respondent
Yes	200 (100%)
No	Nil
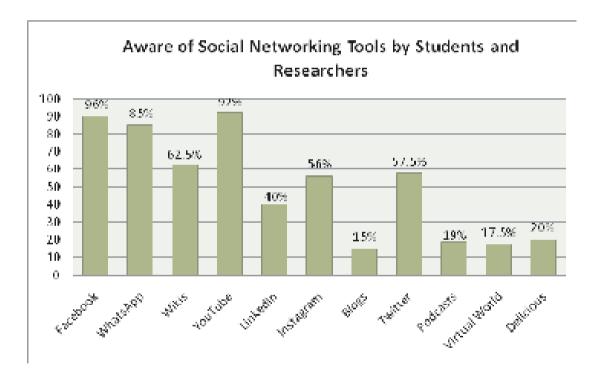
5.1 Aware of Social Media Tools by the Students and Researchers of Manipur University

In table 3 and figure 1 shows the social networking tools aware by the students and research scholars of Manipur University. It can be seen that most of the students and research scholars aware about social networking tools specially Facebook (96%), WhatsApp(85%), Twitter(57.5%), YouTube(92%), Wikis(62.5%), while very least number of student aware about Blogs(15%), Virtual World(17.5%), Podcasts(19%).

Table 3: Aware of Social media Tool by Students and Researchers

Social Media Tools	No. of respondents
Facebook	192(96%)
WhatsApp	170(85%)
Wikis	125(62.5%)
Youtube	184(92%)
LinkedIn	80(40%)
Instagram	112(56%)
Blogs	30(15%)
Twitter	115(57.5%)
Podcasts	38(19%)
Virtual World	35(17.5%)
Delicious	40(20%)

Figure 1: Aware of Social Networking Tools by the Students of Manipur University
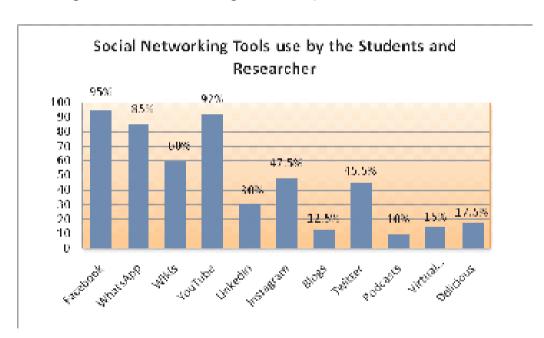
5.1 Social Networking Tools use by Students and Researchers

Table 4 and figure 2 indicate the types of social media tools being used by the students and researchers of Manipur University. Some of the social media tools which are mostly use by the students are Facebook (95%), Whatsapp (85%), YouTube (92%) and Wikis (60%). On the other hand, Blogs (12.5%), Podcasts (10%), Virtual World (15%) and Delicious (17.5%) are use by very least number of students.

Table 4: Social Networking tools use by students and researchers

Social Media Tools	No. of Respondents
Facebook	190(95%)
WhatsApp	170(85%)
Wikis	120(60%)
Youtube	184(92%)
LinkedIn	60(30%)
Instagram	95(47.5%)
Blogs	25(12.5%)
Twitter	91(45.5%)
Podcasts	20(10%)
Virtual World	30(15%)
Delicious	35(17.5%)

Figure 2: Social Networking Tools use by students and researchers

5.1 Devices used to access Social Media/ Networking Sites

Some of the device which are popularly use in today's environment to access social media or social networking sites are smart phone, laptop, tablet, etc. Table 5 and figure 3 show the devices used by the students and researchers of Manipur University for accessing social networking sites. In this table and figure clearly shows that majority of students use smart phone (97.5%) to access social networking sites followed by laptop (48%), while very least number of students use tablet (11%).

Table 5: Devices Used by Students

Device	No. of respondents
PC	80 (40%)
Smart Phone	195 (97.5%)
Laptop	96 (48%)
Tablet	22 (11%)
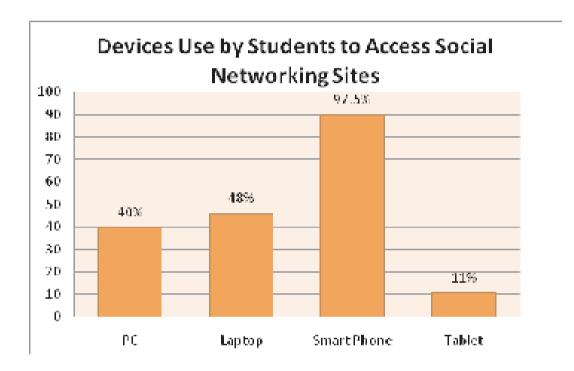
Figure 3: Devices Used by Students

5.5 Frequency of visiting Social Networking Sites
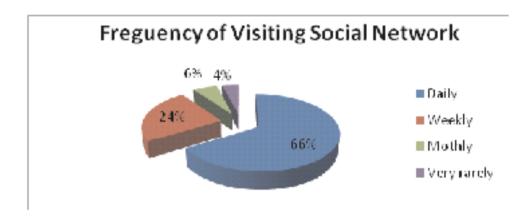
Table 6 and figure 4 indicate the frequency of visiting social networking sites. It shows that 66% of students and researchers of Manipur University access social media sites on daily basis, 24% users' access weekly and very least number of users access very rarely (4%).

Table 6: Frequency of Visiting Social Networking Sites

Frequency of Visit	No. of Respondents
Daily	132 (66%)
Weekly	48 (24%)
Monthly	12 (6%)
Very Rarely	8 (4%)

Figure 4: Frequency of Visiting Social Networking Sites
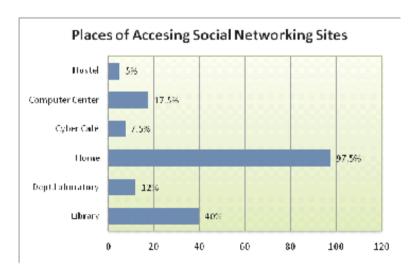
5.5 Place of accessing Social Networking Sites

In table 7 and figure 5 represent the place where Manipur University students and researchers access social networking sites. It indicate that most of the students access social networking sites at home (97.5%) followed by library (40%). On the other hand least number of students access at cyber café (7.5%), hostel (5%), and department laboratory (12%).

Table 7: Place of accessing Social Networking Sites

Place of accessing SM	No. of Respondent
Library	80 (40%)
Dept. Laboratory	24 (12%)
Home	195 (97.5%)
Cyber Café	15 (7.5%)
Computer Center	35 (17.5%)
Hostel	10 (5%)

Figure: 5 Place of accessing Social Networking Sites

5.1 Purpose of using Social Networking Sites
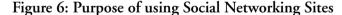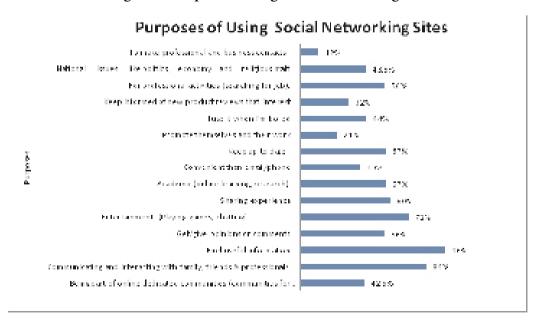
Table 8 and figure 6 indicate the main purpose of using social networking sites by the students and researchers of Manipur University. It shows that maximum number of students use social networking to find useful information (96%), Communicating and interacting with family, friends & professionals (84%), Entertainment (Playing games, chatting) (72%), sharing experience (60%), etc. while least number of students used it for the purpose of making professional and business contacts (12%), Promote themselves and their work (24%).

Table 8: Purpose of using Social Networking Sites

Purpose	No. of Respondent
Being part of online dedicated communities (communities for music, books, etc.)	85 (42.55%)
Communicating and interacting with family, friends & professionals	168 (84%)
Find useful information	192 (96%)
Get/give opinions or comments	112 (56%)
Entertainment (Playing games, chatting)	144 (72%)
Sharing experience	120 (60%)
Academic (online learning, research)	114 (57%)
Convenient than email/phone	80 (40%)
Keep up-to-date	114 (57%)
Promote themselves and their work	48 (24%)
I use it when I'm bored	88 (44%)
Keep informed of new product reviews that interest	64 (32%)
For professional activities (searching for job)	112 (56%)
National issues like politics, economy and religious matters	87 (43.5%)
To make professional and business contacts	24 (12%)

Figure 6: Purpose of using Social Networking Sites
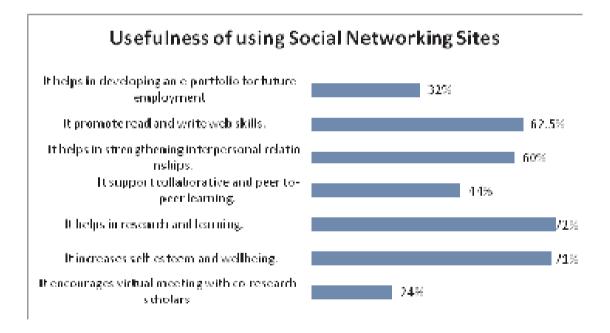
5.1 Usefulness of Using Social Networking Sites

Table 9 and figure 7 reveals the usefulness of social networking sites. Majority of the students and researchers state that social networking sites helps in research and learning (72%), increases self-esteem and wellbeing (71%), It helps in strengthening interpersonal relationships (60%).

Table 9: Usefulness of using Social Networking Sites

Benefit	No. of Respondent
It encourages virtual meeting with co-research scholar'	48 (24%)
It increases self-esteem and wellbeing.	142 (71%)
It helps in research and learning	144 (72%)
It support collaborative and peer to-peer learning.	88 (44%)
It helps in strengthening interpersonal relationships.	120 (60%)
It promote read and write web skills	125 (62.5%)
It helps in developing an e-portfolio for future employment	64 (32%)

Figure 7: Usefulness of using Networking Sites
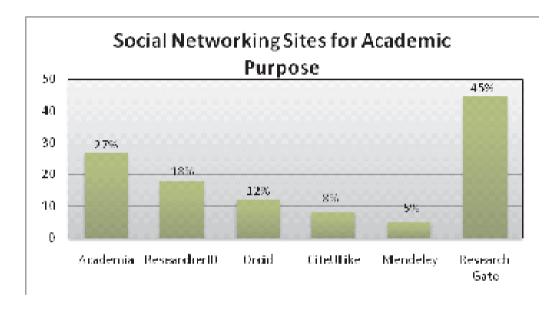
5.9 Specialized Social Networking Sites for Academic Purpose

For academic purpose there are many social networking sites to share and upload and download their research work and many more. Some of the specialized social media/networking sites are listed in table 10 and figure 8 and showing the most use social media/networking sites by the students and researchers of Manipur University. Among them research gate (45%) used maximum number of users followed by Academia (27%).

Table 10: Social Networking Sites for Academic Purpose

Social Media site for Academic Purpose	No.of Respondent
Academia.edu	54 (27%)
ResearcherID	36 (18%)
Orcid	24 (12%)
CiteULike	16 (8%)
Mendeley	10 (5%)
Research Gate	90 (45%)

Figure 8: Social Networking Sites for Academic Purpose

5.10 Library as a Friends or Community on Social Networking Sites: Users response

According to data presented in figure 11 reveals that the student's response regarding the library page or community as their friend on whatever social networking sites they are member of. So majority of the student and researcher of Manipur University want to add or want to be friend with their library (87.5%) while very few users (i.e. 2.5%) do not want to add their library on social media sites as their community or friends.

Table 11: Users response regarding library as friend on Social Networking Sites.

Category	Users Response
Yes	175 (87.5%)
No	5 (2.5%)
Not Sure	20 (10%)

5.11 Services from Library Page on Social Networking Sites: Users Expectation

Table 12 shows the library services which the students and researchers of Manipur University would like to get if they add their library on their social networking sites like facebook, whatsapp, youtube, etc. Majority of them want library provide Library updates, e.g. new stock, events, book signings etc.(76%); Information on interest groups, e.g. a reading group (72.5%); Information on University event (70%) and Help with research either in person or via internet communication (60%) through social networking sites.

Table 12: Services from Library Page on Social Networking Site: Users Expectation

Sl. No	Services	No.of Respondent
1	Information on University event	144 (72%)
2	Information on interest groups, e.g. a reading group	145 (72.5%)
3	Access to good quality information for research (e.g. genealogy or personal interest	64 (32%)
4	Help with research either in person or via internet communication	120 (60%)
5	Updates on what services the library's own web site can offer, e.g. improved search options and new electronic services	72 (36%)
6	Library updates, e.g. new stock, events, book signings etc.	152 (76%)

5.12 Problems and Risk involved in used of Social Networking Sites

Table 13 and Figure 9 indicate the problems and risks face by the users while accessing the social networking sites. Some of the main problems and risks faces by the users to access social networking sites are unwanted attention from others (60%), data security (45%).

Table 13: Problems and Risk involved in used of Social Networking Sites

Problems and Risk	No. of Respondent
Access denied by University	70(35%)
Cyber-bullying	40(40%)
Data security	90(45%)
Unwanted attention from others	124(62%)

Figure 9: Problems and Risk

1. FINDINGS

Some of the major findings are as follows:

➢ 100% respondents of Manipur University students and research scholars aware about social network.

➢ Maximum number of users aware of Facebook (96%), WhatsApp(85%), Twitter(57.5%), YouTube(92%), Wikis(62.5%) while very least number of respondent of the total population aware about Blogs(15%), Virtual World(17.5%), Podcasts(19%).

➢ Facebook (95%), Whatsapp (85%), YouTube (92%) and Wikis (60%) are mostly use by students and researchers. On the other hand, Blogs (12.5%), Podcasts (10%), Virtual World (15%) and Delicious (17.5%) are least use by them.

➢ Students use smart phone (97.5%) to access social networking sites followed by laptop (48%), while very least number of students use tablet (11%).

➢ Maximum number of users access social networking sites on daily basis i.e.(66%) and minimum number of users access these sites very rarely (4%).

➢ Majority of students access social networking sites at home (97.5%) followed by library (40%). Whereas very least number of students access social media at cyber café (7.5%), hostel (5%), department laboratory (12%).

➢ The main purpose of using social networking sites is to find useful information (96%), Communicating and interacting with family, friends & professionals (84%), Entertainment (Playing games, chatting) (72%), sharing experience (60%), etc. while least number of students used it for the purpose to make professional and business contacts (12%), Promote themselves and their work (24%).

➢ Among the social networking site research gate (45%) used maximum number of users followed by Academia (27%) by the users for academic purposes.

➢ Majority of users want library provide Library updates, e.g. new stock, events, book signings etc. (76%); Information on interest groups, e.g. a reading group (72.5%); Information on University event (70%) and Help with research either in person or via internet communication (60%) through social networking sites.

➢ Unwanted attention from others (60%), data security (45%) are the main problems and risks faced by the students.

2. CONCLUSION

In today's society social networking taking very important part to access, disseminate, share information and communicate to each other and also becoming very important part in academic purpose. Moreover, today most of the people or community or group (friends, colleague, Clients, etc.) is well connected through social networking sites. So, if library and librarian also connect with their users through social networking sites then, it will be very useful to share library resources, update information, etc. anywhere anytime. Therefore, in such advance knowledge and technological environment adding their library or library page as a friend on social networking sites becoming the wishes of today's library users (both students and researchers and other professionals).

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ADOPTION AND USER PERCEPTION OF 'DSPACE' IN PDPU LIBRARIES: A CASE STUDY

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Abstract:

This study examines the extent of use of Dspace open source software and its adoption and users perceptions among Indian libraries. Two separate questionnaires were used to gather data. In my pilot study 100 DSpace users were selected using the stratified random sampling technique. The findings revealed that 93 library users and 1 Library member responses on it. It is a clear sign coming out of this study is that all the DSpace software is becoming adoptable option to managing digital collections and building digital repository in India.

Keywords: Digital Library, Digital Repository, Digital Repository Software, Open Source software, Dspace, user perception

1.0 Introduction:

According to Tennant (2009), "Open Source is better option than commercial software" he asserted that Since last few years open source digital repository systems has significantly recognised a solution platform in today's' digital age. The current study tries to identify the extent of adoption and perceptions of open source digital repository system-DSpace, among Indian library and information professionals. An extensive evaluation of the DSpace digital document repository systems has been conducted. The evaluation aimed at selecting an open source software package that best satisfies the organization needs and the requirements for the storage, dissemination and preservation of documents and for their optimum information usage. The Dspace repository systems were evaluated against 17 basic criteria chosen from nine core categories of requirements: community, security, functionality, integration, modularity, metadata, statistics and reports, preservation, and outputs. These criteria were selected with the expansive literature review and pilot project conducted at Pandit Deendayal Petroleum University Gandhinagar. This research emphasis on two aspects of study one is to know adoption situation of Dspace for managing institutional scholarly repository among Indian libraries and second is to know user perceptions and level of satisfaction investigating the librarian, author's and users roles to successful management of digital (DL) repository using DSpace.

2.0 Research Question

As per the Dspace website (www.dspace.org) Last data on January 1, 2015 Over 1000 organizations that are currently using the DSpace software in a production or project environment. The most common use is by academic and research libraries as an institutional repository; however there are many organizations using the software to host and manage subject based repositories, dataset repositories or media based repositories. Visiting to a list of registered users. For a map of all registered user's visit. DSpace comes with the best web based interface *to library communities.* Goutam Biswas and Dibyendu (2009) has mentioned various advantages of DSpace software like unrestricted use; free of cost; community involvement in development and maintenance of software; competence compared to other commercial software; and the issues of copyright etc. The obvious recognized reason for the organizations like libraries to choose open source software for DR purposes is 'no cost'. There is no restriction but everyone can use, study, modify and distribute the open source software, regardless of a person's position, wealth, social conditions etc. The social aspect of the open source software is tremendous. The development and maintenance of this type of software can be done with community-based activities. Anybody can contribute the social group engaged in its development. "Open source software projects encourage innovation and collaboration of community members."

Why Dspace, because
- Has become a popular software among Indian libraries
- Is platform of choice
- Has features reach application to offer optimum (effectiveness + efficiency) service to users

How Dspace
- MIT Library was willing to have the best flexible software with no lock in base option so they developed Dspace a alternative option.

Who Dspace
- According to Dspace Foundation (www.dspace.org), over 1000 organizations are using dspace as a digital library platform. Academic, Public, Research Library are using Dspace.

Where DSpace:
- According the Dspace foundation (www.dspace.org) around 90 countries have adoted dspace for their digital repository-

3.0 DSpace Digital Repository Systems

The Dspace is an open source service platform developed by the community and project of the MIT Libraries and HP Labs

Dspace is a digital asset management system. It helps create, index and retrieve various forms digital content. Dspace is adaptable to different community needs. Interoperability between systems is built-in and it adheres to international standards for metadata format.

There are various reasons to choose this software:
- Dspace is an open source technology platform which can be customized or extend its capabilities.
- Dspace is a service model for open access and/or digital archiving for perpetual access.
- Dspace is a platform to build an Institutional Repository and the collections are searchable and

retrievable by the Web.

· To make available institution-based scholarly material in digital formats.

· The collections will be open and interoperable. Institutional repository is a set of services that a research institution/ organization/ University offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members

Major features of DSpace

The following sections describe the ten major features of Dspace:

1. Lucene search engine and query language

2. Handle system

3. OAI-PMH

4. Standard metadata format

5. Reach workflow management

6. Web and cloud –based

7. Mobility

8. Statistics and Metrics

9. Language customization

10. Intolerabilities

4.0 Objectives of the Research:

The primary aim of the research is to investigate the role of DSpace in scholarly publishing, growth of Institutional repositories adopting DSpace as system by Indian Library and information professionals. At a baseline, the research project will examine the current level of accessibilities of DSpace, difficulties faced to manage and by the library professions, repository managers and usage by end users.

1. To know the perception between faculty and users of using information on research

2. To identify the impediment faces by Indian library professionals to establish DR and users to utilize Dspace

3. To find out the selection approach of dspace among academic, research, commercial and public library building digital repository.

4. To understand the popularity of DSpace among library and information professionals in India

5. To measure technical performance evaluating DSpace as a software

6. To identify debilities faced by Indian library professionals to establish DR and users to utilize Dspace

7. Conduct evaluation study on a Test bed environment to know Dspace potentiality

8. Measuring adoption rate of Dspace software

9. Measuring satisfaction rate DSpace software

10. To find out effectiveness and efficiencies taking a survey to ascertain the feedback of their DR on Dspace

11. To measure efficiency of Dspace among Indian libraries

5.0 Scope and Coverage:

The current study is focused on Indian Library and information centres. The academic, research centre, Government, non-profit organizations, commercial organizations, archive public library, and personal repositories are included for the study. The study is comprised the libraries or institutions those adopted DSpace open source software only in India and its territories. The Library manger, IT manager, system administrator are selected as a DR adapters. Administrative Staff, Faculty Members, under graduate

students, post-graduate student, research scholar, Librarian are the users of DR.

6.0 Literature Review:

The research paper published entitled adoption and user perception of Koha library management system in India published in 'in Annals of Library and Information Studies'vol.59, December, 2012 gave me full idea and inspiration to explore the research on the current subject. The idea of samples selection has obtained from dspace and Duraspace foundation, US that gave me delivery of correct information to my research. A number of authors advocated the suitability of OSS to libraries, while a few articles describe empirical studies of open source digital library systems using Dspace. Sreekumar,

M, G.(2007) asserted that open source is better than proprietary software because libraries may alter it to meet their needs, and such alterations may benefit other libraries as well. However, he noted that small libraries were unlikely to have technically sophisticated personnel who could install and maintain OSS, and large libraries exceeded the scalability limits of open source ILSs at the time.

Bretthauer (2006) considered OSS an opportunity for libraries and with a "tendency to push innovations". OSS considered low-cost solutions for technological applications and offer cheap alternatives to expensive commercialized solutions for libraries. Forrester undertook an in-depth study of how open source software is being used in North America and Europe to understand its role in IT and examine the barriers and benefits that open source software represents to enterprise customers. Among the concerns, the biggest concern was to find 'technical support'. The survey revealed respondents' perceptions as: OS provide significant economical and technological benefits including cost savings, improving overall efficiency of IT, quality of products and processes, greater innovation, increased competition among service offerings, and more efficient use of resources across the industry. Kumar has compared the open source ILSs Dspace, E-Print, and Greenstone in a cross comparison ranking of their features, and found that Dspace was the most functionally mature of the three. Chalon et al. Researched several open source ILSs for small collections.

Gail Hodge and Evelyn Frangakis (2004) studied the digital archive. One of the aim of the study was to identify the how to archive document in digital format in a digital environment. It was found about DSpace Institutional Digital Repository System began as a joint project of the MIT Libraries and Hewlett-Packard Company. This architecture use number of preceding projects including those at Cornell, CERN, OCLC, LC and OAIS. It describe about DSpace released in November 2003 via an open source license.

7.0 Research Design:

The proposed research is a descriptive study to evaluate DSpace digital repository open source system among Indian Library and information professionals also to measure perception scale of end users those using DSpace. Through the experimental study analysis the similarities and differences between cases, identifying areas that have direct implementations for DSpace for their DR. Data to be collected from multiple sources, printed and electronic questionnaires. Expert opinion through Gtalk and Skype has also been made for getting accurate course of research action. Web based tools for evaluation and Analysis have been accepted for the study.

8.0 Research Methodology:
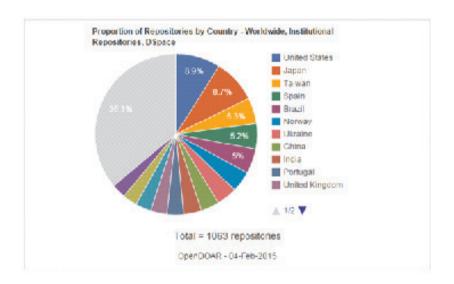
In the current study survey methods of research has been adopted. The structured questionnaire was prepared MS word file and also hosted on of survey tools Google drive. Researcher asked a question on details of Dspace implementation in the library and received their feedback on key fictional features of Dspace. The questionaries were distributed through LIS mailing group and by mail those who are established the Dspace for their digital repositories. Researcher also got the full information from www. Dspace.org

website according to the list of DSpace users in India and worldwide. Male and female, various category of library sample were randomly chosen. Form analysing the data mean, standard deviation, ANOVA etc. for measuring perception rate of favouring component amongst of users groups to Dspace.

For preparation of keywords researcher used the chain indexing of Dr. S. R. Ranganathan (1935).The correct calculation and for effectiveness and measuring perception of services amounts groups of users Mean, Standard Deviation, and ANOVA has been applied.

8.1 Total Population: (Scenario for Adoption of Dspace in India and worldwide)

According to OpenDOAR - 04-Feb-2015 data from the opendoar.org proportion of repositories worldwide is available; where 1063 organizations using DSpace for managing their digital institutional repository. As per the record the United States remained on top in the world adoption of DSpace while India stands at 9th positions in the word.

8.1.1 Sample: (Selection of Intuitions- DSpace User in India)
Table-1.Category-wise DSpace Installations in India, as on Jan-2015

S. No.	Institutions/Libraries	No.	%
1	Academic	95	74
2	Research Centre	20	16
3	Government	3	2
4	Commercial	4	3
5	Archive Public Library	6	5
	Total	128	100

(Source: www.dspace.org)
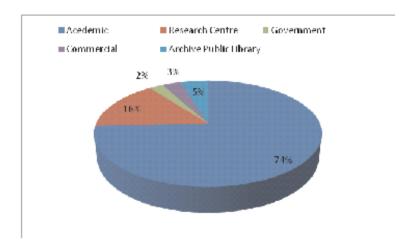
Fig. 1 Category wise Installations of DSpace in India, as on Jan-2015

As per the feedback collected from the Dspace user's list from www.dspace.org web sit as on January, 2015 the total number of Dspace users in India were 128. The grater user of DSpace users are academic intuitions which are 74%, 16% Research Centres are a second larger numbers of Dspace users in percentile. While Government organization is in least stage with two percentages,

8.1.2 Demographic distribution of Dspace users in India

Table-2 Sate-wise Dspace Installation in India

State	No.	Year	%
Andhra Pradesh	9	2010	7
Bihar	1	2011	1
Goa	1	2010	1
Gujarat	18	2007	14
Haryana	1	2008	1
HP	2	2010	2
JK	2	2012	2
Karnataka	20	2005	16
Kerala	11	2006	9
Maharashtra	18	2006	14
Meghalaya	1	2012	1
MP	1	2012	1
New Delhi	17	2007	13
Orissa	2	2012	2
Punjab	2	2012	2
Pondicherry	1	2010	1
Pune	1	2009	1
Rajasthan	1	2010	1
Tamalnadu	5	2008	4
UP	4	2009	3
Uttrakhand	3	2011	2
West Bengal	7	2010	5
Total	128		100

(Source: www.dspace.org)
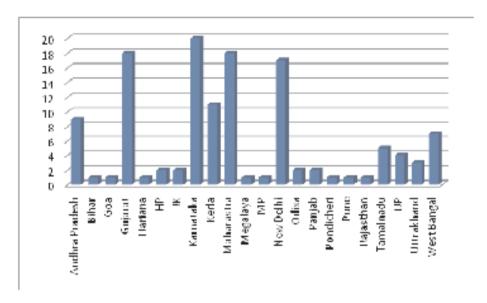
Fig. 2 Demographic distribution of Dspace users in India, as on Jan-2015

While a numbers of DSpace installations have been reported in India, the numbers of 128 have been reported based on URLs and which are registered on OpenDoar directory. However many more have run their digital repositories on intranet offline. The study revealed that out of 128 DSpace installation in India and its territories the large group of institutions belong to Karnataka 20(15%), and Gujarat 18(14%) and Maharastra 18(14% Fig. 2%. The table shows that Gujarat was adopted dspace in the year year 2007 and has 18 numbers of users. While Tamil Nadu was adopted in year 2005 but stop at number 5.

9.0 Dspace in Pandit Deendayal Petroleum University: a pilot study

Pandit Deendayal Petroleum University acronym with PDPU was enacted in 2007. The University offers programs to address the need for trained human resources in the domains of Science, Technology, Management and Humanities.

9.1 PDPU Libraries:

In India the DRTC Bangalore was first adopter. In 2006, Dr. A.R. Prasad implemented its first version 1.8 in DRTC. After all, by Dr. M.G. Sreekumar was adopted dspace in Indian Institute of Management, Kozicode, Karala in the year of 2006. In Guajrat Dr. H. Anil Kumar from Nirma University was the first user of Dspace in the year of 2007. After Nirma University, Ahmedabad, PDPU adopted Dspace in year 2007.

PDPU libraries have its branch institutional libraries named FOET Library, SPM Library and SLS Library. PDPU libraries started its computerization in 2007 with its inception. The library automation has been approached centrally among all libraries. PDPU libraries begun to use Information Technology services such as OPAC for checking online availability and online book reservation. It is ensured that the resources are easily accessible to the users, remote access to e-resources and online databases are also made available.

9.2 Dspace in PDPU Library:

SPM library implemented Dspace 4.1 version with a relatively low cost on 4th August 2008 with 521 records which now 1241 records are accessible online. Library adopt XMLUI module of Dspace. The Dspace project was initiated by librarian and hosted on window 2003 IBM blade server shared with Alice software. Dspace now occupied 2 GB of Data out of 2TB of server space the RAM is 20GB. Assistant Librarian is managing all digital repository

and Dspace task. Library is offering service with brand name 'DeepBlue' – Knowledge repository. Attended Dspace workshop and received 6 days training from NISCAIR, New Delhi to learn Dspace software. The most appropriate reason to adopt Dspace lack of alternative available in market and cost. Deeplue is also deposited on OpenDoar repository platform. Now DeepBlue repository is available online at http://library.pdpu.ac.in:8080/xmlui

9. 3 Performance scale in of Dspace components as Software in PDPU library

Criteria-based assessment is a quantitative assessment of the software in terms of sustainability, maintainability, and usability. This can inform high-level decisions on specific areas for software improvement.

For measuring any software performance evaluation is key requirement .Dspace as software, I disseminated total number of five questionaries in PDPU Library and in IT-Admin Department out of five; received 3 responses for Dspace user's as an administrator. I defined 17 criteria to evaluate Dspace as software for its performance. The result saws that information retrieval system and Documentation with top with 71% goes with excellent and 100% given the marks very good scale while Dspace installation remained at poor scale.

The assessment criteria are grouped as follows.

(Table-3 Performance Evaluation by system admin)

Sr. No.	Response of users for DSpace	Excellence	very good	Good	Average	Poor
		5	4	3	2	1
1	Information Management	38.46	61.54	0.00	0.00	0.00
2	Information retrieval system	71.43	28.57	0.00	0.00	0.00
3	Report Module	0.00	0.00	42.86	30.77	0.00
4	Statistics Module	0.00	0.00	42.86	30.77	0.00
5	Preservation	0.00	100.00	0.00	0.00	0.00
6	Quality Control	38.46	61.54	0.00	0.00	0.00
7	Interoperability	38.46	61.54	0.00	0.00	0.00
8	Metadata	38.46	61.54	0.00	0.00	0.00
9	User Interface	45.45	0.00	54.55	0.00	0.00
10	Administration and control	41.67	33.33	25.00	0.00	0.00
11	User Management	45.45	0.00	54.55	0.00	0.00
12	Bug-track feature request forum help	0.00	0.00	50.00	15.38	16.67
13	DSpace Installation Process	0.00	0.00	0.00	30.77	20.00
14	Documentation	71.43	28.57	0.00	0.00	0.00
15	DSpace Security Features	0.00	72.73	27.27	0.00	0.00
16	Dspace Visibility	38.46	61.54	0.00	0.00	0.00
17	DSpace Content Workflow	38.46	61.54	0.00	0.00	0.00
	Average	29.78	37.20	17.48	6.33	2.16

The table shows that preservation component of dspace is most popular in users point of view. While Dspace installation is in poor choice, as researcher interview shows that Installation part is though and complex. Dspace foundation and community should more emphasize on Dspace Installation part should be more usable.

9. 4 User perception scale of Dspace among PDPU Communities

Total 100 questionaries circulated total number of [100] questionaries among PDPU libraries users. I was defined 12 criteria looking user's perceptions and evaluate Dspace as software for its performance. The result saws that Dspace Visibility and search retrieval service remained top with 38% and 25% of scale respectively goes with excellent scale.

(Table-4 demographic background of respondents)

Demographic background of respondents "Gender" in Library		
Gender	N	%
Male	58	61.70
Female	36	38.30
Total	94	100

Table-5 Central Tendency of Users for Research Finding in DSpace

Research Finding/Journals	N	Total	Mean
Under Graduate Student	37	2	19.5
Post Graduate Student	18	11	14.5
Research Scholar-PhD	15	14	14.5
Research Associate	5	4	4.5
Non-Teaching Staff	3	0	1.5
Teaching Faculty	15	12	13.5
DSpace Admin/Librarian	1	0	0.5

Most of the Research Scholar and RA are finding the information on DSpace for satisfy their information need.

Most of the Research Scholar and RA are finding the information on DSpace for satisfy their information need. As researcher calculated standard deviation for measuring the correct opinion for research findings in Dspace in SD-**15.66**

Table-6 demographic background of respondents

Level of satisfaction with over all DSpace services and Information resources	No. of Users	%
Very satisfied	30	31.91
Satisfied	61	64.89
Not very satisfied	2	2.13
Never satisfied	1	1.06
	0	0.00
Total	94	100.00

Over all satisfaction ratio shows that 61% Dspace users are satisfied with Dspace service platform.

Total 100 Questionaries ware circulated amongst Digital repository users those are Under Graduate Student, Post-graduate students, Research Scholar-PHD, Research Associate, Non-Teaching Staff, Teaching Faculty and DSpace Admin/Librarian. According to questionnaires following result are available.

Response of users for DSpace	Excellence	very good	Good	Average	Poor
	5	4	3	2	1
Information access and management	18.87	73.32	4.04	3.77	0.00
search retrieval service	25.21	57.14	10.92	6.72	0.00
Search support	21.93	57.31	10.53	9.94	1.00
Browse	23.61	61.11	9.17	6.11	0.00
Preservation	20.17	56.48	16.43	6.92	0.00
Interoperability	23.44	69.79	6.25	0.52	0.00
Metadata	9.31	86.17	3.99	0.53	0.00
User Interface	5.29	93.12	1.59	0.00	0.00
User Management	24.42	71.98	3.08	0.51	0.00
User's Documentation	13.79	1.38	80.69	3.45	2.00
Dspace Visibility	38.36	40.21	21.43	0.00	0.00
DSpace Content Workflow	21.92	59.18	17.26	1.64	0.00
Mean	20.53	60.60	15.45	3.34	0.25

10.0 Hypotheses:

1.   **Hypothesis-1** There is a no significant deference in the perception of students and faculty using for research finding in DSpace.

2.   **Hypothesis-2** Indian library and information professionals get difficulties to implement DSpace as a DR.

3.   **Hypothesis-3** DSpace is the best innovative content management and archival application for managing digital repository in libraries communities.

4.   **Hypothesis-4** DSpace is the software of choice for academic, public, and commercial organizations for building open digital repositories.

11.0 Result and Discussion:

Testing of hypotheses H-1 shows there is no significant deference in the perception of students and faculty using dspace.

The consolidated score [Table 1-6]indicates that DSpace is offering best services and a good option having best search and browsing support as well good support for metadata and provides more power to administrator to put access restrictions at collection level to PDPU communities. The web browser based upload and better user interface. With the option of deployment of themes adds to better look and feel. The back end programming language JAVA makes it platform independent (Open Source). The lacking points like unavailability to upload compressed files and little bit tough installation put it on backstage This study has key implications for Open Source Software Dspace; the librarian, administrators as well as organizations who want to adopt DSpace. Firstly, the validated measurement model suggested in this study can help Librarian, and DR Manager to better determine the effectiveness of their enhancement processes. The current study identified 5-1 scale for measuring enhancement effectiveness and efficiencies of Dspace. A thorough examination of enhancement performance of Dspace would include incorporating both the sets of measures (i.e. Efficiency= perceptions, as well as effectiveness = adoption)

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A STUDY OF COMPETENCY RANKING IN THE COMPETENCY MODELS OF LIBRARY PROFESSIONALS: A REVIEW

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ABSTRACT

Purpose: The LIS (Library and Information Science) profession has timelessly been strengthened by its skilled professionals and the working units; therefore it is equally important to define their "competencies" i.e. a set of knowledge, skills and abilities required in order to yield better job performance in the field. Competencies are relevant to be defined for job grading at various organizational levels; which in turn demarcates the levels of job performance in terms of higher to lower qualifications and job experience. Numerous studies have been carried out on LIS competency and various competency models have been proposed at the same time pertaining to different types of libraries. In view of the dramatic changes taking place in the academic and research libraries, it is now evident that the libraries can no longer afford to wait for the crash courses to be offered in the job arena. The librarians need to keep up, update, learn, adapt and evolve with the increasing expected competencies on their own. This paper is an attempt to rank the various sets of LIS competencies which have been defined by various authors in the competency models proposed for library professionals. The purpose of ranking is to identify and draw out the most and the least important set of competencies among many others.

Paper type: Literature review
Keywords: LIS competency, Competency model, Job skills, Job performance, LIS Profession, Library professionals

INTRODUCTION

The library and information science profession has been continuously facing revolutionary and unprecedented changes with time; therefore librarians must at the same time continually update their skills i.e. 'competencies' in the field. This is important because the rapidly advancing IT technologies are driving libraries to change, adapt and evolve. Another pressuring factor is the increasing expectations from the library patrons as well. The library management team needs to know what competencies are expected of the staff – act on it and build up the necessary competence in them. In simple words, competency means the comprehensive skills required by the individuals (in this case the LIS professionals) for efficient job performance.

As per the Library of Congress "Competencies are measurable, observable patterns of skills, knowledge, abilities, behaviours and other characteristics that an individual needs to perform as work roles or occupational functions successfully" (Webber, 1999).

According to the Federal Library Information and Centre Committee (2011), "competencies are observable, measurable patterns of skills, knowledge, abilities, behaviours and other characteristics that an

individual needs to perform as work roles or occupational functions successfully".

The Webster's Third New International Dictionary has defined competencies as "the quality or state of being functionally adequate or having sufficient knowledge, judgement, skill or strength (as for a particular duty or in a particular respect).

The important, minimal pre-requisite competencies of library professionals include MLISc degree/PhD, PGDCA, IT skills, communication skills, personal and interpersonal competency skills like – managerial skills, continual learning, cognitive skills, customer service skills, information literacy, professional skills, teamwork, motivation, leadership skills and human resource management etc.

Having a pre-formulated set of competencies is helpful for the libraries in several ways;
- It can be used as a tool to develop and provide better improved services in the libraries
- Provides a set of binding principles for the organization
- Stimulates critical thinking, better decision-making and suggest improvements
- Acts as a tool of strength and weakness analysis of staff performance and service delivery
- Provides a basis of job qualifications for the job applications
- Improves library service delivery for the users

With advancements in the studies of competencies, several researchers started to come up with the LIS competency models. A competency model is framework that defines and specifies the skills and knowledge requirements of a job. They act as a key tool of the recruitment and hiring process as well as assessment of strengths and performance measurement.

Bock & Ruyak (2007) defined competency model as "a customised list of behaviours and skills used to distinguish or predict employee performance within a business".

Ansari & Khadher (2011) acknowledged that "competency models are selective and consists of a short list of competencies". He also added one pitfall or criticism about the framework of competency modelling i.e. it lacks scientific assessment and verification of the competency skills as drawn for the measurement of job performance.

Design/Methodology:

For this paper, literature review method was used mostly. A thorough review of total six (6) LIS competency models was carried out. A total of twenty-five (25) quintessential competency points were drawn out from the six models and ranking method carried out in order to provide a clear picture of the competency skills statistically . The LIS competency points were extracted out from the competency models, on the basis of their popularity and importance. Apart from that, several cross studies of LIS competency models were also done in order to get deeper in depth of understanding and knowledge.

Objectives: The major objectives undertaken for this literature review study were-

i.   To study and analyse the various competencies present in the competency models

ii. To rank the competencies in the competency models according to their importance and significance in the LIS profession

Findings: This study provides an enumerative account of the ranking of various competencies as defined in the six LIS competency models, taken into account for the study. After analysing the ranking tables, it was found that there are only three competency skills with highest ranking 5 votes found in all the reviewed six competency models viz. cognitive skills, communication skills and professional skills. Hence these three competency skills have been found to be most relevant and important amongst all other competency skills. The least acknowledged competency skills with the lowest rank are CPD, designing, evaluation, motivation, planning, psychology safety, and teaching.

Research limitations/implications: Not a single competency skill was found present in all the six

competency models. Each model seemed to be lacking at least one or more competency skill(s) in it. Hence no perfect competency model as such has been found during this literature review study. Therefore more of literatures need to be reviewed in future for better understanding and results.

LITERATURE REVIEW

The competency models can take up a variety of forms but typically includes the following principle elements:

- A diagram of the model
- Skills and activities interlinked with each other with a specific relationship amongst each other
- Definitions/descriptions of activities of the specific competencies

The broadest categories of competencies being found and further sub-divided in the competency models are

- Personal Competencies
- Interpersonal Competencies
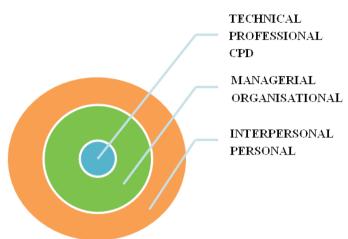
It is usually found that all other types of competencies are more or less the sub-divisions or sub-types of the aforementioned categories. Accordingly the other sub-types of competencies are as subject-specific competencies, core competencies, job competencies, technical competencies, specialized competencies (eg. special libraries), generic competencies etc.

For this literature review study, a total no. of six (6) competency models have been reviewed and analysed. They are as follows:

1) Grover (1985) drafted a curriculum competency model for library and information professionals

It is one of the oldest models in the LIS profession; therefore several loopholes were witnessed both in terms of its framing structure, content and development. The concept of Information literacy was recently proposed in 1972 by Paul Zurkowski and just a decade later this model came into its being with an attempt to incorporate the principles of Information literacy in it. Surely enough it was a challenging task for the researcher, nevertheless Grover designed the competency model keeping into account a balanced mixture of information literacy, information management and human resource management. The core competencies mentioned in the model curriculum can be abstracted into the following points:

i. Articulate a philosophy of the library and information professionals

ii. Recognise basic human behaviour patterns applied to the communication of information

iii. Comprehend the theory and general patterns of information transfer in society

iv. Articulate the major methods of organizing information for use in the design and implementation of information systems

v. Manage an information system, employing appropriate management theory

vi. Analyze information needs of a client group

vii. Apply appropriate research methodologies and interpret research results in the management of an information system

viii. Evaluate and design an information system, employing appropriate methods and technologies

ix. Design appropriate services for a particular environment based on the comprehension of the societal function of libraries and information centres (educational, cultural, information research, recreational and bibliographic functions).

2) A competency model was developed by **Corall** (**2005**) keeping in mind the developing professionals at this networking age. It is as shown below:

Fig 1: Differentiating and Contextualising Professional Competence Model

Source: Developing Models of Professional Competence to enhance Employability i the Network World (UK: University of Sheffield, 2005), 35.

It is a three-layered, concentric circular competency model consisting of the layers- interpersonal & personal skills, organisational & managerial skills and CPD (Continuing Developing Professionals), professional and technical skills. The first outer layer describes the generic skills i.e. interpersonal and personal skills as a competency requirement such as teamwork, communication and time management skills etc. The interpersonal and personal skills have been described as basic survival skills that should be acquired by all professionals in general. The middle layer deals with the "need for business acumen" or management skills, in addition to the generic skills. They have been described as important enablers; it deals with the context-specific LIS knowledge and skills. The innermost deals with the technical skills essential for a profession. This is the core competency to be augmented by the professionals supported by managerial and generic skills. The CPD has been included here to indicate how a profession's technical skills will keep on evolving and updating with time including the continuous development of professionals with it.

3) Ansari & Khadher (2011) drafted 42 points in their competency model for library and information professionals. In this competency model the competency requirements are mostly based upon the grounds of practical and common sense. Other qualities like efficient IT skills, management skills, motivation, communication skills and tactfulness have also been highlighted by the author.

The points can be summarised as below:

Managerial Effectiveness
· Develops plans and strategies
· Sets priorities and focuses on what is critical
· Confronts and solves problems
· Makes sound and timely decisions
· Evaluates subordinates fairly
· Monitors task implementation
· Decisive
· Negotiates effectively
· Manages and organizes time effectively

- Realizes the need for change and manages change effectively
- Utilizes available resources effectively
- Develop subordinates' abilities
- Delegates authority

Cognitive Skills
- Envisions future trends
- Open minded and accept new ideas
- Diagnoses situations accurately
- Creative
- Analyzes information effectively

Social Skills
- Communicates effectively/Builds good work relationships
- Understand others' needs and emotions
- Listens actively
- Appreciates and respects the ideas of others
- Able to function in a political environment
- Has a sense of humour

Motivational
- Has high motivation to achieve and motivate staff
- Active
- Committed to achieving organizational goals
- Takes initiative and ready to act
- Keeps an optimistic view

Personal
- Controls own emotions
- Self-confident
- Knows own strengths and weakness
- Trustworthy
- Accepts criticisms

Occupational
- Committed to high ethical and professional standards
- Committed to lifelong learning
- Strives for service improvement/excellence
- Deals effectively with the media
- Strives for self-improvement
- Competent with new information technology
- Has the ability to evaluate user needs
- Demonstrates fundraising skills and techniques

4) The **University of Saskatchewan (2013)** in Canada designed a competency model framework for its university librarians, shown as below
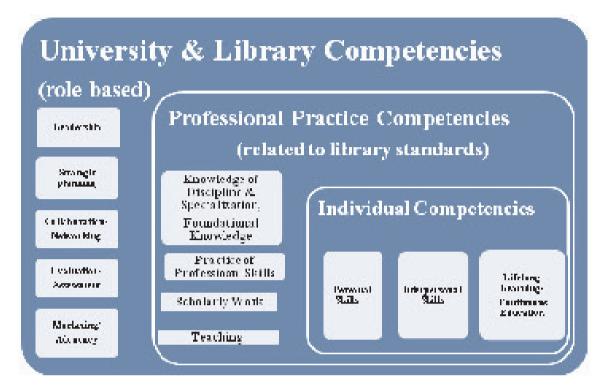
Fig 2: University Library Competencies Framework

Source: Core Competencies for University of Saskatchewan Librarians (Canada: University of Saskatchewan, 2013).

This model describes the basic and essential skills and knowledge required by the university librarians. The competency requirements have been broadly arranged into three groups viz., university & library competencies, professional practice competencies and individual competencies. The essence of the models nests in the relationship between the three competencies groups-

- Competencies related to the goals (vision), organisational objectives (mission), and long term plans prepared by the library professionals
- Those related to the technical and professionals skills required by the university librarians
- Those related to the personal and interpersonal skills

1) Yaminfirooz, Nooshinfard & Siamian (2015) prepared a competency model for the academic library professionals in Iran.
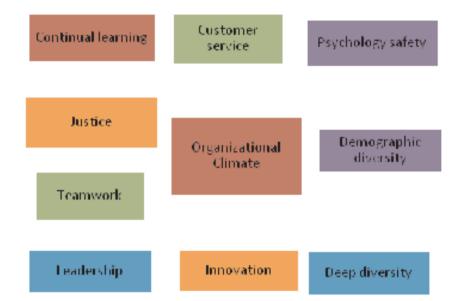
Fig 3: Theoretical Competency model for the academic librarians in Iran

Source: Structural Equation Model of Organizational Climate in Iranian Academic Libraries (Iran), 946.

The researchers focused this model development based on the theory of organizational climate; to study and understand the variation in work environments of academic libraries and its workers at various job levels. Forehand and Von Haller (1964) have defined organizational climate as "set of characteristics that distinguish the organization from other organizations, are relatively enduring over time and influence the behaviour of the people in the organisation." It has been studied that the organizational climate is the central focus of all the possible competencies, in the work environment of Iranian academic libraries. All other surrounding factors of competencies like justice, teamwork, leadership, innovation, deep diversity, continual learning, demographic diversity, psychology safety and customer service are influenced by the organizational climate.

1) Thabah (2015) prepared the following competency model for library professionals of academic libraries.

This study was carried out in the central libraries of all the major Indian universities like – Jawaharlal Nehru University, Delhi University, Banaras Hindu University, Gauhati University, NEHU etc. The researcher formulated several competency models with respect to each separate designation in the academic libraries for example like- competency models for Assistant Librarian, Deputy Librarian, Head Librarian and a model for all library professionals in general. The last general model for LIS professionals have been reviewed for this study as it covers all the professionals in general. Of all the models reviewed, the Thabah model was found to be the most detailed, specific and content rich in terms of competency coverage. The key points of competencies as pointed out by the researcher are as follows:

Knowledge competencies
i.　Foundation of Professional Knowledge
ii. Information Resources
iii. Information and Knowledge Management
iv. Information Technology

v. Library and Information Services
vi. Organisation Management
vii. Research and User Studies
viii. Continuing Education and Lifelong Learning

· **Skill competencies**
i. IT skills
ii. Team building skills
iii. Organisational skills
iv. Ability to manage a library and its function
v. Research skills
vi. Analytical & problem solving skills
vii. Decision- making skills
viii. Communication skills
ix. Computer skills
x. Stress management skills
xi. Time management skills

Personal competencies
i. Willingness to work effectively as part of a team
ii. Be honest, trustworthy and accountable
iii. Be respectful
iv. Demonstrate sound work ethics
v. Be flexible
vi. Willingness to assume some responsibility and work independently
vii. Ability to relate to people from various backgrounds
viii. Possess cultural awareness and sensitivity

RANKING TABLE OF COMPETENCY MODELS
Table 1: Shortlisted Competency skills present in each model

S No.	COMPETENCIES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	No. of occurrences
1.	Cognitive Skills	√	√	√	√	-	√	5
2.	Collaborative/Networking	-	-	√	√	√	√	4
3.	Communication Skills	-	√	√	√	√	√	5
4	Continuing Professional Development (CPD)	-	√	-	-	-	-	1
5.	Customer/User Service Skills	-	-	-	-	√	√	2

6	Designing Skills	√	-	-	-	-	-	1
7.	Evaluation/Assessment	-	-	-	√	-	-	1
8.	Human Resource Management	√	-	-	-	-	√	2
9.	Information Literacy	√	-	-	-	-	√	2
10.	Innovativeness	-	-	-	-	√	√	2
11.	Interpersonal Competency	-	√	-	√	-	√	3
12.	IT/Technical Skills	-	√	-	-	-	√	2
13.	Justice	-	-	-	-	√	√	2
14.	Leadership skills	-	√	-	√	√	√	4
15.	Lifelong Learning	-	-	-	√	√	√	3
16.	Management /Marketing Skills	√	√	√	√	-	-	4
17.	Motivational	-	-	√	-	-	-	1
18.	Personal competency	-	√	√	√	-	√	4
19.	Planning Skills	-	-	-	√	-	-	1
20.	Professional Skills	-	√	√	√	√	√	5
21.	Psychology Safety	-	-	-	-	√	-	1
22.	Research Skills	-	-	-	√	-	√	2
23.	Subject-specific Knowledge	√	√	-	√	-	√	4
24.	Teaching	-	-	-	√	-	-	1
25.	Teamwork	-	√	-	-	√	√	3

RANKING TABLES

Table 2: Highest ranking competency skills with "5" votes

Sl. no.	Competency Skills	Present in
1.	Cognitive Skills	Model 1, Model 2, Model 3, Model 4, Model 6
2.	Communication Skills	Model 2, Model 3, Model 4, Model 5, Model 6
3.	Professional Skills	Model 2, Model 3, Model 4, Model 5, Model 6

Table 3: Second highest ranking competency skills with "4" votes

Sl. no.	Competency Skills	Present in
1.	Collaborative/Networking skills	Model 3, Model 4, Model 5, Model 6
2.	Leadership skills	Model 2, Model 4, Model 5, Model 6
3.	Management /Marketing Skills	Model 1, Model 2, Model 3, Model 4
4.	Personal competency	Model 2, Model 3, Model 4, Model 6
5.	Subject-specific Knowledge	Model 1, Model 2, Model 4, Model 6

Table 4: Third highest ranking competency skills with "3" votes

Sl. no.	Competency Skills	Present in
1.	Interpersonal competency	Model 2, Model 4, Model 6
2.	Lifelong learning	Model 4, Model 5, Model 6
3.	Teamwork	Model 2, Model 5, Model 6

Table 5: Second lowest ranking competency skills with "2" votes

Sl. no.	Competency Skills	Present in
1.	Customer/User Service skills	Model 5, Model 6
2.	Human Resource Management	Model 1, Model 6
3.	Information Literacy	Model 1, Model 6
4.	Innovativeness	Model 5, Model 6
5.	IT/Technical skills	Model 2, Model 6
6.	Justice	Model 5, Model 6
7.	Research Skills	Model 4, Model 6

Table 6: Lowest ranking competency skills with "1" vote

Sl. no.	Competency Skills	Present in
1.	Continuing Professional Development	Model 2
2.	Designing	Model 1
3.	Evaluation/ Assessment	Model 4
4.	Motivational	Model 3
5.	Planning skills	Model 4
6.	Psychology Safety	Model 5
7.	Teaching	Model 4

CONCLUSION

After reviewing the six competency models, a list of total 25 relevant competency skills were shortlisted for the ranking purpose. These skills have been drawn collectively from all the six models. From the study of above tables, it is concluded that there are only three competency skills with highest ranking 5 votes found in all the reviewed six competency models viz. cognitive skills, communication skills and professional skills. Hence these three competency skills have been found to be most relevant and important amongst all other competency skills. The second highest ranking competency skills with four no. of votes are collaborative/ networking skills, leadership, management skill, personal skill and subject-specific knowledge. The third highest ranking competency skills are interpersonal, lifelong learning and teamwork. Next the third highest ranking competency skills are customer/user service, HRM, information literacy, innovativeness, IT skills, justice and research skills. The least acknowledged competency skills with the lowest rank are CPD, designing, evaluation, motivation, planning, psychology safety, and teaching.

Not a single competency skill was found present in all the six competency models. Each model seemed to be lacking at least one or more competency skill(s) in it. Hence no perfect competency model as such has been found during this literature review study. Therefore more of literatures need to be reviewed in future for better understanding and results.

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APPLICATION OF ICT IN PRESERVATION OF INDIGENOUS KNOWLEDGE: A STUDY OF SELECT LIBRARIES IN SHILLONG

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Abstract: *The indigenous knowledge of many cultures are at risk of disappearing due to many factors such as apathy and use of new technologies. The preservation of indigenous knowledge has become a global concern today. Many bodies such as governmental and non-governmental are playing an active role in collecting and preserving indigenous knowledge. In this regard, libraries are in the forefront. Information communication technologies (ICTs) are one of the best means for preserving information including indigenous knowledge. This study reports results of a study on application of ICT in preservation of indigenous knowledge in select libraries of Shillong, Meghalaya. It found that these libraries do collect and preserve indigenous knowledge but not in a very organized manner and that the use of ICTs is also still minimal.*

Keywords: Information communication technologies (ICT); indigenous knowledge; libraries; preservation

Introduction:

Information communication technologies (ICT) have globally become obligatory used instruments in progressive motive development. With the digitalization growth of knowledge, including indigenous knowledge (IK), ICT s are offering alternative perspectives of knowledge (Averweg, 2005). Types of IK include information technologies, belief, tools, materials, experimentation, biological resources, education and communication (Grenier, 1998). The knowledge that people in a given community has developed over time and continues to develop (Nyumba, 2006). As Indigenous communities endeavor to maintain their traditional ways of knowing, many are turning to information and communication technologies (ICTs) to sustain and stimulate their Indigenous knowledge. They are using analog and digital video and audio recording devices as well as a constellation of computer and Internet-related technologies, to capture, store, and make available to future generations important aspects of their languages, arts and understanding (Oppenneer, 2010).

Defining the Problem:

In general, the design of ICTs does not accommodate Indigenous knowledge, the nature of which is cast in terms not typically associated with Western knowledge (Ladislaus & Kincheloe, 1999). Western culture has its ways of accumulating knowledge. Among them, we use books, film, and audio recordings to help us store information. We construct libraries, databases, and collections that house this information for future generations. Our schools and universities draw on these resources for teaching and research. When faced with preserving Indigenous ways of knowing, it seems logical to use similar techniques. And

this is where the problems begin. Pacey (1983) considers technology "not only as comprising machines, techniques and crisply precise knowledge, but also as involving characteristic patterns of organization and imprecise values". Technologies, like any cultural artifact, are imbued with the memes of the society that creates them. They are laden with cultural assumptions about what information is, what knowledge is, how they are transferred, and so on (Oppenneer, 2010).

Indigenous knowledge:

Indigenous knowledge is concerned primarily with those activities that are intimately connected with the daily livelihood of people rather than with abstract ideas and philosophies. Indigenous knowledge is thus confined to local population that possesses highly detailed and richly complex information about agriculture, agro-forestry, pest management, soil fertilization, multiple cropping patterns, health care, food preparation and so forth. Local knowledge also called indigenous knowledge is often viewed as the latest and the best strategy in the old fight against hunger, poverty and underdevelopment (Atte, 1992). Because indigenous knowledge has permitted its holders to exist in "harmony" with nature, using it sustainably, it is seen as especially pivotal in discussions of sustainable resource used (Anderson & Grove, 1987, p. 32).

The knowledge and skills are derived from man s daily interactions with the environment, observations and experiments. They greatly shape and model the decisions made by people regarding exploitation of resources. The knowledge, skills and practices relating to natural resources are passed down to generations through the cultural learning process. It is the outcome of all these among different groups and the environment that is termed indigenous, local, tradition or people s knowledge (Akullo et al, 2007). It exists nowhere as a totality, there is no grand repository, and hence no coherent overall theoretical model, although it may achieve some coherence in cosmologies, rituals and symbolic discourse, which are not notoriously difficult to access convincingly. It is as much skill as knowledge, and its learning across generations is characterized by oral transmission and learning through experience and repetitive practice. It is the heritage of practical every life, with its functional demands, and is fluid and constantly changing, being subject to ongoing negotiation between people and their environments (Sillitoe, 1998). In simple terms, such knowledge has been orally passed for generations from person to person. Some forms of indigenous knowledge are expressed through stories, legends, folklore, rituals, songs, and even laws. Other form of indigenous knowledge refers to knowledge and values, which have been acquired through experience, observation, from the land or from spiritual teachings, and handed down from one generation to another. These sets of understandings, interpretations and meanings are part of a cultural complex that encompasses language, naming and classification systems, practices for using resources, ritual, and spirituality and worldview. It provides the basis for local level decision-making about many fundamental aspects of day-to-day life (Agrawal, 1995).

Need for preservation of indigenous knowledge

Several factors such as government developmental schemes and the spread of information communication technologies have led to the rapid change in the life of local communities which in turn has largely accounted for the loss of indigenous knowledge. With the influence of modern technology and education, today's younger generation tends to neglect and underestimate the importance of indigenous knowledge. It is evident that if indigenous knowledge is not recorded and preserved, it will be lost and remain inaccessible to other indigenous systems as well as to development workers. Development projects cannot offer sustainable solutions to local problems without integrating local knowledge (Warren, 1991). Development needs people's knowledge. Otherwise it can be a failure in the process (Brokensha et al., 1980, p. 139). Therefore, to bring development in local-level community, indigenous knowledge plays

a very important role. The use of indigenous knowledge can guarantee the survival of the economics of the developing world. Not only the expertise of scientific knowledge of professional should be taken into account for improving development, even the richest and most successful governments cannot provide all the needs of the people, it has been suggested that indigenous knowledge can also become vital tools for rural development (Atte, 1992). Since indigenous knowledge is essential to development, it must be gathered, organized and disseminated in the same systematic way as modern knowledge (Agrawal, 1995).

ICT: ICTs are broadly defined as computers, software, networks, satellite links and related systems that allow [end-]users to access, analyze, create, exchange and use data, information and knowledge (Dyson *et al.*, 2007). The term ICT must be seen as an evolution from the antecedent and more narrowly defined term IT (information technology) which maintains its usage in government, business, and industry and in relation to tertiary and other academic courses dealing with such areas as programming, database design and expert systems (Lloyd, 2005). At this moment ICT is emerging in all of the aspects of today's society. Over the last two decades ICT has become more enhanced, improved and affordable (Fisser, 2001).

ICT application in preservation of IK:

There is no doubt that ICTs hold significant potential for supporting the recording, management, dissemination and long term preservation of Indigenous knowledge. But there remain significant challenges which will need to be overcome to ensure that such projects deliver real benefits to both the Indigenous communities who own the knowledge and the wider community (Nakata & Langton, 2005). The multi-media capabilities (*e.g.* digital video and recording devices), storage capacity (*e.g.* online databases) and communication tools (*e.g.* the Internet and digital technologies) offered by ICT s "provide new opportunities to preserve and revitalize indigenous cultures and languages" (Dyson *et al.*, 2007).

Operational definition:

ICT: Information communication technology (ICT) relates to those technologies that are used for gathering, storing, accessing, transmitting or receiving information electronically in digital form. The technologies could include hardware (eg: computers and other devices) software applications; and connectivity (eg: access to the internet, local networking infrastructure).

Objectives:

1. To compare preservation methods for indigenous knowledge among the libraries under study.
2. To identify challenges in using ICT for preservation of indigenous knowledge in libraries.
3. To propose suggestion for using ICT in preservation of IK with emphasis on the role of libraries.

Methodology:

The study aims to portray the characteristics on the use pattern of information communication technology in preservation of indigenous knowledge among selected libraries. In the present study, survey method has been adopted using structured questionnaire as a tool for collection of data. The questionnaire was designed keeping the objectives in view and the structured questionnaire comprises mainly closed ended-questions. The populace involved libraries in Shillong. Purposive sampling was adopted in selecting libraries surveyed inferable to pre-study visits that drove to the disclosure that IK preservation practices were not that pronounced in all the libraries of shilling. Hence, a sum of fifteen college libraries with some level of IK preservation practices was purposely chosen. Table 1 displays a list of selected libraries. The target participants were the librarians, since they were in the best position to give all the vital information concerning the issues being considered in the study.

Choice of Libraries: The libraries under study were chosen based on the understanding that they would be the right categories for preserving indigenous knowledge. The NEHU Central library, for example has a Digital Repository which houses documents like PhD theses from such Departments as Anthropology, Geography, Botany, Khasi and Cultural and Creative Studies which studied indigenous knowledge in one form or another. The other libraries too were expected to collect and preserve indigenous knowledge owing to their nature.

Table 1: list of selected libraries

Sl. No.	Name of libraries
1	The State Central Library
2	North Eastern Council library
3	Don Bosco Centre for Indigenous Culture Library
4	Department of Arts and Culture
5	NEHU Central library

1. The state central library:

The state central library is a public library which serves as knowledge centre for people of the region. The library's collection development policies aim at collections of local indigenous knowledge which are digitized through ICT technology. These collections are made available for the users in print and digitized format. The indigenous collection covers every aspect of knowledge of the region. Indigenous knowledge written in local language are also disseminated and stocked up in digital repository and are processed and made available in the library for user easy access.

2. North Eastern Council Library:

The North Eastern Council Library, also known as Regional Documentation and Information Centre (RDIC) has built up a very respectable collection of documents of research, studies and reports on various aspects of potentialities and development of the Region besides setting up a library. The prime objective of setting up the Centre is dissemination of information pertaining to all aspects of developmental activities, potentialities and problems and plan strategies in respect of the constituent units of the North Eastern Region. The other objective of the Centre is to provide necessary background information about the socio-cultural heritage as also the outlook and attitude of the people inhabiting the Region. Over the years, RDIC has built up a stock of more than 42,000 books, 5000 reports, Plan Documents etc and subscribes to 200 journals, both national and international on various subjects.

3. Don Bosco Centre for Indigenous culture Library:

The library serves as information centre for studies of people of the North Eastern region of India. The library collects and digitized the rare documents of the people indigenous knowledge which are stock up in digital repository. Presently the Library has 110,473 volumes of which some 8,000 deal with cultures of North East India and 12,518 are bound volumes of reviews or journals. The library subscribes to 130

journals/ reviews (mostly Indian). The facilities provided by the Centre are frequented by school students, research students and anthropologists.

4. Department of Arts and Culture:

Preservation, documentation, research, promotion, development and augmentation of arts and culture in the state of Meghalaya continue to be the important objectives of the Arts and culture Department. For achieving these objectives, the department exclusively deals with preservation of ancient arts, culture and heritage including promotion and expansion of cultural activities in the state of Meghalaya. Unlike any other knowledge centre, arts and culture department preserve their collection with indigenous method where ICT plays a role of maintaining the database but the collected items are managed and preserved indigenously.

5. NEHU Central library:

The NEHU Central Library is now equipped with high-end computers and other electronic and audio-visual equipment to provide seamless in-house and online services. Following the University Grants Commission's selection of North-Eastern Hill University as a "University with Potential for Excellence", the NEHU Library has launched a major effort to provide the best services through internal reorganization, optimization of available resources, launching of innovative services, and by taking the initiative to reach out to the user community through various programmes.

Data Analysis and Interpretation:

The collected data were analyzed, classified and tabulated. The questionnaire of this section based on a set of questions was implied to collect data from selected libraries. In this section, analysis has been prepared only for those questions which are essential to conduct the objectives of the study.

Table 2: ICT infrastructure facilities in the library

Policy	Yes	No
Does your library have indigenous knowledge preservation policy	4 (80%)	1 (20%)
Does your library policy follow specific format for IK collections?	3 (60%)	2 (40%)
Does your library acquire IK materials from local indigenous people?	3 (60%)	2 (40%)
Does your library collect all types of IK materials?	2 (40%)	3 (60%)
Do you have separate staff for maintaining IK collections?	1 (20%)	4 (80%)
Do you have separate section for IK collections?	2 (40%)	3 (60%)
Does your library preserve IK in digitized form?	3 (60%)	2 (40%)

Table 3 shows that almost all the libraries under study have a standing preservation and conservation indigenous knowledge management policy, which is followed and it serves as a guiding instrument to security of IK collections. The study however reveals that separate staff for IK collections is not supervised. But, when it comes to prolonged and secure management of IK collections, ICT plays a vital role in collecting and storing through digitization.

Table 4: Stance of Library staff towards preservation of IK in the library

Sl. No.	Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Library should have required infrastructure for IK preservation	3(60%)	2(40%)	–	–	–
2	Library should have trained manpower for all IK maintenance	2(40%)	2(40%)	1(20%)	–	–
3	Library should automate all its preservation applications	3(60%)	1(20%)	1(20%)	–	–
4	Provide online access of IK to library member users	2(40%)	2(40%)	1(20%)	–	–
5	Provide access to users of all category	3(60%)	2(40%)	–	–	–
6	IK collections should be preserve in separate ventilated rooms	3(60%)	2(40%)	–	–	–
7	Preserve and also provide access to library webpage	2(40%)	2(40%)	–	–	1(20%)

Above table 4 presents the case of library staff approach towards preservation of indigenous knowledge in the libraries under study. The study reveals that majority of the staff appraise for making decision related to preservation of indigenous knowledge in the library. The score obtained from the statement strongly agree that there is a provision for performance development assessment that can be improved in the library with the acquirement of information communication technology.

Findings

The study presented the situation regarding preservation of indigenous knowledge by the libraries under study. It appears that majority of the libraries are carrying out some kind of preservation methods for indigenous knowledge. Their policies (mostly unwritten), do accommodate the collection, preservation and the dissemination of indigenous knowledge. As for the application of ICTs however, the situation is far from satisfactory. Most lack the hardware and software particularly applicable to preservation of indigenous knowledge.

Suggestions:

Based on the above findings, associated policy options and strategies are suggested. The libraries should be proficient with new developmental challenges. They should be well equipped with newly generated technologies to counter all sorts of competitions. There should be adequate and well trained manpower in the libraries management and preservation activities. Each library should be in the position to employ an expert who understands the required information of the physical and chemical nature of the materials in their library holdings. Information generated from the study forms the vital part in the decision making process. It is observed that there is a need for improvement in the libraries under study in light of preservation of IK collections. Thus, it is suggested through the study that training and education of library personnel in preservation and management of indigenous knowledge through ICT could be affected by the results of the study.

Conclusion:

This study has shown that application of Information and Communication Technology (ICTs) and digital technologies in the library under study may seem to answer some of the problems of preservation techniques of Indigenous Knowledge (IK), however the techniques are not completely applied which may be due to various barriers associated with the libraries.

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AUTOMATED GATE REGISTER IN LIBRARIES: AN UNEXPLORED DOMAIN

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Abstract:

The paper deals with the automated gate register system of the libraries. At the initial level, certain comparisons are drawn between the traditional and automated gate register system of the libraries. The paper provides a practical approach of maintaining an automated gate register using SOUL 2.0 software with the barcode technology. At the concluding part of the paper, two different models have been provided for keeping the future aspects of the modern gate register.

Keywords: Automated Gate Register, Barcode, RFID, GPRS, MIS, RDBMS

1. Introduction

Libraries are management level services devoting institutions which has adopted and implemented different management systems and its principles from time to time. Today, Libraries are easily analyzing the data available for the online visitors but in many cases the same library faced difficulties in analyzing the data of physical users in spite of having an automated library system where the traditional practice of maintaining a physical record keeping register still persist. As Library users are the main target for any library activities and their transaction in the library should be properly monitored. Generally in libraries, automated transactions of the users are maintained at the Circulation desk level, i.e Issue/return level but the level from where a user enters into the library is still to be observed a matter of unexplored domain.

2. Importance of the Study

There are n numbers of study on automation of Library operations but these aspects of "Automated Gate Register" is an untouched area which needs to be properly study to make a library a fully automated one. Also many libraries are expending huge investment on the library automation where the aspect of library gate are considered basically in respect of security point of view and the data management of library users at the library entrance in many cases is still observe to be an unexplored area.

3. Library Gate Register

Library gate is an important passage through which a user is welcome into the library. Every library is maintaining a physical gate register in their respective gate to input the data. Although the practice is an important in measuring the use of library services but still it is a challenging task on the part of both the user and the library professionals in properly entering the data and to intercept a result from the input data in spite of monitoring staff.

4. Transforming Library Gate Register

The LIS centres has been transforming in various form as Re-Packaging, Re-engineering and so. Many broad areas of libraries viz acquisition, cataloguing, circulation, serial management, Access management, Library administration etc are mechanized with different suitable library management packages whether it is through ILMS or through e-resource management packages. Yogendra Singh in 2003 has identified OPAC, Acquisition, Circulation, Serial Control, Intranet, Internet and CD-Rom services are the prime areas where libraries were automating then (Singh, 2003). Debasis Das and Pranab Chatterjee has also identified similar areas (Das & Chateerjee, 2015). Innovations in the library domain are a never ending task and ILMS are developed and updated in different phases of time to support the innovative features. It is high time for the libraries to transform their Traditional gate register to an automated one. Transforming the gate register will bring a kind of MIS (Management Information System) of users in the libraries where it will support the decision support system for the library managers.

5. TRADITIONAL GATE REGISTER VS AUTOMATED GATE REGISTER
The following parameters are selected based on which certain comparison is done between the two systems.

Parameters	Traditional Gate Register	Automated Gate Register
User Behaviour	Not reluctant to enroll	It will be Highly motivated for log in
	Feel bored every time to disclose the similar details in every time	The Mechanical process may reduce the user burden
Users Validity	difficult to trace the valid and non valid users	It will Check properly the validity and authorization of users
Analysis of Data	Difficult and Hercules task	Data interpretation within fingertips
	Performed only after certain period	Can be performed at any time
Data Entry	Sometimes incomplete, inaccurate	As per the desired format and accurate
Live Performance	Difficult and beyond imagination	Easy for live transaction of user
Medium	Fully Paper Based	Paperless

6. TRANSFORMATION OF GATE REGISTER
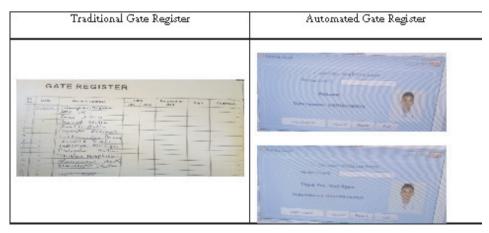
Fig 1: Transformation from Traditional to Automated gate Register

SOUL 2.0 is considered for maintaining an automated Gate register. The features for the automated Gate register is available at the Circulation Module of SOUL 2.0 (Circulation Member Login). By default the "Member Login" option may be available with the fresh installation but there are many new features updated to it with the release of latest SOUL updates. User need to update regularly the SOUL software so as to enjoy the charm of many new innovative features added. As on 10/06/2017, the latest update of SOUL software is SOUL 2.0.0.14.

6.1 Process

There are two thing user has to perform while entering into the library: entry and exit, i.e Login and Logout.

Prerequisite for Automated Gate Register

1. Input taking devices like Automatic Barcode scanner/handheld scanner.
2. One big size flat screen Monitor along with CPU where user's information are displayed.
3. Client installation of ILMS

Fig 2: Shows the two types of Barcode Scanner: Handheld and Automatic

6.2 Practice

Using the barcode scanner user can themselves log their data to the system. Although at the initial level the role of a Monitoring person can be effective in assisting the user for handling the automated gate register.

6.3 Output

SOUL software is having one of its strong areas of Report generation through which reports can be accessed through different approach. As per version 2.0.0.14, five types of report can be generated for the automated Gate register (as named). These are

a. By Date,
b. By Current Login Member,
c. By Member Code,
d. By Member ID and
e. By Most Frequently User.

i. Date

The below three figures is an abstract of the report generated through SOUL 2.0 using the different parameters mentioned above.
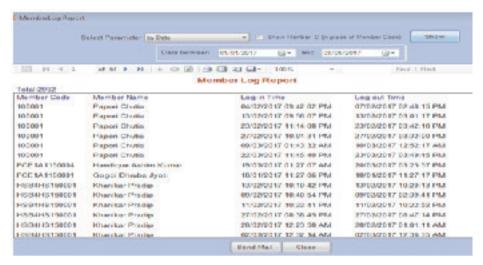
Fig 3: Report status by "Date".

ii. Current Login Member

The above figure report indicates the date wise transactions of user. This report will help to know how many users have visited the library in the different periods queried.
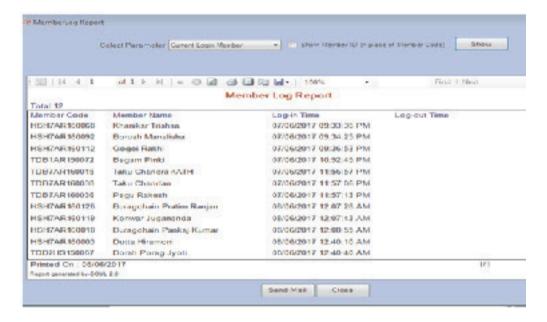
Fig 4: Report status by "Current login".

The above figure report indicates that the users are at present inside the library area. There may be certain instances that a user may sometimes forget to logout. In such cases there is another option that can be performed by the Library staff known as "Logout all" through which all those users who forgot to logout will be automatically logout with a single click. This feature should be applied while there is no any user in the library or just before the closing time of the library server.

iii. Most Frequently User
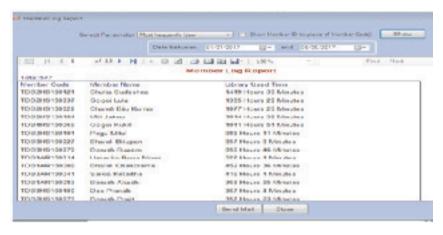
Fig 5: Report status by "Most Frequently User".

Using the Parameter "By Most Frequently User" the figure basically reflects the total time invested by a user in ascending order. This report can be best use while evaluating the best user library award.

1. FUTURE MODEL OF AN AUTOMATED GATE REGISTER

1. Model for Future Gate Register
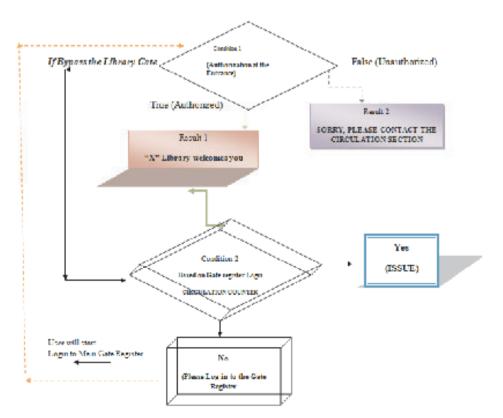
Fig: Model designed for Future Gate Register

The model is designed based on the programming idea derived from "C" Programming.

The model basically describes that
i. 	A user can enter into the library only when he/she had log into the Main gate.
ii. 	A user cannot issue a document unless he/she log in to the Gate register of the library.
If the data recorded in the automated gate register is not accessed through the ILMS in Circulation counter then a user can issue/return a book without log-in to the Main gate which will mean that a user comes to the library only for circulation although he/she have invested the time in different sections of the library.
iii. 	The technology used basically the software aspect should be integrated with the ILMS used in the library otherwise the data recorded will be a separate entity meant for only the users statistics and certain other library functions might be ignored. *In other words the role of third party software should be avoided if it not integrated with the ILMS used in the library.*
iv. 	Identification of users can be done either through Barcode, RFID Tags. The system can be made more convenient if biometric impressions like fingers, eyes are taken into account.

1. Model Based on GPRS Systems
There may be different ways of maintaining the mechanized gate register but certain things should be kept in mind while implementing it such as
1. 	Welcome messaging system can be introduced as soon as a user enters into the library using the GPRS (General Packet Radio Service) system through the smart phone enabled application.
2. 	User need to write the similar details in different sections visited by them. The system can be transformed with the GPRS enable technology with the help of Mobile Application installed by the User in their smart Phones.
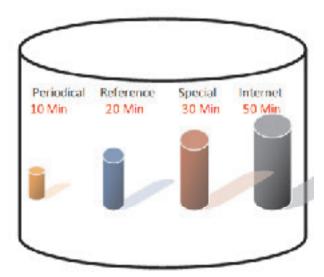
Fig: A Model based on GPRS system of extracting the records of the User
The basic philosophy for the automated gate register is that user time is worthy and the library should plan as per the users desire. Before planning anything in the library related to user interests, statistics should be properly follow up. Taking a decision on anticipation may reduce the uses of library.

1. Conclusion

Data Management in the libraries is not a new phenomenon. For a library it is imperative to handle the data aspects of the users. The RDBMS (Relational database management system) platform has given the libraries to reuse the same data for different activities performed in the libraries. This platform has to be map both the library services and its users through its data management procedures. In many Official platforms, Libraries are push back by the critics on the basis of the logical inference drawn of less use of libraries with the increase use of internet. Such critics can be handle well if the library has the answer within their fingertips through handling the user data management system.

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A STUDY ON SOCIAL NETWORKING FOR EFFECTIVE PROVISION OF LIBRARY SERVICES

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ABSTRACT

Social networking is one of the newest platforms with a promising growth and development opportunity for libraries in the era of Information and Communication Technology. The paper describes how social networking tools, media and websites can be helpful in contributing to the growth and development of libraries by creating a user-friendly virtual environment which allows active participation and communication between the library and its patrons. Social networking has become a necessity with people being in constant contact with each other, staying updated with the latest happenings of the world and what not through Facebook, Twitter, etc. and it doesn't just end at that. Today many organizations mostly companies make a constant use of social media to reach out to its customers, for advertising, marketing and selling. Library also being an organization has to reap the benefits of social media for the pace at which the world is developing libraries must take hold of every opportunity to make it more engaging to the users.

Introduction

Communication is the process of exchanging information through speaking, writing or using some other medium. Information Communication Technology has brought about a revolution in the field of information and communication. The evolution of internet and World Wide Web has transformed the whole globe and presented a new way of communication. The limitless connectivity and potential to create an open social order and system of interaction and collaboration have been made possible only because of information and communication technology. Advances in world wide web and web technology has given rise to easier and friendly environments for retrieving and sharing information and one of such is social networking websites.Deleting Online Predators Act of 2006 states the term "commercial social networking website" means a commercially operated Internet Web site that allows users to create web pages or profiles that provide information about themselves and are available to others users; and offers a mechanism for communication with other users, such as a forum, chat room, email, or instant messenger (Fitzpatrick, 2006).Social media has become an important tool of self-expression and self-presentation. Social media is evolving itself into very important and crucial form of ICT through which one can share, connect people and communities with active participation.

Social Networking: What is it?

Social networking is merely a tool for connecting with people. To share what we know or have in mind by bringing it to a larger audience i.e. the people who are connected to the world wide web via the internet with the help of social media tools is social networking.

While talking about social media we also need talk about web 2.0 and library 2.0. Social media is one of the many tools that have been brought about with the advent of web 2.0. So what is web 2.0? Web 2.0 may be described as the second generation of the world-wide-web, the first generation being web 1.0. Web 2.0 is characterized by the ability of the people to collaborate and share information online. Dynamic web pages and active user participation are the features that distinguishes web 2.0 from 1.0. There are various tools that put together makes up the structure of what is known as web 2.0. These tools include - (1) presentation tools such as SlideShare, Prezi, Picsviewr, etc. (2) community tools such as Facebook, Wiki, etc. and many more. These tools when integrated with the library system to provide its services give rise to Library 2.0. Library 2.0 seeks to put users in touch with information by breaking down the barriers of space and time. It is a user oriented paradigm focusing on knowledge collaboration and creation of new content.

Social media is one such wonder of web 2.0 that has a promising platform as a tool of library 2.0 for creating interactive user environment within the library.

Social networking is the use of internet-based social media programs to make connections with friends, family, classmates, customers and clients. Social networking can occur for social purposes, business purposes or both through sites such as Facebook, Twitter, LinkedIn, Classmates.com and Yelp. Facebook, Twitter, etc. are some of the names that come into mind when we talk about social networks but social network itself is an umbrella term and it can be classified into the following types.

1. Social Network for Social Connections: These are the social networking sites that are used to build social connections such as Facebook, Twitter, etc.

2. Social Network for Multimedia Sharing: These are the SNS that are used to share video and photography content online such as YouTube, Flickr, etc.

3. Social Network for Professionals: It is specifically designed to help professionals connect, share and help each other with profession-specific matters. LinkedIn, Classroom 2.0 are some of the examples.

4. Academic Social Networks: Academic researchers who want to share their research and review results achieved by colleagues may find academic-specific social networking to be quite valuable. Academia.edu is one of the most popular online communities for academics.

Social Networking in Libraries

The prime reason behind the existence of a library is information dissemination. It is the responsibility of a library to bring the right information to users at the right time. Now by right time it is definitely meant that it be provided as soon as possible. That is where social networking fits in into the realm of library services. Social networking creates a constant medium of communication between the library and its users. By applying social networking as a medium of providing its services a library moves one step further into the realm of Information and Communication Technology.

Why Social Networking in Libraries?

People from all walks of life, regardless of their skin color, education, social status, nationality, etc. are using social networks. Organizations big and small are realizing great and dynamic benefits from the use of these tools and libraries are no exception. Today, social networks have improved the way people and industries transact, communicate and create relationships with colleagues, peers and or prospective clients. People in different locations are able to converse with one another as though they were in one room. Distance between or among the people involved is no longer a barrier. A 2010 survey by the Society

of Chief Librarians (2012) in the UK found that internet users trust library staff more than most other providers of online support and information, and public library staff are second only to doctors in terms of the trust placed in them by seekers of information.

Social networking in libraries is required to promote library services, collections, new acquisitions, to connect with new students joining the university, to engage with the academic community, for customer (patrons) services such as complaints, suggestions, enquiries, feedback, etc. The crucial aim of librarians is to make library resources available to patrons so if social networking sites will help achieve this goal then it should be pursued vigorously.

Following are some of the reasons that have made libraries reap the benefits of social networking.

1. Today's modern libraries no longer rely solely on its physical space as an access point to its resources. Through social network it is possible to reach users at their home or virtual spaces.

2. Social networking sites will facilitate collaborations and promote effective communication between Librarians and their patrons.

3. It will generate a flow of information excluded from search engines and library catalogues.

4. For self-evaluation purposes opinion on the library services can be received through social media.

5. To increase usage of library collections by promoting new and existing content.

6. To connect with other librarians and keep abreast of industry news.

7. To build a sense of community with both users and also with other institutions.

How Social Media Works in Libraries?

There are three main areas for implication of social networking in libraries. They are:

1. Social networks for communication of information: Communication of information is an important area for implementing social networking in libraries. The main objective here is to create and maintain a constant line or network of communication for effective interaction with patrons, staff and faculty in an online collaborative environment. To realize this objective a library can make use of the following social networking tools:

a.   **Facebook:** Probably the most popular social networking website today Facebook makes it possible to create pages and groups for organizations, companies, etc. A library too can benefit from this social networking tool allowing posting regular updates and creating a social environment for group communications.

b. **MySpace:** MySpace is another popular social networking site allowing users to create profile, make friends, talk online and share resources.

c.   **Twitter:** Twitter lets people send and receive short messages (called Tweets) via the web or via SMS using a mobile phone. Messages on Twitter are limited to a maximum of 140 characters, including spaces, and they're generally public. Because Twitter has millions of users, libraries can use it as a tool for broadcasting.

d. **Other:** There are many more social networking sites that can be used to realize this objective such as Blogs, LinkedIn, etc. that performs functions like any other social networking sites.

2. Social networks for dissemination of information: Information dissemination being the most important function of a library can make use of the following tools to realize this objective.

a.   **Flickr:**Flickr (pronounced "flicker") is an image hosting and video hosting website and web services suite that was created by Ludicorp in 2004 and acquired by Yahoo on March 20, 2005.Library can share photo collection of workshops; conference and different programs that are organized within the campus.

b. **YouTube:** YouTube is the largest and most popular video sharing website today. A library can make effective use of YouTube for implementing social networking in library by uploading library related videos

such as orientation programs, e-learning tutorials, events and other videos.

c. **TeacherTube:**TeacherTube is a video sharing website similar to, and based on, YouTube. It is designed to allow those in the educational industry, particularly teachers, to share educational resources such as video, audio, documents, photos, groups and blogs. It presents an excellent opportunity for instructor-librarian collaboration. Instructors can guide students to helpful library resources, and vice versa.

d. **SlideShare:**SlideShare is a slide hosting service, acquired by LinkedIn in 2012. It allows users to upload power point presentations either privately or publicly. The slide decks can then be viewed on the site itself or can be embedded on other sites. It is a great platform for sharing information.

3. Social networks for organization of knowledge: Due to information explosion it is hard to keep up with all the information in today's era. Information today needs to be filtered and users today are only after information that is relevant. Social networking tools can help organize knowledge and point information hunters toward the right direction. Some social networking tool that can realize this objective are:

a. **Del.icio.us:** It is a social bookmarking web service for storing, sharing, and discovering web bookmarks. Through this tool a library can create a custom bookmark directory that can help users to find all the relevant links which a library prepares for its users.

b. **a Nobii:** aNobii is a social networking site aimed at readers. It allows individuals to catalogue their books and rate, review and discuss them with other readers. It also provides due date alerts for borrowed books. Some screenshotsfrom the website itself may give an idea on how aNobii actually works.

Fig.1: A screenshot from a Nobii showing the options for write review.

Fig.2: A screenshot from aNobii showing the due date alert option.

c. **LibraryThing:** LibraryThing is an online service to help people catalog their books easily. LibraryThing offers powerful tools for cataloging and tracking books with access to the Library of Congress, Amazon sites, and more than 1,000 libraries worldwide.

d. **lib.rario.us:** A website that allows cataloguing and displaying books, CD's, journals, etc. for easy access and tracking.

Advantages of using Social Media in Libraries

1. Low cost maintenance: The maintenance or use of social media for a library incurs a very small expense.

*2. Requires little training:*Not much training is required for maintaining a social media profile for a library. A regular social media user can easily handle it without much effort.

3. Direct and fast service: Through social networks a library can provide its services and disseminate news quickly, delivering this information more directly to library users.

4. Regular interaction: Through social media it is possible for regular interactions with library users.

*5. Regular feedback:*Social networks make it possible to gather regular feedbacks from library users to enhance its services.

6. Usage of library contents: The promotion of library holdings and services through social networks can help increase the usage of library contents.

*7. Enhances communication:*It enhances communication both within libraries and with other departments.

8. Sharing platform: Social networks provide a wide platform for sharing the library resources to a wide range of users living thousands of miles away.

Challenges of using social media in libraries

There are great advantages of using social media in libraries however it does not come without challenges. Challenges are an important part of development and following are some of those challenges that needed to be overcome if implementing social network as part of library development is to be made a reality.

1. Time consuming process: It is a time consuming process and requires considerable amount of effort and patience from library staff.

2. Training: Even though it has been discussed earlier that maintaining a social media profile requires little training it may be difficult for a person without experience in social media to maintain a social media profile. For advanced and more professional customization and maintenance of a social media profile does require some amount of technological expertise.

3. Participation from both sides: For an active social media profile participation from both the library staff and users is necessary and so both ends require a level of interest in social media and networking. A library needs to work hard to maintain engagement with library users and to attract popularity in the form of followers, likes, etc.

4. Funds: Funds may also pose as a challenge for setting up a social media profile but that depends from library to library. Some libraries may receive adequate funds while others may not so it is very important to convince appropriate authorities of the importance of social networking and how it will benefit users and the library alike.

5. User-friendly: The social media whether it is a blog or a website should not have a complicated design and usability. It should be user-friendly so that patrons may take maximum benefits out of such applications.

6. Copyright issues: There are always copyright issues while using social media. Building a video collection on YouTube or an image collection on Flickr with copyrighted content may result in copyright infringement. So, it always helps to be aware of the Intellectual Property Rights and the contents uploaded online to not face any issues regarding copyright.

7. External factors: External factors such as internet connectivity, technological infrastructure and government restrictions on the use of social media may restrict access.

Conclusion

Social media can be beneficial for libraries to provide a wide range of services, news and updates, content promotion, dissemination of institutions research output, provision of educational tools and resources and for building relationships both within and outside the organization. Use of social media is still an evolving process and much more studies and experiments are required to be carried out before it can fully implemented as part of library products and services. Library professionals will need at least some degree of digital literacy, and the willingness to see these channels provide fruitful results. It is also crucial to note that the upcoming wave of library patrons (students, teachers or staff) will be from this generation who are technologically sophisticated and well-connected to the social web. So it is only imperative that there should be more focus in this library 2.0 tool to make it a part of the library system. There is huge potential of growth and development of libraries through social networking platform so it is essential to clear the air of fear and confusion surrounding use of social media in library workplace. Therefore the users are needed to be made aware of and the library staff must be imparted with sufficient training for making social networking in libraries a reality.

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AWARENESS AND ACCESSIBILITY OF E-RESOURCES THROUGH E-SHODHSINDHU CONSORTIUM: AN ANALYTICAL STUDY AMONG THE USER COMMUNITY OF LNB LIBRARY, DIBRUGARH UNIVERSITY

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Abstract: E-resources promote to use of all higher educational institution in India and provide access to scholarly content available in open access through subject portals and subject gateways. Today in the age of information technology where whole world has become a global village, information has become a major commodity for everyone. With the explosion of information followed by the huge budget constraints specially in Academic libraries which are the hubs of research, library consortia has emerged as necessity. The government of India has taken various steps to introduce e-resources facility in academic institutions for the benefit of the users. Because information resources especially journals are becoming very expensive due to their availability in the electronic format. In the meantime, e- ShodhSindhu consortium provides quality e-resources to support learning and research activities of Higher Education covering full text, bibliographical and factual databases. This study shows the level of awareness among the user community (students, faculties and research scholars) towards e-ShodhSindhu Consortium in the LNB Library of Dibrugarh University. It focuses on the accessibility of e-resources with the help of users' statistics of LNB Library, Dibrugarh University.

Keywords: E-resources, e-ShodhSindhu, Information and Communication Technology (ICT), Library Consortia.

1. Introduction:

Now in the age of information explosion, e resources play a vital role and only it is the solution in higher education for distribution of skills in the present situation. The procuring and implementing e-consortium involves high cost and manpower. However consortium is a collective strength of various institutions and provides subscription with high discounted rate through IP address with agreement. Consortium is a tool to access e-journals and accordingly e-ShodhSindhu provides access to vast databases, full text e-journals in various subjects. e -ShodhSindhu is the consortium for higher education. Based on the recommendation of an Expert Committee, the MHRD has formed e-ShodhSindhu merging

three consortia initiatives, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. The e-ShodhSindhu will continue to provide current as well as archival access to more than 15,000 core and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines from a large number of publishers. All the Centrally-funded Technical institutions, Universities and Colleges that are covered under 12(B) and 2(f) Sections of the UGC Act are eligible for membership.

1.1 Aims and Objectives of e-Shodh Sindhu:

The main objective of the e-ShodhSindhu: Consortia for Higher Education E-Resources is to provide access to qualitative electronic resources including full-text, bibliographic and factual databases to academic institutions at a lower rates of subscription. The major aims and objectives of the e-ShodhSindhu are as follows:

- Setting-up e-ShodhSindhu: Consortia for Higher Education E-Resources by augmenting and strengthening activities and services offered by three MHRD-funded Consortia;
- Develop a formidable collection of e-journals, e-journal archives and e-books on perpetual access basis;
- Monitor and promote usage of e-resources in member universities, colleges and technical institutions in India through awareness and training programmes;
- Provide access to subscription-based scholarly information (e-books and e-journals) to all educational institutions;
- Provide access to scholarly content available in open access through subject portals and subject gateways;
- Bridge digital divide and move towards an information-rich society;
- Provide access to selected e-resources to additional institutions including open universities and MHRD-funded institutions that are not covered under existing consortia;
- Take-up additional activities and services that require collaborative platform and are not being performed by existing Consortia; and
- Moving towards developing a National Electronic Library with electronic journals and electronic books as its major building blocks.

1.2 Members of e-ShodhSindhu:

The members of the e-ShodhSindhu consortium includes the following-

Universities:
   i)   12(B)/ 2(f) State Universities
   ii) Central Universities
   iii) Deemed Universities (UGC Funded)
   iv) National Law Schools/Universities
   v) IUC of UGC

CFTIs (Central Funding Technical Institutions):
   i)   NITs, SLIET, NERIST
   ii) IITs & IISc.
   iii) IIMs
   iv) IIITs, IIEST, NITIE, NIFFT and NITTTR
   v) IISERs

Technical Colleges:
   i)   AICTE Funded Engineering Colleges.

2. Objectives of the Study:

    i.   To know the level of awareness among the users of LNB Library of Dibrugarh University towards using the e-ShodhSindhu Consortium.

    ii. To see the accessibility of e-resources by using e-ShodhSindhu Consortium of LNB Library Dibrugarh University.

3. Scope and Limitations:

    This study is limited to the use of e-ShodhSindhu Consortium of LNB Library, Dibrugarh University only. It reveals only the analysis of last five years users' (Students, Research Scholars and Faculty Members) statistics towards the use of e-resources by using e-ShodhSindhu Consortium.

4. Methodology:

    i.   Personal Interview;

    ii. Questionnaire Method;

    iii. Data Collection and Analysis.

5. The Study:

5.1 Dibrugarh University: An Overview

    Dibrugarh University is the easternmost University of India. It was set up in 1965, under the provision of the Dibrugarh University Act, 1965 enacted in Assam Legislative Assembly. The University is situated in Rajabheta at a distance of about five kilometers to the south of the premier town of Dibrugarh in the eastern part of Assam as well as India. It is a teaching-cum-affiliating University with limited residential facilities. The campus of the University extends over an area of more than 500 acres. The University is re-accredited by National Assessment and Accreditation Council (NAAC) in 2017 with CGPA of 3.16 with 'A' Grade. Dibrugarh University is a member of the Association of Indian Universities (AIU) and recognized by all Universities in India and abroad on reciprocal basis.

5.2 Lakshminath Bezbaroa Library:

    The Central Library of Dibrugarh University is popularly known as the Lakshminath Bezbaroa Granthagar. It was established in the year 1967 and since then it has remained as an integral part of all accomplishments of academic excellence and endeavor of the University. The library was shifted to its present building, with an area of 33570 sq. fit in 1985. The Lakshminath Bezbaroa Granthagar is rich in terms of its holding both in print and electronic resources. To keep pace with the growing demands, the library is rendering yeoman service to the University community as a whole. The library has already crossed a landmark collection of 2, 22,111 print volumes. With Automated Library Management System, the LNB Granthagar is not lacking behind from any other University library of the country as far as application of ICT is concerned. The LNB Granthagar of Dibrugarh University performs various House Keeping operations with the help of SOUL 2.0. The Library has a seating capacity of more than 150 users at a time in various clusters arranged with modern ergonomic reading facilities with installation of OPAC, Self Users' Scanning Facilities under proper CCTV surveillance.

5.3 Library Consortia available at LNB Granthagar:

    The LNB Library subscribes two consortia; namely, DelCON and e-ShodhSindhu. The e-ShodhSindhu
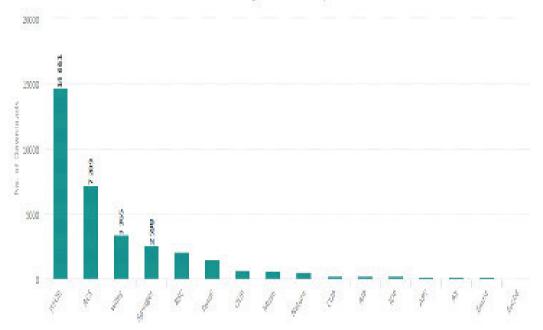
Consortium of INFLIBNET Center is providing access facility to 10,725 e-journals and also gets online access of 926 e-journals through DelCON Consortium. On the other hand, the users of the Central Library can access the resources of the Library from any terminal within the University campus. But, in this study we have only analyzed the users' statistics of last five years i.e., from 2012-2016 towards the access of e-resources through e-ShodhSindhu consortium in LNB Library.

5.3.1 Data Analysis and Interpretation:
User statistics of e-ShodhSindhu Consortium accessed during the year 2012

Table: 1

Resources	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
JSTOR	1066	1646	1523	1600	1211	1133	423	1102	1687	1268	984	1018	14661
American Chemical Society	345	440	428	425	1662	596	526	501	572	365	646	703	7209
Wiley-Blackwell	121	415	221	177	346	222	264	323	228	200	451	397	3365
Springer Link	106	265	205	137	310	468	184	609	302	10	2	0	2598
Royal Society of Chemistry	33	118	143	60	172	533	164	131	90	92	287	194	2017
Taylor and Francis	42	199	106	71	94	163	91	127	110	159	100	198	1460
Oxford University Press	16	64	62	51	55	55	40	55	43	84	35	53	613
Project Muse	0	0	0	0	70	57	1	30	42	156	64	109	529
Nature	1	69	30	12	21	40	25	33	79	32	2	144	488
Cambridge Univ Press	8	39	33	13	31	35	7	7	11	6	24	28	242
American Institute of Physics	8	2	39	28	19	14	4	27	9	12	21	9	192
Institute of Physics	2	16	17	11	20	15	20	28	17	19	15	9	189
APS	7	10	14	7	5	8	23	34	14	20	8	23	173
Annual Reviews	1	8	5	6	48	19	19	11	6	8	10	11	152
Emerald	0	5	4	5	24	2	0	6	52	7	6	19	130
Project Euclid	0	0	0	0	0	1	0	0	0	0	0	0	1
Total													34,019

Figure: 1

Resource wise usage statistics for the year 2002
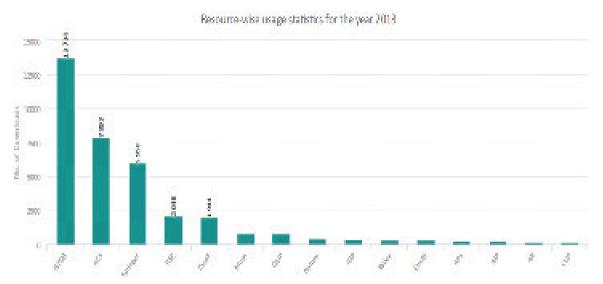
User statistics of e-ShodhSindhu Consortium accessed during the year 2013

Table: 2

Resources	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
JSTOR	219	1278	1635	1862	2362	867	585	781	1424	778	963	980	13734
American Chemical Society	543	716	682	1265	1411	651	695	446	433	405	258	388	7893
Springer Link	286	254	410	512	534	1829	407	425	405	364	319	205	5950
Royal Society of Chemistry	240	225	190	136	268	226	283	84	115	65	90	126	2048
Taylor and Francis	128	245	91	133	266	174	130	109	122	141	350	55	1944
Project Muse	1	38	86	144	236	22	38	34	98	36	54	16	803
Oxford University Press	11	45	122	81	113	82	39	63	99	37	67	32	791
Nature	16	28	15	25	19	33	94	15	67	38	11	54	415
Institute of Physics	62	16	18	15	33	43	31	48	18	30	24	47	385
Wiley-Blackwell	0	0	0	0	0	0	0	0	0	0	0	331	331
Emerald	15	9	110	9	9	16	46	12	4	5	70	1	306
APS	3	28	24	24	20	33	33	33	19	29	7	13	266
American Institute of Physics	8	31	49	12	17	29	5	0	1	29	8	44	233
Annual Reviews	1	18	12	4	24	28	17	16	28	6	13	0	167
Cambridge Univ. Press	1	9	22	11	32	10	22	23	4	6	8	5	153
Total													35,419

Figure: 2

Resource-wise usage statistics for the year 2013
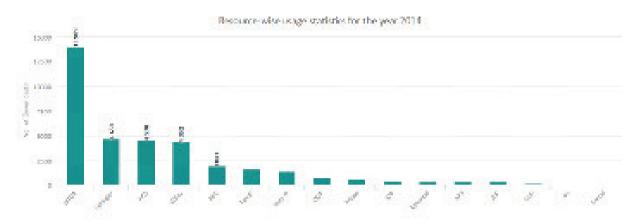
statistics of e-ShodhSindhu Consortium accessed during the year 2014

Table: 3

Resources	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
JSTOR	509	819	1154	1464	1844	1187	853	1105	1514	1714	1071	755	13989
Springer Link	155	217	256	420	851	545	257	496	542	543	233	543	5058
American Chemical Society	188	307	377	626	1179	186	441	567	377	550	180	370	5370
Wiley Blackwell	189	205	310	311	1197	467	405	605	690	350	295	428	5452
Royal Society of Chemistry	61	227	133	343	246	163	117	200	299	181	293	280	2543
Taylor and Francis	123	68	105	48	250	300	26	46	85	269	75	116	1511
Nature	92	26	59	90	107	339	35	99	178	94	44	68	1291
Oxford University Press	25	17	51	44	163	39	41	45	97	36	34	66	658
Project Muse	36	3	19	70	65	15	1	73	68	49	5	66	512
Institute of Physics	22	44	26	14	34	24	19	47	40	41	14	46	371
Emerald Publishing	0	0	0	0	0	0	0	8	9	32	180	83	312
APS	9	11	28	27	13	18	2	13	8	98	23	55	305
American Institute of Physics	5	9	54	17	59	33	8	29	26	10	10	32	292
Cambridge Univ Press	8	4	10	4	27	5	9	5	9	11	11	6	109
Annual Reviews	23	2	4	4	1	5	3	8	4	3	4	6	67
Emerald	2	0	0	3	35	4	0	0	0	0	0	0	44
Total													37,884

Figure: 3

Resource-wise usage statistics for the year 2014
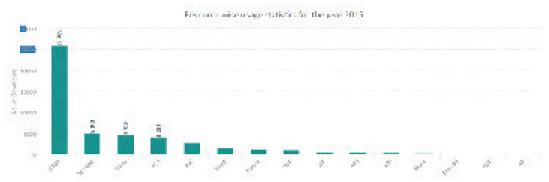
User statistics of e-ShodhSindhu Consortium accessed during the year 2015

Table: 4

Resources	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
JSTOR	448	1761	3250	5806	3756	1440	1084	2085	1885	2044	1472	758	25789
Springer Link	161	662	458	482	490	423	310	530	663	265	294	405	5143
Wiley Blackwell	183	468	512	446	405	431	362	564	449	232	257	426	4735
American Chemical Society	243	495	502	458	349	406	317	325	257	265	230	390	4237
Royal Society of Chemistry	172	324	226	261	271	343	237	274	119	132	164	224	2747
Taylor and Francis	61	94	113	171	186	145	73	149	125	99	125	118	1459
Nature	38	113	107	89	123	95	50	259	97	79	62	65	1177
Oxford University Press	22	89	141	122	116	74	144	107	96	69	49	53	1082
American Institute of Physics	40	22	51	36	29	47	25	93	37	53	28	20	481
APS	36	64	65	33	46	54	60	47	25	16	17	13	476
Institute of Physics	23	32	57	24	34	46	33	30	24	12	23	33	371
Project Muse	1	40	19	30	34	26	30	15	28	9	29	3	264
Emerald Publishing	1	3	15	1	5	16	37	35	8	8	1	2	132
Cambridge Univ Press	4	7	11	7	10	10	8	6	5	6	27	9	110
Annual Reviews	2	4	19	2	12	6	0	6	16	5	10	6	88
Total													48,291

Figure: 4
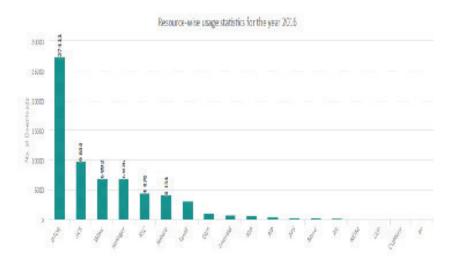
User statistics of e-ShodhSindhu Consortium accessed during the year 2016

Table: 5

Resources	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
American Chemical Society	295	905	813	1409	1392	652	594	809	812	509	829	705	9844
American Institute of Physics	22	23	58	61	70	64	84	14	40	23	0	0	459
Annual Reviews	5	20	19	24	28	12	4	6	11	12	22	24	187
APS	38	24	3	0	14	19	47	34	52	24	33	27	315
Cambridge Univ Press	4	4	13	8	19	22	10	7	0	0	0	0	87
Cambridge	0	0	0	0	0	0	0	0	36	29	0	0	65
Emerald Publishing	0	33	48	58	224	126	19	141	21	31	13	20	734
Institute of Physics	45	44	50	16	90	76	36	67	70	47	43	65	649
JSTOR	654	1719	3522	3958	4669	2052	498	1476	1728	3306	2846	995	27411
Nature	46	145	2044	571	216	101	84	158	227	81	92	374	4134
NEJM	3	1	17	19	16	4	2	9	16	4	7	2	100
Oxford University Press	75	97	119	93	182	81	32	158	70	69	69	45	1090
Project Muse	25	15	14	38	48	25	5	39	37	15	19	10	290
Royal Society of Chemistry	204	405	317	476	331	256	371	480	418	288	376	488	4470
Springer Link	288	790	555	530	915	525	454	810	671	439	409	420	6876
Taylor and Francis	104	601	190	188	437	362	147	270	272	137	212	150	3070
Wiley Blackwell	342	528	805	509	826	604	455	568	619	398	381	812	6892
Total													66,673

Figure: 5

Resource-wise usage statistics for the year 2016

6. Findings:

From the above tables, it can be observed that these are some of the e-resources accessed through e-ShodhSindhu Consortium by LNB Library, Dibrugarh University. The tables also reflect the level of awareness among the user community towards the access of e- resources. It is seen that total 34,019 nos. of e-resources had been accesses in the year 2012. Similarly, 35,419 nos. in 2013, 37,884 nos. in 2014, 48,291 nos. in 2015 and 66,673 nos. in 2016 has been accessed through e-ShodhSindhu Consortium by the users of LNB Library, Dibrugarh University. The amount of access of e-resources through e-ShodhSindhu Consortium is increasing day by day due to increasing awareness among the user community of LNB Library, Dibrugarh University. Among the number of e-resources provided by the e-ShodhSindhu Consortium, JSTOR is the most frequently accessed resources by the users followed by American Chemical Society and Springer link. On the other hand, Project Euclid, Emerald and Annual Reviews are the least accessible e-resources.

7. Conclusion:

With the explosion of information and knowledge and the limited financial resources, consortia have emerged as an essential requirement for libraries. The consortia initiatives are growing and expanding and there is an urgent need to form library consortium at regional, state and national level and more so in Indian libraries. The study reveals that the Research scholars and Faculty members are very much aware about the available e-resources provided by e-ShodhSindhu Consortium subscribed by the LNB Library, Dibrugarh University. It can be also observed that the users are quite satisfied with the existing e-resource collections that the library possesses. So, in this regard necessary steps should be taken by expanding the access from print to electronic collections and thereby developing new services to meet the users' demands.

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A STUDY ON USE OF ACADEMIC SOCIAL MEDIA BY THE SCIENTIFIC COMMUNITY LIBRARY USERS OF ASSAM UNIVERSITY, SILCHAR

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Abstract

Now a Days everyone is connected with each other via means of Social Networking Sites and applications. For entertainment as well as for academic purpose everyone uses social networking Sites. Popular academic social Networking Sites are LinkedIn, Google Scholar, ResearchGate, ResearchID, Quora, Blogs etc. The rise of social media and networking has made it faster and easier to access information around the world, and by having smaller, bite-sized chunks of information makes it easier for people to digest and communicate to one another. Whether through a simple tweet, post on Instagram or a status update on Facebook, we can instantly be made aware of aware of different issues around the world than we ever were before. A significant transition can be seen in the academic communities approach and the way they seek information and establish the social relation activities.

This paper is written with special focus on Researchgate and Google scholar. The purpose of the study is to know the use of google scholar and Researchgate among the faculty members and research scholars of the scientific community of Assam UniversitySilchar. The study has been represented through data analysis by surveying through many respondents. The depth of the study is represented in line graphs and diagrams which gave us a general overview of the popularity of Researchgate and google scholar. It has been observed that majority of the respondents used the Internet and Social Networking Sites and their resources for improving their skills in academic way.

The academic libraries are increasingly using Social Media tools to promote services and highlight resources to the Patrons. The survey also tries to acknowledge how the respondents use Google Scholar and ResearchGate Social media platform for their scholarly work.The respondents are satisfied with the available contents of Google scholar and ResearchGate.

In short, the paper pragmatically shows how google scholar and Researchgate are potentially powerful links in transforming innovation, education and ideas.

Keywords: Academic Social Networking Sites, Google Scholar, ResearchGate, Scientific Community.

Assam University.

1. Introduction

Technology and Innovations are the gradual trend and its branches are increasing day by day. Any piece of information which was limited only to books few years back can now be travelled all over the world. It is all possible because of technology. After the traditional approach, ICT came which is known as the umbrella term which is a part of all technologies for information communication. All difficult problems are easily solved with the help of ICT. The problem of manpower, mistakes of human being can be easily avoided. It also helps in distance learning, teachers can easily teach students from geographically distance place. One can connect to other worldwide etc.After ICT, Tim-Berners Lee invented World Wide Web in 1989. The www is a space of information where all the documents and other web resources can be trace through URLs, and all the information connected through hypertexts links, and can be accessed via the internet. After that technology advances and introduces web 2.0. Web 2.0 is a term that describes the changing trends in the use of World Wide Web technology and Web design that aim to enhance creativity, secure information sharing, increase collaboration, and improve the functionality of the Web as we know it (Web 1.0).Young people seem to be particularly attracted to Web 2.0 developments, often for the social aspects of easy communication, coordination, and online self-expression.Similarly,to achieve such a fate, Researchgate and google scholar have widened the boundaries of information and ideas across the world. Researchgate is the social Network for Scientist. It focuses on sharing scientific research with others. On the other hand Google Scholar provides a simple way to broadly search for Scholarly literature. We can search across many disciplines,articles, abstracts etc. It helps us to find relevant work across the world of scholarly literature.

1.1 About Assam University:-

Assam University Library was started with the establishment of the University in the year 1994 as a central facility for meeting the information requirements of the academic community of the University. The Central Library of Assam University was shifted to its new permanent Central Library cum Computer Centre building in January 2006 and renamed as RABINDRA LIBRARY. The new building has a total plinth area of 38,700 sq.ft. The main function of Library includes collection and development of knowledge resources, technical processing, organization, retrieval and dissemination of information to the end users including the academic community of Barak Valley in particular and the entire North Eastern Region in general.

2. About Google Scholar and Researchgate

Social Networking sites have very high demand for academic purpose. Many scholars use social networking sites for their research work. Google Scholar and ResearchGate occupied a significant place among the PhD Scholars. These sites gives them ideas about the new articles, research etc. With the help of these sites they can make their profile and share their ideas and researches with one another. These sites give electronic sources for the students to gather various materials for their academic learning.

2.1 Google Scholar

Google Scholar is an online, freely accessible search engine that lets users look for both physical and digital copies of articles. It searches a wide variety of sources, including academic publishers, universities, and preprint depositories. Google Scholar arose out of a discussion between Alex Verstakand and AnuragAcharya, both of whom were then working on building Google's main web. In 2006, a citation importing feature was implemented. In 2007, Acharya announced that Google Scholar had started a program to digitize and

host journal articles in agreement with their publishers. In 2011, Google removed scholar from toolbars on its search pages making it both easily accessible and less discoverable for users. In 2012, a major enhancing was rolled out, scholars can create personal 'Scholar Citations Profile', Public author profiles that are editable by author themselves.In 2013, a feature was introduced where logged-in users can save search results into the "Google Scholar library" -a personal collection which the user can search separately and organize by text.A metrics feature now supports viewing the impact of academic journal. The "metric" button helps to reveal top journals,articles in the field of interest.

2.2 Researchgate

Research Gate is a social networking site for Scientists and researchers to share papers,ask and answer questions, and find collaborators. According to a study by *Nature* and an article in *Times Higher Education*, it is the largest academic social network in terms of active users. Users that wish to register to use the site need to have an email address at a recognized institution or to be manually confirmed as a published researcher in order to sign up for an account. Users of the site each have a user profile and can upload research output including papers, data, chapters, negative results, patents, research proposals, methods, presentations, and software source code. Users may also follow the activities of other users and engage in discussions with them. Users are also able to block interactions with other users. The main work of ResearchGate is to connect researchers and make it easy for them to share and access scientific documents in the internet. It is easy for the researchers to get articles and related research work in the Internet.

The main purpose of Google scholar and ResearchGate is to provide information to the users about the works done by the researchers and present it in front of the world via web media.

3. Literature Review

Thelwall and Kayvan(2013) studied on ResearchGate: Disseminating, Communicating, and Measuring Scholarship. They said in the article that ResearchGate provides a new way for scholars to disseminate their work and hence potentially changes the dynamics of informal scholarly communication. This article assesses whether ResearchGate usage and publication data broadly reflect existing academic hierarchies and whether individual countries are set to benefit or lose out from the site. The results show that rankings based on ResearchGate statistics correlate moderately well with other rankings of academic institutions, suggesting that ResearchGate use broadly reflects the traditional distribution of academic capital.

Chakraborty(2012) made study on the Activities and Reasons for Using Social Networking Sites like Facebook and ResearchGate by Research Scholars in NEHU. In his study it was found that most of the scholars of Social Science background use these sites for their education purpose, whereas, pure science students use this sites only for their entertainment. Many of the students have their account in Facebook(34%) whereas very less have their account on Researchgate(8%). 90% of the facebook users use it to up to date themselves. Whereas 24% of the Researchgate users use it to know about others research work.

Boyd and Ellison (2008) has pointed out that SNS becomes the latest online communication tool that allows these users to create a public or private profile to interact with people in their networks.

Mayr and Walter(2005) they have made a study on "An exploratory study of GoogleScholar"the investigators of this article said that about the new scientific search service Google Scholar (GS). This search engine, intended for searching exclusively scholarly documents, will be described with its most important functionality and then empirically tested. The focus is on an exploratory study which investigates the coverage of scientific serials in GS. After the study they find that there is a

deficiency in the coverage and Up-To-Datedness of Google Scholar Indexes. It also give us which web server are the most important data provider. There is a relatively large gap in Google Scholar's coverage of German literature as well as weaknesses in the accessibility of Open Access content.

Calvert (2009) studied college students' Social Networking experiences on Facebook. Results of the study revealed that students used Facebook approximately 30 minutes throughout the day as part of their daily routine. Students communicated in Facebook using many styles.

Shaheen(2008) investigated the use of social networks and political activism by the students of three universities of Islamabad and Rawalpindi during the political crises and the emergency imposed by the Government of Pakistan on 3rd November 2007.

4. Objectives of the Study

The Objectives of the study are briefly discussed below:-

1. To examine the use of Google Scholar and Researchgate among the Faculty members and Research scholars of Science Community;

2. To know the purpose of using Google Scholar and Researchgate;

3. To find out the problems facing by the Faculty members and Research Scholars in using Google Scholar and Researchgate;

4. To examine their level of satisfaction with Google Scholar and Researchgate;

5. To know about the number of Publications users uploaded to the Google Scholar and Researchgate.

5. Methodology

The present study was conducted using survey method and the data was collected from the faculty members and research scholars of scientific community of Assam University by using questionnaire. Seventeen Questions were prepared on the basis of the objectives and distributed among the Faculty members and research scholars. To facilitate quantification and analysis, mainly close-ended questions were used along with few open ended questions so that users can express their views freely. Data has been analyzed through Microsoft Excel. Optimum accuracy has been maintained precisely while preparing the data.

6. Scope and Limitations

The study has been limited to the use of the Google Scholar and ResearchGate among the faculty Members and Research scholars of scientific Community library users of Assam University,Silchar.

The scope of the study area is also limited to faculty members and scholars of Scientific community of Assam University,Silchar.

7.Data Analysis
7.1Distribution of Questionnaire to Respondent and Responses Received:

Altogether 130 questionnaire were distributed among thirteen scientific community departments of Assam University,Silchar out of which, 104 (80 %) respondents have responded. Thus the response rate is 80% which is considered as a good response.

Table 1: Percentage of Respondent (N=130)

Questionnaire	Nos.	Percentage
Received	104	80
Not Received	26	20
Total	130	100

7.2 Gender Wise Distribution of Respondents:

From the table 3, it is evident that out of 104 respondents, 58(55.76%) of respondents are male whereas 46 (44.24%) respondents are female which shows that in the present study male respondents have participated in more number than that of its female counterpart.

Table 2: Gender Wise Distribution of the Respondents of the Departments(N=104)

Gender	Received	Percentage
Male	58	55.76%
Female	46	44.24
Total	104	100

7.3 Category Wise Distribution of Respondent

The given table shows the category wise distribution of the survey. In which there are 37.5% are the faculty members and 62.5% are Research Scholar
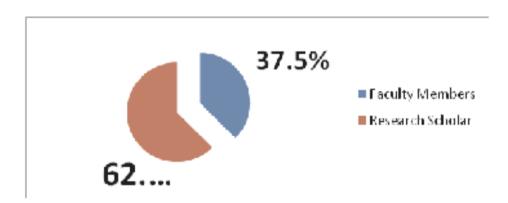
Figure 1: Category wise Distribution of Respondent

7.4 Awareness about Social Networking Sites

The table reveals that out of 104 respondents, 103 respondents' i.e.99.04% were aware about Social Networking Sites where as only one respondent i.e. 0.96% have no knowledge about Social Networking Sites. Therefore, Majority of the students are aware about Social Networking Sites.
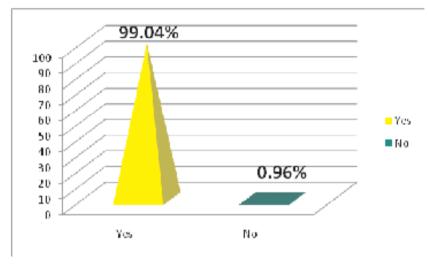
Figure 2. Awareness about Social Networking Sites

7.5 Awareness about Google Scholar and ResearchGate

The Table 16 shows that 101(97.15%) respondents are aware about the sites whereas very less i.e 3(2.85%) have no idea about these sites.

Table 3: Awareness About Google Scholar And ResearchGate(N=104)

Awareness	Respondent	Percentage
Yes	101	97.15
No	3	2.85
Total	104	100

7.6 Respondents Account on Google Scholar and Research Gate

There are 82 respondents i.e.78.85% have account on Google Scholar and ResearchGate whereas only 22 respondents1 i.e 21.15% don't have no account on both the sites.
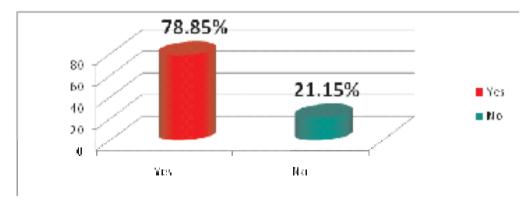
Figure3. Respondents account on Google Scholar and Research Gate

7.7Use of Articles in Google Scholar and ResearchGate

The Data analysis shows the use of the articles in Google Scholar and ResearchGate among the respondents. Here 74 respondents i.e. 90.25% were using the articles and 8 i.e 9.75% respondents are not using the articles

Table4: Use of articles in Google Scholars and Research Gate(N=82)

Use of Articles	Respondents	Percentage (%)
Yes	74	90.25
No	8	9.75
Total	82	100

7.8 Frequency of Using Google Scholar and ResearchGate

From the table we get that the respondents are using the articles very frequently. Most of the respondent i.e 45.13% are using the articles weekly whereas 30.48% are using it on daily basis. And very less number of respondents use the articles fortnightly and monthly i.e 14.64% and 9.75%.
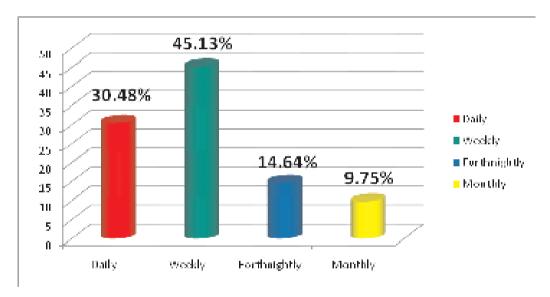
Figure 4.Frequency of using articles in Google Scholars and Research Gate

7.9Purpose of Using Google Scholar and ResearchGate

There are many purposes for which individuals are using Google Scholar and ResearchGate. From the data analysis we get that most of the respondents of scientific community of Assam University,Silchar are using the Sites for research Purpose i.e. 39.02%. And rest of the individuals used it for writing papers and articles (20.73%), for expert view on research topic (14.63%), Sharing of Research Publications (13.43%), for seminar(12.19).
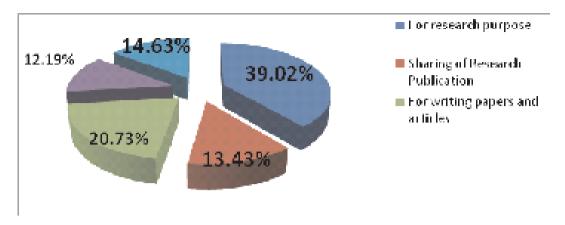
Table 5. Purpose of using Google Scholar and Research Gate

7.10 Usefulness of the Contents:

We gave a question where we asked the respondents to give ranks like Extremely Good, Good, Somewhat Good and Not Good. Where majority of the user of both Google Scholars 51(62.19%) and ResearchGate 65(79.26%) said the contents are Good in these sites.

Table5: Usefulness of the Contents(N=82)

Sites	Extremely good	%	Good	%	Somewhat good	%	Not good	%
GS	22	26.82	51	62.19	9	10.97	1	1.21
RG	5	6.09	65	79.26	10	12.1	2	2.43

7.11 Level of Satisfaction of the User

To check the level of Satisfaction of the respondents, we asked a question, where we divide the satisfactions as highly Satisfied, Satisfied, Not Satisfied, Dissatisfied, Highly Dissatisfied. Maximum respondents are satisfied with the contents of Google Scholar69(84.14%) and ResearchGate 52(63.41%).
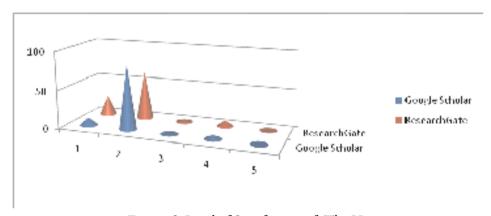
Figure 6. Level of Satisfaction of The User

7.12Prospects of These Two Sites

From the Survey, we can say that these two sites have a very good and positive prospects in future. 78(95.12%) said that google scholar have a very positive aspect in near future. Whereas 80(97.56%) said that ResearchGate Have A positive Future.
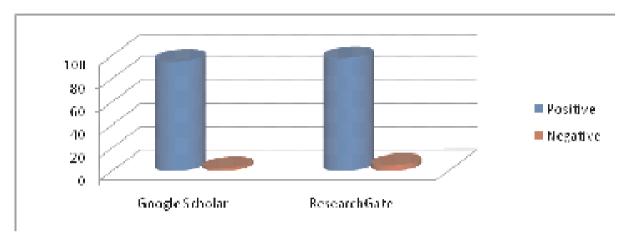
Figure7. Prospects of These Two Sites

6.   Major Findings

i.   There is a very good awareness about Social Networking Sites among the Respondents (**99.04%**) whereas very less number have no Awareness.

ii.   Out of 104 respondents, (**97.15%**)respondents are aware about Google Scholar and ResearchGate.

iii.   In the scientific community of Assam University, most of the Respondents (**78.85%**) have their account on Google scholar then researchgate, it means Google Scholar is more popular than Researchgate.

iv.   Most of the respondents use the sites from more than 1 year i.e Google Scholar (**73.17**) and ResearchGate (**46.34**).

v.   (**90.25%**) respondents are using the articles which are available in these two sites.

vi.   (**39.02%**) respondents use these sites for their research Purpose.

vii.   92.68% respondents said that the contents of these two sites are good. In google scholar (**62.19%**) and in researchGate (**79.25%**) respondents   said that the contents available in these two sites are Good.

viii.   Most of the respondents are satisfied with contents of these two sites. In Google Scholar (**84.14%**) and in researchGate (**63.41%**) of the respondents are satisfied. Rest have another level of satisfaction.

ix.   Google Scholar (**95.12%**) and ResearchGate (**97.56%**) both have positive prospects in future.

7. CONCLUSION

The present study shows that Google Scholar and ResearchGate has created a tremendous influence upon the faculty members and research scholars of scientific community of Assam University,Silchar. In this new era of technology, there is a very rapid change in information seeking behavior as everyone wants information as fast as possible and these two sites helps them in getting information with a single click of the mouse. Both Faculty members and Research Scholars have their account on these two sites for more than one year and they mainly uses these two sites for their research purpose. The contents which are

available in these are interesting and fruitful through which one can learn and grave knowledge in their field of study.

Shaping that information into well-worded prose is satisfying and then seeing ones contribution immediately published on one of the world's biggest and popular website is exciting. Inviting others to then peer review of your work and receiving feedback on it can be very satisfying, as can work together with other contributors to improve their own work. It leads to "Learning along with reviewing and improving."

It is clear from the study that these two sites have very positive prospects in future and a lot can be done to make it more user friendly.

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A SURVEY ON STATUS OF ACADEMIC LIBRARIES IN DIMAPUR

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Abstract

This paper is focused on the status of the academic libraries in Dimapur District of Nagaland, India. It is an attempt to illustrate the present state of automation, strength, collection, staff and infrastructure in academic libraries of Dimapur. The online questionnaire has been sentto the selected academic libraries to collect the information about the present status-scenario of the library. Most of the academic institutions are run under private sector. The different issues of library barriers are described and the survey conducted is explained in terms of methodology and findings. The study area has been taken out to the limit of nine educational institution's library in Dimapur area. Most of the libraries started the computerisation since 2016. The study reveals most of the libraries have sufficient infrastructure to carry out a well equipped library services. However, in library management and automation libraries are encountering some serious problems. Lack of trained staff, less number of collections, space, budget and cooperation from the higher authority are the major problems which reveals from the study.

Keyword*s- Academic library, Library automation, Library Management,Dimapur.*

Introduction

Librarians have experienced a series of changes over the past decade with the movement of information resources from the physical to the electronic and the availability of funding opportunities for the process. Many technologies and services are available to improve access to books, journals, manuscripts and other printed materials in libraries. Digitization is taking place on a global scale. The library should satisfy to its users effectively in terms of collections and services. Librarian and library staff has to play an important role in providing the right information to the right users at the right time. In the age of information, libraries are expected to use Information and Communication Technologies (ICT) to provide information more expeditiously and exhaustively than before. Computerization of library "housekeeping" operations is an important activity in this context. Information and communication technologies (ICT) has opening up the new ways of interactive communication between the Library staff and the user community. But to make this happen, modernization and upgradation of library infrastructure in terms of ICT applications and staff proficiency is required.

Library automation is the application of automatic and semi-automatic data processing to perform traditional library housekeeping activities such as acquisition, circulation,cataloguing and reference and serial control. It is the process of performing allinformation operations and activities in library with the help of computers and related information technologies.

Literature review

In order to put this survey into proper context some works dealing with the statusof academic library are mentioned."Automation," when used in a library or similar environment, refers to the computerization or mechanization of activities (Kumar, 1987; Harinarayana, 1991). Bansode and Periera (2008) surveyed to assess the status of the library automation of Goa State. Bavakuttyet. al., (2006) pinpointed the fact that the information explosion, shrinking budgets and rising costs and lack of adequate staff are the major reasons that necessitate dependence on latest technologies in libraries. Tiwari (2002) sees automation in nineties as an increasingly divergent issue, in terms of resources, skills and abilities. BamanParida (1998) conducted a survey of library personnel working in different academic libraries in Orissa to determine the type of status library professionals prefer.Gunjal and Sangam (1987) discussed the problems and prospects for the status of the college librarians. Over the past few years, library automation has undergone a dramatic shift in direction. Library automation began with in-house processing of traditional task and grew to include the use of computing and ICT tools. In the present age of ICT libraries are expanding their services, resources and relationship between libraries and resources around the globe.

Objectives of the Study:

The aim of the survey is to assess the information about the status level of strength, infrastructure and automation of the academic libraries of the proposed area. The objectives of the study are-
1. To find out the current strength and status of Academic library.
2. To find out the number of libraries undertaken automation.
3. To find out which areas are automated.
4. To find out whether sufficient staff is available to carry out automation.
5. To find out the barriers of automation faced by libraries.
6. To find out whether the libraries have sufficient infrastructure.

Methodology

The present study is a survey using a structured questionnaire as a tool. Besides, an informal interview has also been taken out to the librarian. The structured questionnaire was distributed selectively to the educational institution of the proposed area. All the necessary information were compiled, recorded and tabulated.

Background to the Study

The Study is taken out to find out the strength and the status of the academic libraries of the Dimapur area. Dimapur is the main commercial hub and most populated district in Nagaland. There are many educational institutions in the proposed area. Among the educational institutions most of them are run by the private organisational and few are run by the Government body. The Dimapur Government college is the only college which is run by the government body and the rest are run by private organisation. The survey has been taken out to Dimapur Government college, Unity College, St. Johns College, Immanual College, Pranabananda Women's College, Public Commerce College, Patkai Christian College, Tetso College and ICFAI University.Many studies on library have been undertaken in the other part of India, but few have been undertaken in Nagaland.This paper tries to identify the status of library and library automation in college libraries of Dimapur.

Analysis, Interpretation and Findings

To assess the status of selective academic library in Dimapur area, the survey method and structured questionnaire were used as a tool for collecting the necessary information required for the study. The questionnaire was distributed to nine academic libraries, out of which eight are College library and one is University library. The percentage of response received is 100%. The finalised data have been analysed, interpreted and discussed with the table and chart.

Age group of Librarian:

Age Group	Responds (%)
20-25	0 (0)
26-30	6 (66.67)
31-35	0 (0)
36-40	1 (11.11)
Above 40	2 (22.22)

Table: 1

Table: 1 shows thatage group between 26-30 responded with a percentage 66.67%, followed by 22.22% respondents were from above 40 age group, and 36-35 age group with a percentage of 11.11%. The remaining age group between 20-25 and 31-35 were found to have no responds. So, the highest responds is found to come from age group between 26-30 with a total percentage about 66.67%.

Qualification of librarian

Degree	M.Lib.Sc (%)	MPhil (%)	PhD (%)
Respondents	8 (88.89)	1 (11.11)	0 (0%)

Table: 2

From the above table it shows that majority of the respondent has M.Lib.Sc Degree with a total percentage of 88.89% and respondent with M.Phildegree is found to have just 11.11% while respondent with PhD degree is found to have none.

Institution Affiliated to

Affiliated to	Responds (%)
Nagaland University	8 (88.89)
ICFAI University	1 (11.11)

Table: 3

Out of nine institutions eight are affiliated to Nagaland University and one under ICFAIUniversity.

Funding Agency/Parent Body

Parent Body	Responds (%)
Government	1 (11.11)
Private	8 (88.89)

Table: 4

The above table shows that only 11.11% has been funded by the government while the rest 88.89% is private.

Number of students enrols

Name of College	Number of Users
Public College Of Commerce	672
Unity College	1300
Tetso College	1065
Pranabananda Women's College	1100
Patkai Christian College	2000
Immanuel College	504
Dimapur Government College	987
St John College	592
ICFAI University	500

Table: 5

Nine institutions were taken for the study. In table:4 shows the number of enrolment in a particular institution. From the analysis it shows that out of these nine institutions Patkai Christian college has the highest number of users enrolment so far with a total number of 2000 users followed by Unity College and Tetso College etc., whereas ICFAI university is found to have the lowest enrolment among other institutions with a number of 500 users only.

Number of Staff

Name of College	LIS Background	Non LIS Background	Total
Public College Of Commerce	1	2	3
Unity College	1	2	3
Tetso College	2	0	2
Pranabananda Women's College	1	1	2
Patkai Christian College	3	3	6
Immanuel College	1	0	1
DimapurGovt College	1	4	5
St John College	1	1	1
ICFAI University	2	2	2

Table: 6

From the above table it shows that staffs of library are mostly not from library science background. The analyses show that in libraries there are more non-professional library staffs than library professionals. From the above tablePatkai College has the highest number of staff in comparison to other colleges. It hasa total of 6 staff out of which 3 are from library science background and 3 non-professionals. And the lowest number of library staff is from Pranabananda Women's College and St. John College.

Library Working Hour

Working Hours	Responds (%)
5 Hours	1 (11.11)
6 Hours	4 (44.44)
7 Hours	3 (33.33)
8 Hours	1 (11.11)

Table: 7

Table: 7shows only 11.11% of the library provides service for a maximum of 8 hours.According to the responds most of the libraries serves 6 to 7 hours a day. From the analysis it was found that 44.44% libraries provide service for 6 hours and followed by 7 hours responded by 33.33% colleges.
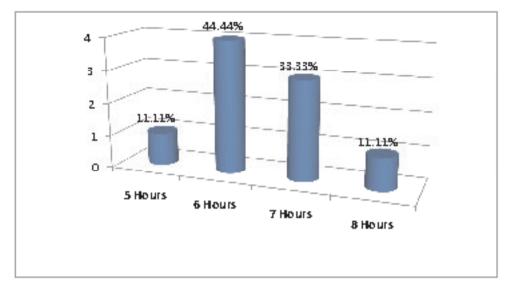
Chart: 1- Library Working Hour

Number of working Days in a Week

Number Of Days	Responds (%)
5 Days	1 (11.11)
6 Days	6 (66.67)
7 Days	2 (22.22)

Table: 8

The table shows that out of 9 libraries, 66.66% libraries responded the number of working days for about 6 days in a week, and 22.22% libraries responded number of working days for 7days in a week and only 11.11%libraries provide service for 5 days in a week. This shows that the highest working hours is for 6days i.e., 66.67%.
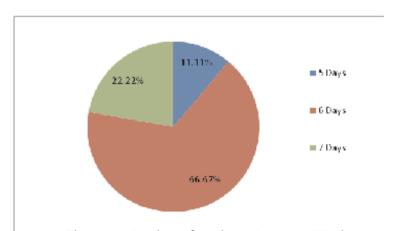
Chart: 2- Number of working Days in a Week

Library Access System

Access System	Responds (%)
Open Access	8 (88.89)
Closed Access	1 (11.11)

Table: 9

Above table shows that majority of the library provides open access. The analysis shows that out of 9 respondents, 8 respondents provide open accesswhich consists of 88.89% and only 1 respondent responds to providing closed access i.e., 11.11%.
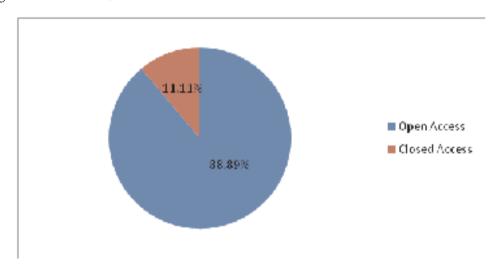
Chart: 3- Library Access System

Yearly Library Budget

Name of College	Yearly Budget
Public College Of Commerce	1.5 Lac
Unity College	3-4 Lac
Tetso College	No Specific Budget
Pranabananda Women's College	No Specific Budget
Patkai Christian College	No Specific Budget
Immanuel College	No Specific Budget
DimapurGovt College	1.5-2 Lac
St John College	1 Lac
ICFAI University	1 Lac

Table: 10

The table shows that out of nine libraries only five libraries have specific budget, the rest four libraries do not have any specific budget for the Library. Analysis shows that Unity College has the highest allocation of Library Budget with an amount of 3-4 lakh in comparison to other colleges.

Total Collection of Books

Collection Status	Responds (%)
1000-10000	7(77.78)
11000-20000	1 (11.11)
21000-30000	1 (11.11)

Table: 11

The analysis shows that majority of the libraries have collection within 1000-10000 with a percentage of 77.78%. 11.11% of libraries are having within 11000-20000 and 21000-30000.
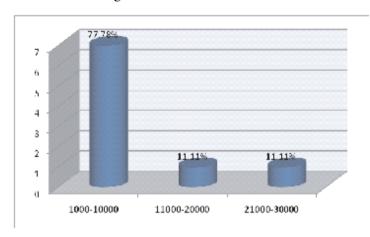
Chart: 4- Total Collection of Books

Classification Scheme Used

100% respondents have responded to use DDC as classification system.

Journal Subscription

Name of College	Number of Journal Subscription
Public College Of Commerce	5
Unity College	8
Tetso College	6
PranabanandaWomen's College	10
PatkaiChristian College	22
Immanuel College	10
DimapurGovt College	4
St John College	4
IcfaiUniversity	15

Table:12

From the table above it clearly shows that Patkai Christian College Library has the highest number of journal subscription with a total number of 22 journal, this is followed by ICFAI University 15 journals, Pranabananda Women's College and Immanuel College 10 journals, Unity College 8 journals, Tetso college 6 journals and St. John and Dimapur Govt. College 4 journals.
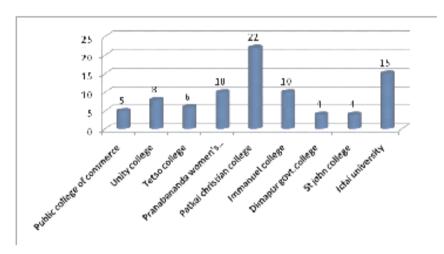
Chart: 5 - Journal Subscription

Registered to Consortia

E-Consortia	Responds
N-List	6 (66.67)
UGC-INFONET	1 (11.11)
Others	0 (0)
Nil	2 (22.22)

Table: 13

Above table shows that 66.67% colleges are registered to Consortia and 22.22% are not registered to any consortia. It reveals that between N-list and **UGC**-INFONET, the highest used of consortia is N-list. Only 11.11% libraries are registered to UGC-INFONET.
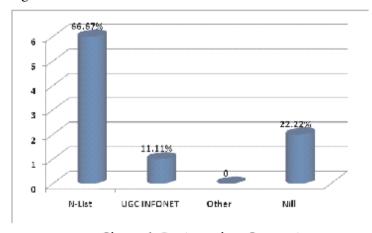
Chart: 6- Registered to Consortia

Services Provided by the Library

Service	Responds (%)
Lending/Borrowing Service	9 (100)
Reference Service	9 (100)
Internet Access	8 (88.89)
Reading Room	9 (100)
Digital Library Service	0 (0)
Reprographic Service	5 (55.56)
Reserve facility	5 (55.56)

Table: 14

The above table reveals that 100% libraries are providing the service of lending/borrowing, reference and reading room facility, which is follows 88.89% libraries provides internet access to their users. 55.56% of libraries are providing reprographic and reserve facility service and none of the library has Digital library facility.
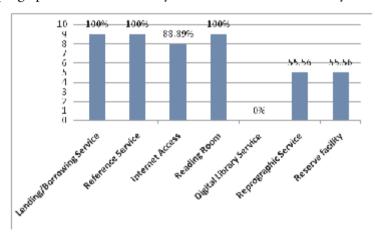
Chart: 7- Services Provided by the Library

Number of Computer

Name of Institution	Number of Computer
Public College Of Commerce	5
Unity College	3
Tetso College	8
Pranabananda Women's College	4
Patkai Christian College	7
Immanuel College	2
Dimapur Govt College	3
St John College	2
ICFAI University	6

Table: 15

The above table shows that most of the libraries have sufficient computer. It reveals that Tetso College has highest number with 8 computers and followed by Patkai Christian College with 7 computers. At the same time,Immanual College and St. John College has lowest with 2 computers.

Library Automation

Automation	Responds (%)
Fully Automated	0 (0)
Semi Automated	6 (66.67)
Automation Under Process	2 (22.22)
Not Yet Started	1 (11.11)

Table: 16

From the above table it reveals that 66.67% of library are semi-automated library, which is followed by 22.22% libraries are still under process. 11.11% has not yet started and none of the library has fully-automated library system.
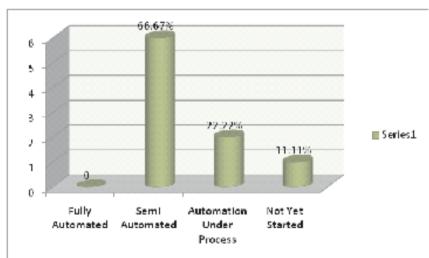
Chart: 8- Library Automation

Year of the Library Automation Started

Year	Responds (%)
2013	1 (11.11)
2014	1 (11.11)
2015	2 (22.22)
2016	3 (33.33)
2017	1 (11.11)

Table: 17

From the above table it reveals that most of the libraries have started automation recently. 33.33% library has started automation system from the year of 2016 which is followed by 22.22% of libraries in the year 2015.

Integrated Library System Software Used

ILS	Response
Koha	5 (55.56)
SOUL	3 (33.33)
LYBSIS	0 (0)
E-granthalaya	0 (0)
Other	0 (0)

Table: 18

The above table shows that 55.56% of the libraries are using Koha for ILS, which is followed by 33.33% of the Library are using SOUL. The rest of the libraries are not using anyother software.
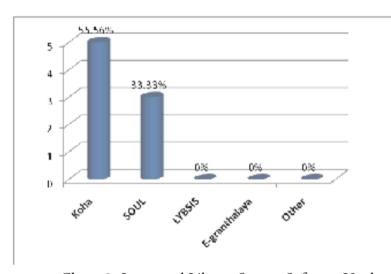
Chart: 9- Integrated Library System Software Used

Area of the Library Automation

Area of Automation	Responds (%)
Acquisition	1 (11.11)
Cataloguing	8 (88.89)
Circulation	8 (88.89)
Serial Control	0 (0)
Budgeting	0 (0)
OPAC	8 (88.89)

Table: 19

From the above table:18 it reveals that 88.89% of the libraries are automated in the area of Cataloguing, Circulation and OPAC and which is followed by 11.11% of the libraries are in acquisition area. None of the libraries are automated in the area of Budgeting and serial control.
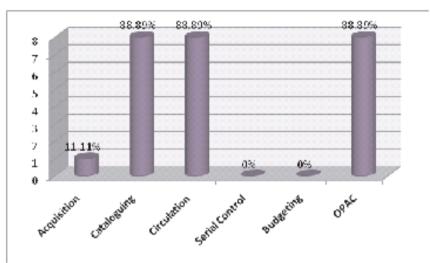
Chart: 10- Area of the Library Automation

Use of any Identification Technology

Identification Technology	Responds (%)
RFID	0 (0)
Barcode	2 (22.22)
Nil	7 (77.78)

Table: 20

The above table shows that only 22.22% of libraries are using Barcode technology for identification of their resources. 77.78% of libraries are not using any identification technology
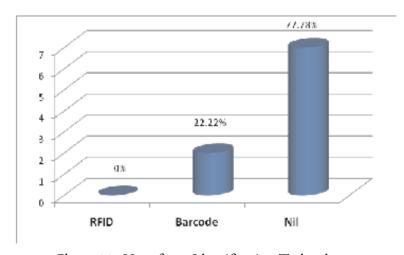
Chart: 11- Use of any Identification Technology

ICT Infrastructure Available in Library

Infrastructure	Responds (%)
Sufficient Computer	4 (44.44)
Internet connection	8 (88.89)
LAN Connection	7 (77.78)
Database record	5 (55.56)
Wi-Fi	6 (66.67)

Table: 21

From the above table we can see that most of the libraries has sufficient ICT infrastructure. It reveals 88.89% of libraries have internet connection which is followed by 77.77% of libraries has LAN Connection too. 66.66% of libraries have Wi-Fi facility and 44.44% of libraries responded as having of sufficient computer facility. 55.56% of library has database record.
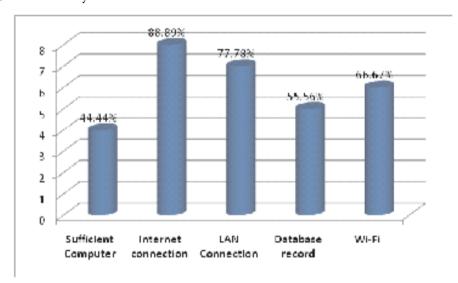
Chart: 12- ICT Infrastructure Available in Library

Barriers of the Managing Library

Barriers	Responds (%)
ICT Trained Staff	4 (44.44)
Power	1 (11.11)
Space	6 (66.67)
Cooperation from Higher Authority	5 (55.56)
Finance	5 (55.56)

Table: 22

From the above table it reveals that 66.67% of libraries believed "space" as their barriers of library management. 55.56% of libraries also choose finance and cooperation from higher authority as their barrier. 44.44% and 11.11% of libraries believe ICT trained staff and power as their barrier in managing the library.
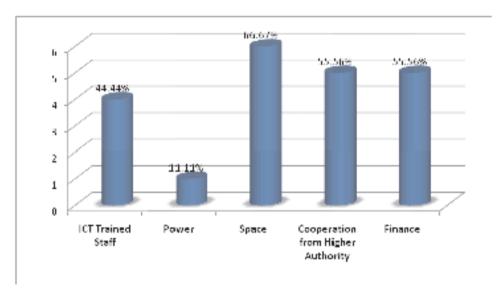
Chart: 13- Barriers of the Managing Library

Suggestions

At the end by distributing questionnaire different suggestions were taken from the respondents and two respondents have given their views as suggestions:

"For any library to serve the users should meet their requirements, it is imperative that the library is well stocked, e-resources and databases should be made available through. Hence, the improvement is needed in the field of infrastructure with scope in future expansion and ICT infrastructure as well."

"I feel libraries should be given the first priority in academic institutions. Authorities should also pay interest in the building up of libraries. Students should also be made aware of libraries and its proper usage."

Major Findings

1. None of the Libraries are providing Digital Library service.
2. None of the libraries are fully automated.
3. Majority of the library initiated the automation process in the year of 2016.
4. Libraries have focused on circulation, cataloguing and OPAC service.
5. Most of the libraries has sufficient infrastructure.
6. Majority of the Libraries are facing the less cooperation from the higher authority.
7. Majority of the Libraries are using Koha as ILMS.
8. Barriers, such as insufficient funds, lack of trained staff and lack of space are faced by the majority of the Libraries.

Conclusion

Overall, by looking at the output of survey most of the libraries has sufficient infrastructure including with Wi-Fi and computer facility to upgrade more services in terms of resources and staff. Most of the libraries have poor collections and less professional staff. These two factors act as the main barrier between

library and its users. Maximum number of the libraries has startedwith automation system recently; they need to be fully implemented to provide user-friendly service. Most of the libraries have very less yearly budget to meet their needs. Library budget should be satisfactory and higher authority needs to be cooperative on the matter. None of the automated libraries have used serial control and budgeting, and a very few number of libraries have used acquisition area of automation. To bring the smooth running of library management system all the automation area should be fully implemented and well-equipped.

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ANNALS OF LIBRARY AND INFORMATION STUDIES: A SCIENTOMETRIC PORTRAIT

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ABSTRACT

Library and Information Science is a fastest growing area. New innovative ideas are being added in the subject regularly. Unlike other subjects Library and Information Science is also having different journals (printed as well as electronic) to publish different innovative ideas. Annals of Library and Information Studies (ALIS) is such a journal. This is a metrics study focussing on research productivity of ALIS. Study period has been covered from 2001 to 2016 and total of 469 records were found for these 16 years of period.

KEYWORDS: Scientometrics, Collaborative Index, Degree of Collaboration, Annual Growth Rate.

INTRODUCTION

Annals of library and information studies (ALIS) is a leading quarterly journal in Library and Information Studies publishing original papers, survey reports, reviews, short communications, and letters by NISCAIR pertaining to library science, information science and computer applications in these fields. In the year 1954, erstwhile INSDOC launched Annals of Library Science as its first publication and Dr. S R Ranganathan was its first Editor. The journal's title was expanded to Annals of Library Science and Documentation in 1964 and again renamed in 2001 as Annals of Library and Information Studies. Into its 59th volume in 2012, Annals of Library and Information Studies is the oldest LIS Indian journal. This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge. Annual Subscription rate of the journal is Rs 1200.00; US $ 140.00 and for Single Copy it is Rs 400.00; $ 50.00. The current Editor is Dr. G Mahesh, India and Assistant Editor is Mrs. Swarnlata Upadhyay. ALIS covers Library and Information Science Abstracts, UK and Indian Library and Information Science Abstracts, India. For this study the publications of ALIS from 2001 to 2016 has been chosen and growth rate and collaborative research work of these 16 years has been examined.

REVIEW OF LITERATURE

1. Research Productivity of Tibor Braun : an analytical chemist –cum scientometrician, by **Kalyane and Sen (2003) states that** Tibor Braun encompasses his papers (single-authored 40; and multi-authored 140) during 1954-1995. Productivity coefficient is 0.78. Tibor Braun had 80 collaborators of which Schubert, Glanzel, Zsindely and Farag were the most active. Author productivity in the research group of Tibor Braun follows the trend of Lotka's Law. He had used 49 channels of communication to disseminate the results of his research of which Scientometrics (33 papers) tops the list followed by Anal Chim Acta (21 papers).

2. Gupta (2012) in his paper Scientometric Analysis of Pakistan's S & T research output examined

the research output of Pakistan for the period 2001-10 on several parameters.

3. Dutta and Nikam (2013) examines solar cell research in India as revealed by the publications indexed in Web of Science (WoS) for a period of 20 years from 1991 to 2010 in the paper Solar cell research in India: A scientometric profile. This paper helps to get the idea of application of different metrics

4. Velmurugan and **Radhakrishnan,** in their paper Malaysian Journal of Library and Information Science: A Scientometric Profile, discussed on the different research productivity of the journal and found a rising publication trend. Study was conducted for 7 years *i.e.*from 2008 to 2014 and 142 articles were found.

OBJECTIVES
1. To find out the year wise distribution of articles during the studied period
2. To examine the annual growth rate (AGR).
3. To study the authorship pattern of papers.
4. To find out the author productivity.
5. To study the authorship pattern of single and co-author articles.
6. To describe the year wise single versus multi-authored papers.
7. To measure the Annual Growth Rate, Degree of Collaboration and Collaborative Index of ALIS.
8. To know the top listed subjects.

METHODOLOGY
For the study, the required data have been collected from the official website of ALIS. Total of 469 contributions were found from 2001 with volume number 48 to 2016 with volume number 63. All retrieved and collected data were subsequently examined, analysed and tabulated for making observations. MS Excel has been used for proper analysis. Along with different bibliometric tools such as Degree of Collaboration (DC), Collaborative Index (CI), Annual Growth Rate (AGR) were calculated for scientific result.

ANALYSIS:
Following tables represent the quantitative performance of ALIS through different metrics.

YEAR- WISE DISTRIBUTION OF PUBLICATIONS:
ALIS is almost showing a rising publication trend for the distribution of 469 items. (Table-1). The exceptional rise is seen in 2010 (volume 7) with 9.17%. Minimum number of publications was found in

Table 1: Year wise distribution of articles

Year	Volume	Total Number	%
2001	48	17	3.62
2002	49	18	3.84
2003	50	19	4.05
2004	51	21	4.48
2005	52	23	4.90
2006	53	26	5.54
2007	54	28	5.97
2008	55	35	7.46
2009	56	34	7.25

2010	57	43	9.17
2011	58	36	7.68
2012	59	27	5.76
2013	60	37	7.89
2014	61	35	7.46
2015	62	38	8.10
2016	63	32	6.82
Total		469	
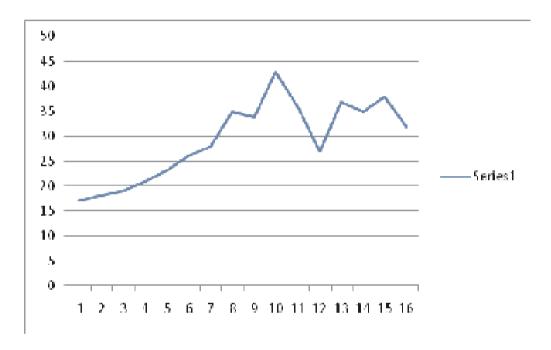
Fig 1: Yearwise distribution of articles

ANNUAL GROWTH RATE

Growth rate is measured to know the rise or fall of a particular field. It is essential in any field to know the growth of a particular year. Here, Annual Growth Rate (AGR) is calculated to measure the growth of the number of publications in a particular discipline AGR has been determined by using the formula given below.

$$AGR = \frac{(End\ Value - First\ Value)}{First\ Value} * 100$$

In this study, AGR of documents was 5.9% in 2002, followed by 5.6% over the respective next year. The highest AGR is in 2011 with an increase of 37.03% in the year 2013 and negative AGR in the year 2011 with   -16.27 %. The average AGR is 5.25%.

Annual Growth Rate %

Year	Volume	Total Number	AGR%
2001	48	17	----
2002	49	18	5.9
2003	50	19	5.6
2004	51	21	10.52
2005	52	23	9.52
2006	53	26	13.04
2007	54	28	7.69
2008	55	35	25
2009	56	34	-2.85
2010	57	43	26.47
2011	58	36	-16.27
2012	59	27	-25
2013	60	37	37.03
2014	61	35	-5.4
2015	62	38	8.57
2016	63	32	-15.78
AGR: Annual Growth Rate			

AUTHORSHIP PATTERN

The authorship pattern for 469 articles represents that the maximum number of the research articles were published by double authors accounting 216 (46.06%), followed by single author 159 (33.90%) and three authored papers 76 (16.20%). Least contributions are from 5 authored and more than 6 authored papers, both of which are 4 papers (0.85%).

Pattern	Total Number of Contribution	% of Total	Cum %
1 Author	159	33.90	33.9
2 Author	216	46.06	79.96
3 Author	76	16.20	96.16
4 Author	10	2.13	98.29
5 Author	4	0.85	99.14
(>6 Author)	4	0.85	100
Total	469		

Authorship pattern for Solo & Co-Authorship Publications

Pattern	Year																No. of Articles
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Single	3	6	6	7	9	6	12	12	6	17	14	11	12	12	18	8	159
Joint	14	12	13	14	14	20	16	23	28	26	22	16	25	23	20	24	310
Total	17	18	19	21	23	26	28	35	34	43	36	27	37	35	38	32	469

Single authorship accounted for 159 while joint authorship accounted for 310 publications amongst 469 papers.

DEGREE OF COLLABORATION

Degree of Collaboration (DC) is the measurement of ratio of collaborative publications and total number of publications. It is measured as 0.66 as average.

DC= Nm/ (Nm+Ns) = 310 (310+159)   = 0.66

Where, Nm refers to multi-authored (two or more) contributions while, Ns refers to number of single authored papers

Year	Ns	Nm	Ns+Nm	DC =Nm/(Nm+Ns)
2001	3	14	17	0.82
2002	6	12	18	0.67
2003	6	13	19	0.68
2004	7	14	21	0.67
2005	9	14	23	0.61
2006	6	20	26	0.77
2007	12	16	28	0.57
2008	12	23	35	0.66
2009	6	28	34	0.82
2010	17	26	43	0.60
2011	14	22	36	0.61
2012	11	16	27	0.59
2013	12	25	37	0.68
2014	12	23	35	0.66
2015	18	20	38	0.53
2016	8	24	32	0.75
Total	159	310	469	0.66

DC=Degree of Collaboration, Ns=Number of Single Authored, Nm=Number of Multi Authored

COLLABORATIVE INDEX

Calculating mean number of authors per joint paper is called Collaborative Index (CI). In this study, highest CI is found in the year 2004 (2.71) while the lowest is in 2001 (2.14). The average CI is 2.41 in these 16 years of period.

Year	Multi-Authored papers	Total Authors of Multi-Authored Paper	CI
2001	14	30	2.14
2002	12	29	2.42
2003	13	28	2.15
2004	14	38	2.71
2005	14	37	2.64
2006	20	48	2.40
2007	16	38	2.38
2008	23	55	2.39
2009	28	64	2.29
2010	26	62	2.38
2011	22	58	2.64
2012	16	38	2.38
2013	25	63	2.52
2014	23	53	2.30
2015	20	49	2.45
2016	24	58	2.42
Total	310	748	2.41

CI=Collaborative Index
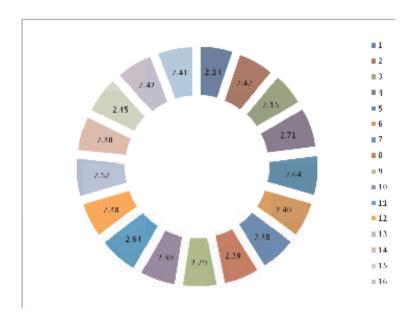
Fig 2: Collaborative Index

SUBJECT WISE DISTRIBUTION

For the study of ALIS in these mentioned 16 years different articles with various subjects were found. But the subject list was found in the website only from 2011 to 2016. It was not available for the earlier years. The top position is secured by 'India' with 18 articles (3.84%) followed by Scientometrics with 15 articles (3.20).

Rank	Subjects	No. of Articles	% of Records
1	India	18	3.84
2	Scientometrics	15	3.20
3	Bibliometrics	8	1.71
4	S R Ranganathan	7	1.49
5	Nigeria	6	1.28
6	Libraries	6	1.28
7	Colon Classification	5	1.07
8	Consortia	4	0.85
9	Electronic Resources	3	0.64
10	Scopus	2	0.43
	Others	395	84.22
	Total	469	

CONCLUSION

ALIS is a leading scholarly peer-reviewed open access journal in the field of Library and Information Science (LIS). It provides a very good coverage of scientific publications related to the field of Library and Information science. This study was an analysis of ALIS towards LIS community and result was seen very successive. ALIS is showing a very rising trend towards the field. Total of 469 publications were found for the 16 years of period with an average of 29 publications per year. Most of the articles are found on current topics of LIS and that is why this journal is very much popular among researchers and faculties of the field.

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AUTOMATED SERIAL CONTROL SYSTEM USING SOUL IN K.K. HANDIQUE LIBRARY, GAUHATI UNIVERSITY:AN EXAMPLE OF PARADISM SHIFT

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Abstract
Library Automation in India began in the late 1970s in a few special libraries and now has reached most of the University libraries. This study provides an overview of some logical steps including report generation facility which are followed in serial control module SOUL 2.0. This paper explores the main element needed in various works such as schedule generation, preparation SET or Accessioning.

Keywords: Library automation, serial control, SOUL, E-ShodhSindhu,Gauhati University,Assam

1. Introduction:

Since 1996 automation work was started in K.K. Handique Library with a vision of providing better services to its users To cope up with the latest trends and technology our library has adopted different program that is provided by INFLIBNET.

The Library is using SOUL 2.0 package developed by INFLIBNET for its automation purpose It is user friendly software developed to work under client/server environment.The K.K. Handique Library has an extensive collection of different types of reading materials such as books, journals, reports etc.

As we are presently using SOUL 2.0 for automations purpose, we feel that serial control module is the most important and tough module of this software SOUL 2.0.The module keeps track of serials in the library more efficiently. All the parameters are to be set properly before we start our work.

2. Serial Control Module

Basically the module is developed based on KARDEX system.The following function are built into it:
q Suggestions
q Master Database
q Subscriptions
q Check-in of individual issues of Journals
q Payment, remainder, binding and title history
q Export/import using ISO 2709 bibliographic exchange format
q Article indexing of journals

q Cataloguing electronic journals

q Keeps track of the history changes of journals

q MARC 21 entry/edit option

3. Logical Steps followed in K.K. Handique Library

i)   Title: All the Serials(subscribed/non subscribed) are to be entered in the database by the title entry format.

ii) Suggestion: All the suggestions that normally received from faculty members or users of Gauhati University are to be added in a specific title. We have to enter details of suggestion in this option.

iii) Subscription: we can place order directly with publisher and supplier.

iv) Check-in: All journals are to be received in this option. We have to ensure that all records for the serials in the database have correct detail in MARC format. One of the important steps is to be followed that, we have to generate a schedule of the title before check-in process.

v) Schedule Generation: Here we are able to display the name of all serials. Highlight the one which we want to generate the schedule. Next step is to double click on the title, we can generate completely new schedule or we can modify or delete it according to our need. We have to ensure that all the volume number, issues from-to, lead time publication date are to be filled up correctly.

Modify the Generate Schedule:

Sometimes situations may arise that arrival schedule of a title gets changed. In such case we need to review and modify previously generated schedule for that particular title. We have to select browse mode and select Modify/Delete option. It will display the list of journals for which schedule has been generated. Double click the title and click 'Regenerate schedule' button. A pop-up box will display as reproduced in the screen. We can make necessary changes according to our needs. After that we have to click on save button.

4. Commercial Binding:

After receiving process, we have to send journals for binding. Binding module facilitates us to send the issues of specific journals for getting them properly bound.

4.1 Set Preparation:

The important step in bound volume journals is to identify the titles and making the sets of each volume published in a given period. We have to fill up details of set no, ISSN No, binding type colour and embossing text etc. After that we are to save the records.

4.1.1 Receiving /Accessioning of SETS

We can receive the Sets which were ordered for binding. We are to choose the order number for which we want to receive the sets. Then enter the other details like Accession No., date, Class no., and location.

Another option available is 'SPLIT'. There may be journals which are getting split as after binding. In this case we are to click on 'split' button. We will be prompted to enter number of parts, enter the date. Now we are able to get different accession number to different parts of bound volumes. After that we are to click on 'save' button.

4.1.2 Order Processing:

By using this option we can create an order for the set prepared for binding we can see all unordered SET which we need to send for binding.

We are to enter Order no. and date. One of the important step is to choose the budget head and Tick the SETS which we want to send for binding. Ensure the binding price and then enter it against each SET. After that we have to click on 'SAVE' button.

Invoice Process:

It is the first step of payment process. Invoices can be entered either for all orders or standing orders.

We are to select the publisher/supplier from the drop-down Menu. We need to click on 'search' button. All the orders placed with that publisher or supplier will appear with brief detail. Next we need to select the titles from the pop-up box for which invoice has been raised by the publisher/suppliers, then we are to click on save button.

The next step is to fill up Invoice number and check whether all other details are correct.

Some time we need to input other miscellaneous charges which are added to the subscription cost. Normally they are handling charges etc. we are to click on 'calculation of Miscellaneous charges' and input details in respective fields. Invoice cost will be calculated automatically.
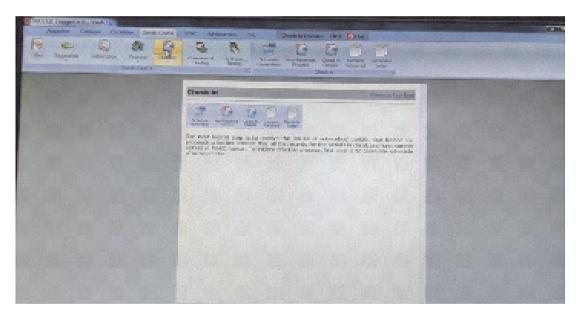
Fig: K.K. Handique Library (Gauhati University) Serial Control Module

Report Generation:

In serial control module different reports can be generated in different sub module.

This reports can be display or one can print as per requrement.

Basically 15 types of reports can be generated in this module.The following table shows the details:

Sl. No.	Name of Sub Module	Name of Report
1	Title	1. Title Holding
2	Suggestions	2. Request Report
3	Subscriptions	3. New Subscription 4. Purchasing Order 5. Print Order 6. Cancel Order
4	Payments	7. Invoice Report 8. Payment Processing
5	Check in Detail	9. Receive Report 10. Non-receive Report 11. Remainder Report
6	Binder	12. Binding Report 13. Remainder Report 14. Purchase Order 15. Bound Volume Report

Table 1: Serial Control

From the above study it is clear that reports are very important for each of the sub module which can show details of information. These reports are very useful for different purposes.

1. Article Indexing Features:

Article Indexing is an important feature of SOUL 2.0. Article from all periodicals can be scanned and files can be attached to that particular records. This can be done using MARC 21 format.

At the first step , we need to retrieve the journal by making search through title. The system will retrieve the item, where we need to link the articles of the issue with the retrieve journal by using the 'Title statement'. Other information such as author electronic location etc are also be entered.

One can also attach the file by filling up details in 'Attachment' field which is display on the screen.
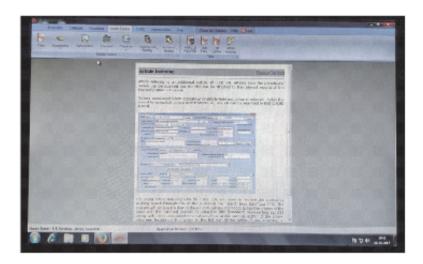
Fig 2: Screen shot of K.K. Handique Library Article Indexing

1. E-ShodhSindhu: Consortium for Higher Education Electronic Resources

The Consortium is needed for K.K. Handique Library because of information explosion, diversity of user needs and for financial crunch etc. UGC-INFONET has brought great changes in the information seeking pattern of library users. It facilitates free access to full text articles from the scholarly journals and bibliographic detail from databases in all fields.

UGC INFONET (along with N-List and INDEST)E-journal consortium is now called e-Shodhsindhu , has subscription agreement with **18** publishers for full text databases and with **4** publishers for bibliographic databases. All electronic resources subscribed are available from publisher websites. The main objectives to subscribe E-ShodhSindhu for K.K. Handique library are as follows:

To develop a formidable collection of e journals, e-journal archives on perpetual access basis.

Provide access to subscription based scholarly information (e-journals) to all educational institutions.

Bridge digital divide and move towards an information rich society.

The E-ShodhSindhu will suppose to provide current access to more than 15000core peer-reviewed journals.

2. Conclusions:

At present situation all library professionals have to learn latest technology and should try to implement in their respective fields.

As in case of K.K. Handique Library which contains large number of journals and books other resources ,SOUL is very useful for maintaining records and doing other housekeeping operations. In this regard serial control module is most complicated and toughest module of this software according to our point of view. So if we follow all the steps systematically it is easy to manage and maintain records of serials effectively. Report generating facility provide pinpointed information of each sub modules of serial control.

K.K. Handique library of Gauhati University has successfully complited all functions of current periodicals using this module.

Lastly we can say that a comprehensive effort is very essential from all corners for improving various services of the library.

It is very essential to have required technological infrastructure ,technologically sound staff, standard knowledge and conscious user community.

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AN INVESTIGATION INTO THE OPEN ACCESS INITIATIVES IN UNIVERSITY LIBRARIES IN NORTH EAST INDIA

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Abstract

Open access initiatives (OAI) is an international effort to make the scholarly research literature, books and other digital resources available in an unrestricted, free access to the public through the internet. Libraries have been taking major initiatives through conducting advocacy programmes, building institutional repositories and supporting open access publishings. The present study aims to assess the initiatives taken up towards Open Access Movement in some selected university libraries of North East India.

Key words: OAI, Institutional repository, University Libraries, North East India.

1. Introduction

The Internet has fundamentally changed the practical and economic realities of distributing scientific knowledge and cultural heritage. For the first time ever, the Internet now offers the chance to constitute a global and interactive representation of human knowledge, including cultural heritage and the guarantee of worldwide access. (Berlin Declaration, 2003). Open access initiative (OAI) is a new approach, movement to democratize accessing to scholarly publication to the academic community liberalizing from economic and geographical barriers. Open access is made possible by the internet and copyright holders consent (Suber,2010). University libraries which have been regarded as the heart of the University should take major initiatives to promote open access in their respective university to fulfill the growing demands of users. The present study aims to assess the initiatives taken up towards Open Access Movement in some selected university libraries of North East India.

2. Past studies

Academic libraries can be highly successful in producing an institutional repository by developing relationships with various organizations on campus in addition to the academic programs. Maintaining standards throughout the IR is crucial to future growth in an organized and consistent manner. Philosophical

considerations of the role of the IR should be addressed in the beginning stages of the development of the IR for eliminating confusion and duplication of its content with other campus organizations(Buehler and Trauernicht, 2007).Westell(2006), have proposed seven indicators such as mandate; integration with planning; funding model; relationship with digitization centres; interoperability measurement; promotion; and preservation strategy; for measuring the success of IRs. Disseminating research results via OA would be more cost effective than subscription publishing and if OA were adopted worldwide the net benefits of Gold OA would exceed those of Green OA(Houghton and Swan,2013). Open initiatives are valued for efficient and interactive communication while traditional publishing still dominates the legitimacy of research publications, which leads to the quandary of individual academics operating within the transitional landscape of scholarly communication (Ren, 2015). Two most important Information Literacy skills in the context of OA are finding OA information and understanding OA citation advantage (Grgic, 2016). Open access articles in hard science have received more citation than those in soft science including LIS (Turk ,2009). Indian research repositories and open access journal publishers are among the top 20s in terms of registry in ROAR or OAIR or scientific journal publications ((Bist&Mohanty, 2006). The importance of quantitative literacy is suggested for librarians and academics for managing alternatives to the rising cost of scholarly communication (Chavez, 2010). Open access journal publishing have to evolve a mechanism that will share the burden of the authors interested in publishing in OA journals that levy article processing charge and bridge the economic divide between the authors who belong to the developed nation and those who reside from third world (Shah &Gul, 2013).University of Nottingham established a central fund to pay for OA publication of research coming out of the University in direct response to mandates from research funders (Cockerill, 2009).

3. Objectives of the Study

The objectives of the present study include the following:
ᵣ To provide an overview of the university libraries in NE India
ᵣTo explore the different measures taken up by the universities to achieve OA culture in the university campus.
ᵣ To explore the major challenges in proper adoption of OA in their respective institutions;
ᵣ To chalk out modalities to have open access facilities in all the university libraries of the region.

4. Scope and Methodology

The study is based on 20 selected University libraries in North East India consisting of 11 central university libraries, 5 state university libraries and 4 private universities. The following methods and techniques have been followed in the study:
ᵣpersonal visit to the libraries and meeting and discussing about the issues with librarians
ᵣUse of a semi-structurally designed questionnaire to collect data from the libraries concerned
ᵣAdoption of statistical tools in the analysis of data.

5. University Libraries in North East India

In North East India there are number of Universities comprising of centrally owned Universities, state run Universities and private Universities.   For the present study 26 questionnaires have been distributed to all types of Universities in all the eight states of the region and following Universities have released the duly filled in questionnaires mailing 76. 92% response.
a) Central Universities: Rajiv Gandhi University, Arunachal Pradesh; Assam University, Silchar, Assam; ; Tezpur University, Tezpur, Assam; Manipur University, Imphal, Manipur, Central Agricultural University,

Imphal, Manipur; IGNTU, Imphal, Manipur;　North Eastern Hill University, Shillong, Meghalaya; Mizoram University, Aizwal, Mizoram; Nagaland University, Kohima, Nagaland; Sikkim University, Sikkim; Tripura University, Tripura.

　　b) State University: Assam Agricultural University, Jorhat; Dibrugarh University, Dibrugarh; Gauhati University, Assam, Boroland University, Assam; Krishna KantaHandiqui Open State University.

　　c)　Private University: Assam donBosco University, Assam; Martin Luther Christian University, Meghalaya; Sikkim Manipal University, Sikkim, SRM University, Sikkim.

6. About the Library

　　The detail about the year of establishment, name of the library and staff strength of the twenty University libraries under study is given in Table-1.

Table-1. About the Library

Name of the University	Year of Estbl.	Name of the Library	Staff Strength			
			Prof	Non prof	IT staff	others
Rajiv Gandhi University (RGU)	1984	Central Library	4	4	1	NA
Assam University(AU)	1994	Rabindra Library	15	6	1	NA
Assam Agricultural University (AAU)	1969	Rev BM Pugh Library	5	20	2	2
Assam Don Bosco University (ADBU)	2008	ADBU Main library	4	4	1	NA
Boroland University (BOU)	2009	Padmashree Modram Brahma Central Library	2	2	NA	1
Dibrugarh University (DBU)	1965	Lakshminath Bezbaroa Library	9	8	0	20
Gauhati University (GU)	1948	KK Handiqui Library	21	NA	NA	29
Tezpur University (TEZU)	1994	Central Library	10	7	NA	NA
KK Handiqui State Open University (KKHU)	2006	Central Library	1	1	NA	NA
Manipur University (MU)	1980	Manipur University Library	26	14	0	0
Indira Gandhi National Tribal University (IGNTU)	2009	IGNTU Library	2	0	0	0

Central Agricultural University, (CAU) Imphal	1993	Library College of Agriculture	5	4	1	2
North Eastern Hill University (NEHU)	1973	NEHU Central Library	9	25	3	23
Martin Luther Christian University (MLCU)	2005	Dr. Hornwell Library	1	1	NA	NA
Mizoram University (MZU)	2000	Central Library	19	13	1	NA
Nagaland University (NU)	1994	Central Library	3	10	NA	NA
Sikkim University (SU)	2007	Teesta Indus Central Library	9	2	2	4
Sikkim Manipal University (SMU)	1995	Central Library	6	3	NA	NA
SRM University (SRMU)	2014	Central Library	NA	NA	NA	NA
Tripura University (TU)	1987	Central Library	7	16	1	NA

University libraries under study are found to be established in the same year the universities are established. Regarding the name of the Libraries, six Universities namely Assam University, Assam Agricultural University, Boroland University, Dibrugarh University, Gauhati University, Martin Luther Christian University and Sikkim University are found to be dedicated to the names of Rabindra Library, Rev. BM Pugh Library, Padmashree Modram Brhama Central Library, Lakshminath Bezbaroa Library, KK Handiqui Library, Dr.Hornwell Library and Teesta Indus Central Library respectively.

7. Human Resources in the Library

The following Table- 2. gives a brief account on staff strength of the libraries.

Table 2. Staff Strength

Staff		No. of Library	Percent
Professional Staff	1-10	14	70.0
	more than 10	5	25.0
Non -professional staff	1-10	13	65.0
	more than 10	5	25.0
IT staff	0	11	55.0
	1-5	9	45.0
Others	0-10	17	85.0
	more than 10	3	15.0

As the table shows, only 25% of the universities have more than 10 professional staff and non-professional staff while 55% of the universities have no IT staff and only 45% have 1 to 5 IT staff.

8. Towards Transforming the Libraries: Automation and Digitisation

The following table-3 provides the status of library automation, digitization process, sufficient number of computer and high speed internet connectivity as a part of transforming the libraries in digital perspectives.

Table 3: Library Transformation perspectives

Particulars		No. of library	Percent
Status of Library Automation	Fully	12	60
	Partially	5	25
	Not Yet	3	15
Digitization process	Yes	9	45
	under process	11	55
Sufficient no of computer	No	3	15
	Yes	17	85
High Speed internet connectivity	No	1	5
	Yes	19	95
	Total	20	100

From the above table it can be observed that out of 20 libraries, majority of the libraries 12(60%) are fully automated, followed by 5(25%) partially automated and remaining 3(15%) are still not automated. Regarding digitisation, 46% of them have started digitisation whereas 85% have sufficient number of computers.

9. Library Management Software(LMS)

Libraries which have started or under the process of their automation using different library management software . The following table -4 shows the use of LMS by the libraries:

Table 4. Library Management Software N=17

Software	Response	Response rate
SOUL	6	35.29%
KOHA	6	35.29%
Libsys	1	5.88%
Others	4	23.52%

As the table shows, GU,NU, BOU, DBU,MU and KKHU are using SOUL as their library management software while RGU, AU, ADBU, NEHU,MLCU and TU are using KOHA as Library management software. Libsys library management software is found to be used in TEZU. However, AAU is using E-Lib software, SLIM-21 for SU, EASY LIB for SMU and MZU is using TLSS(Total Library Solution Service) library management software.

10. Libraries towards Open Access Initiatives

Libraries have been supporting the open access movement in three possible ways :

- v   Advocacy programmes- face to face advocacy, educating or making aware of the open access and their benefits, organizing conference and seminars, organizing open access week, etc.
- v   Establishing Institutional repositories- making aware of existence of institutional repositories and their benefits in scholarly communications.
- v   Supporting OA publishing- supporting OA resources like OA journals, OA books, Open educational resources, open data, etc.

In this context,the following table-5 gives an account on the possible measures taken up by the libraries under study.

Table - 5. Measures towards OAI

Possible measures	Response	Response rate
Advocacy programme	17	85%
Building IR	12	60%
Supporting OA publishing	15	75%

It is seen that 17 (85%) of the libraries have conducted advocacy programme to support OAI in their respective universities while 12(60%) universities have already started to establish IR and 75% have supported OA publishing. Assam Agricultural University, Jorhat, Dibrugarh University, Dibrugarh, Assam,Tezpur University, Tezpur, Assam, North Eastern Hill University, Shillong, Meghalaya, Sikkim University Gangtok, Sikkim, Central Agricultural University, Imphal, Manipur , Tripura University, Agartala, Tripura have supported all the three measures to promote OA .

11. OA resources to Users

Different measures are found to be taken up by the libraries towards making OA resources reach to the users, as the table -6 Shows:

Table-6. Reaching OA resources   N=20

Measures	Response	Response rate
Library catalogue	11	55%
Library websites	12	60%
Discovery systems	3	15%
Research Guide	6	33.33%
List of Indexes	4	16.66%
DOAJ	10	50.00%
DOAB	3	11.11%
DOAR	5	22.22%
ROAR	4	16.66%
Open J Gate	9	50.00%
Google Scholars	10	50.00%

Universities have been using library website and library catalogue as major means to reaching out OA resources to the users followed by DOAJ, Open JGate and Google Scholars.

12. Impact of OAI

OAI have a direct impact on various aspects such in library budget, collection development, vendor/supplier, publishers, users of the library systems.

Table -7. Impact of OAI

OAI have direct impact on		No. of Library	Percentage (%)
Library Budget	Yes	14	70.00
	No	6	30.00
Collection development	Yes	19	95.00
	No	1	5.00
Vender/Supplier	Yes	11	55.00
	No	9	45.00
Publisher	Yes	13	65.00
	No	7	35.00
Readers of the library system	Yes	17	85.00
	No	3	15.00

The above table represents their aspects/feelings on various elements like library budget, collection development, vender/supplier, publisher and reader access to print library resources etc. which may support on OAI. Out of 20 libraries under study 14(70%) libraries accept that library budget have direct impact on OAI and remaining 6(30%) do not accept it. Majority 19(95%) libraries significantly agreed to the statement OAI have direct impact on collection development whereas 17(85%) libraries support to the statement OAI have direct impact on reader access to print library resources.

13.Suggestions and Recommendations

Some suggestions and recommendations to achieve a sustainable OA model for the future library are being given below:

q   All the libraries in the region should start automation and digitization process properly.

q   There should be enough number of staff with IT skills and need to gain new competencies and re-tool the existing librarian's skills to match the current demands.

q   Institutional repository must be established in every university as it will enhance wider information dissemination and access, increase research efficiency, accelerate teaching and learning activity and it will become knowledge repository for the future.

q   OA is possible only through internet, therefore high speed internet is a must.

q   Authors be educated on various issues concerning the benefits of open access and institutional repositories, copyright, self-archiving, OA publishing, new scholarly communication models, etc .

q   Authorities must support fully in building IRs, formatting self- archiving policy, OA publishing, staff deployment, etc.

q   Universities should have their own open access policy and should ensure that their open access policies are in good order.

q   Open access publishing among the authors should be encouraged.

q   Publicly funded or university funded research results should be made mandatory to deposit to an OA repository or OA journals for a fairer access.

13. Conclusion

North Eastern states of India are generally lagging behind in all developmental activities with regard to education, transportation and communication, infrastructural development, socio economic condition, etc. Besides these, there is a series of never ending insurgency problem, drug addiction, unemployment and communal conflicts that crippled the economy further and disrupted the efforts for development of this promising zone. It has a great impact on education systems and functioning of the universities in this region. Most of the University libraries in North East India are in their initial stages concerning their collections, automation status, staff strength, infrastructure and many others. Open access initiatives should be started in NE university libraries since we are living in a knowledge society where knowledge is the power in every field of progress and development and it is producing in a very fast and uncontrollable way. We should take full opportunity of open access movement as it accelerates research, enriches education, and shares learning across the world. Open access is the only solution where we can access and keep pace with any information from anywhere at any time without any restriction without any cost and it will be a boon to the human progress particularly in this region. University being at the top of the higher education system should come forward to have OA facilities in their respective libraries so that a user community can be explored with the vast knowledge resources in many.

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ARE ALL IDEAS SECOND-HAND?
A SOCIO-RELIGIOUS INTERPRETATION OF INTELLECTUAL PROPERTY FOR INFORMATION MANAGERS

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[**Abstract**]
Intentional copying, ethical compromise in academic discipline have been so proliferated any measures are seemed to be inadequate. This paper tries to delve into the social, psychological and religious bent towards plagiarism, particularly on copying with an insight to identify the forms of such practices and how to deal with that. As a conceptual paper, this paper seeks to address the issues of contemporary crisis in uniqueness in knowledge development. Inflict of religion as a prime motivator of such socially condemnable act, this paper makes a through narratives on it and prescribes the information professionals how to combat with the emergent situation.

"The kernel, the soul — let us go further and say the substance, the bulk, the actual and valuable material of all human utterances — is plagiarism."

1. Introduction:

It was Mark Twain who addressed plagiarism charges that had been made against Hellen Keller when her short story "The Frost King" was found to be near to similar to Margaret Canby's "Frost Fairies."

Keller was given a clean cheatalthough the incident prompted Twain to pen down in favour of Hellen Keller. He argued "The kernel, the soul — let us go further and say the substance, the bulk, the actual and valuable material of all human utterances — is plagiarism. For substantially all ideas are second-hand, consciously and unconsciously drawn from a million outside sources, and daily used by the garnerer with a pride and satisfaction born of the superstition that he originated them; whereas there is not a rag of originality about them anywhere except the little discoloration they get from his mental and moral caliber and his temperament, and which is revealed in characteristics of phrasing."

On the other hand, Apple boss, Steve Jobs, famously proclaimed that "creativity is just connecting things", while Kirby Ferguson opines that Steve didn't technically invent any of the things that made him into a cultural icon, he merely perfected them to a point of genius. Salvador Dali, the genius visual impresario uttered, "Those who do not want to imitate anything, produce nothing."

At this juncture, prime consideration that should be focused is towards the sociological, psychological and religious pathos of intentional copying. Still plagiarism is considered more as an ethical crime rather a criminal offence. Standardization and clear prescriptions of anti-plagiarism strictures are not yet seen for legal framework. Apart from software dominated hard-coded proximity and similarity checking nothing concreate has been made so far.

2. Motives for engaging in copyright infringement.

Motives for such plagiarism and copyright infringement has have a social root. The polity and economy of a country paved the way for such society constructed unethical measures. Apart from developed countries, in developing countries as well as in low developed countries where economic surplus is a hard dream, unwillingness or inability to pay the price requested by the legitimate sellers' creeps in subtly and **Price** of commodity(Academic) becomes a major factor for such practices. Moreover, **scarce accessibility** of the product in the country as well as geographical restrictions onsupply and demand is also a motivating factor. Geographical restrictions, region lock and other issues mar the right use of right information at the right time. Hence the context of **Usefulness** of information required for generating additional information is blocked and unnecessarily clubs' peoples in two broader groups; having access and usefulness and not having access and hence, uselessness of useful resources

3. Peer-to-peer issues

Distributed document sharing or Peer-to-Peer(P2P) have been denied access to safe harbor arrangements in connection to copyright encroachment. Lawful activity against such middle agencies, for example, Napster, weretaken for breaching standards of optional obligation for copyright encroachment. These sorts of intermediaries don't have or transmit encroaching substance, themselves, yet might be viewed in a few courts as empowering, empowering or encouraging encroachment by clients. These middle factors may incorporate the creator, distributers and advertisers of shared systems administration programming, and the sites that enable clients to download such contents. Because the BitTorrent convention, incorporation of the download tracker and any sites or web indexes which encourage access to deluge documents. Deluge records don't contain copyrighted substance;however, they may refer to documents that do, and they may indicate trackers which organize the sharing of those documents. Some downloads ordering and hunt locales, for example, The PirateBay, now energize the utilization of magnet links, rather than guide connects to deluge records, making another layer of indirection; utilizing such connections, download documents are acquired from different companion sites, instead of from a specific site.

By and by, regardless of whether and to what degree any of these sorts of delegates have optional risk is the subject of legal consideration. The decentralized structure of shared systems, specifically, does not sit effortlessly with existing laws on online middle people's obligation. The BitTorrent convention set up a completely decentralized system design with a specific end goal to circulate extensive documents adequately. Late improvements in shared innovation towards more mind-boggling system setups are said to have been driven by a longing to evade risk as middle people under existing laws.

4. Gorilla Information Warfare:

Sci-Hub is a site that holds more than 48 million insightful research articles accessible online to anybody for nothing. Be that as it may, many if not the greater part of these articles is still under copyright and are subsequently typically kept behind paywalls. Elsevier, which guaranteed it was losing hundreds to thousands of dollars for each of its articles pilfered on the site, sued to have it closed. Sci-Hub's organizer Alexandra Elbakyan, an analyst from Kazakhstan, has said this absence of all-inclusive get to abuse Article 27 of the United Nations' Universal Declaration of Human Rights, which expresses that ""everyone has the right freely to … share in scientific advancement and its benefits." From her viewpoint, setting insightful articles under copyright is baseless, and Sci-Hub's activities constitute a true-blue type of common rebellion.

Although Sci-Hub has an indistinguishable objective from open access to advocates—making on the web access to insightful articles accessible to anybody—the methods are altogether different. Free access to articles are accessible from numerous distributers, including Elsevier. They are openly accessible

straightforwardly through distributer sites, as opposed to through outsider aggregators like Sci-Hub. Sci-Hub is a to a great degree disputable revelation benefit, not a distributer.

5. Unconscious Plagiarism

Cryptomnesia happens when an overlooked memory returns without it being perceived all things considered by the subject, who trusts it is something new and unique. Psychological clinician Ronald T. Kellogg characterizes Cryptomnesia as "the belief that a thought is novel when in fact it is a memory" and looks at how it emerges. As per him quite a bit of what an author knows, especially talk and sociocultural learning, exists just in inferred shape. For instance, sentence designs and additionally social convictions are shared by individuals from a similar talk group and are drawn upon openly by all, without cognizant mindfulness. A similar kind of oblivious replicating may likewise happen with sentences, realities, and contentions; types of space particular information. When it does, be that as it may, the writer is liable to the charge of literary theft. Cryptomnesia can prompt coincidental copyright infringement if an author neglects to recognize unwittingly a prior source because of the inability to perceive his or her own considerations and words as unimaginative.

In different cases, the sort of accidental auto counterfeiting to which today's excessively productive authors are particularly powerless as they scramble to produce extensive volumes of work with extraordinary normality under the domineering industrialism of present day distributing, on the web and off. In reality, the thought of Cryptomnesia, in the greater part of its changes, appears to be much more awkward two decades later: The development of the web, especially of the social web, has brought about far more prominent network and quicker stream of thoughts amongst originator and beneficiary, trailed by ever-speedier assimilation of those thoughts into the regular pool — or what Vannevar Bush so wonderfully called "the basic record" in 1945 — in which every one of us are progressively submerged. Under these conditions, Cryptomnesia constantly turns into our aggregate inventive pathology. The systems that underlie Cryptomnesia likewise have critical ramifications for innovativeness.

6. Religion and Copyright

Religion had played an influential role both on copyright protection as well as on limits upon copyright. Henry VIII of England even issued a proclamation forbidding the ownership of positive works of heretical nature. On contrary to the above stated importance of religion in helping a reason for safety of copyrighted works, actual instances of copying inside the domain of religion itself was also been observed in instances of copying of bible by Mathew andLuke from Mark in the New Testament as well as in other religioussects like Islam, Judaism, Jainism, etc.

Religion can affect the behaviour of less, respectably and very religious individuals, it has the most influentialeffect on the last mentioned. Strangely, notwithstanding, even profoundly religious individuals won't change their conduct if their gurus or religion instructs them to. No huge contrasts were found in things identifying with "religion" and 'my minister,' suggesting that respondents' inspiration to consent to these referents are not impacted by the degree of their religiosity. many individuals don't see robbery as untrustworthy. This is reflected in past research and their investigation, which found that respondents by and large don't see computerized robbery conduct as evil.To address this, ***imparting moral esteems about computerized robbery*** at an early stage of life is most effective. Religious organizations, in participation with instructive establishments, could cooperate to convey a solid message against computerized theft. It is obviousthat holders will value the recommendation, and they are as of now dealing with instructing youthful children right off the bat, both in the U.S and the UK.

7. Rise of 'The' 'Religion of Copyright'

The new dawn of 2012 chanced upon an interestingtwist in the history of copyright when a new religion called *Kopimism hasemerged*. Although founded in 2010 in Sweden, thereligious groups have tried to get their beliefsrecognized as an official religion in Sweden. Aftertheir request was denied several times, the Church ofKopimism, which holds CTRL + C and CTRL + V assacred symbols, has now been approved by theauthorities as an official religion. The pivotal sermons of this religion are that*, information isholy and copying is sacrament*. The religious practice ofthis community is also peculiar in that they have areligious service called 'kopyacting' which in theform of information distribution uses photocopiers tobit-torrent technology. It has been expressed by thechief of this religion that monetary exploitation iswhat happens in the name of copyrightenforcement. The freedoms of human race aredelimited in the name of protectionism. This newchurch calls for an environment in which they wouldnot be disturbed to freely practice and profess theirown religion. It is predicted that this newly foundedreligious ideology would face deep waters in the faceof the new anti-piracy legislation like Stop OnlinePiracy Act (SOPA).This new religious ideologyoffers new forecast to the future of copyright law.

8. Conclusion:

At this juncture, information managers have the responsibility to judge the potential of nascent information produced in the domain and to ensure all rights holders of traditional knowledge will be deemed to have a 'commons license' under which the rights holder permits others the use of the knowledge for non-commercial purposes. It sis needless to mention that ensure that the incentives for research would not lead to proliferation of proprietary rights.As to cultural institutions, because of the diversity of cultural material within their collections, the range ofstrategies that need to be developed to manage the material requires considered thought. Indigenouspeoples and traditional communities want to access material so that it can be reinterpreted and newmeanings made. However, how these meanings are to be created can contravene the copyright owners'rights in the material. Indigenous peoples' and traditional communities' uses can also fall outside thecopyright law's exceptions and limitations, especially in cases where material is commercially valuable.

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BRANDING AND MARKETING YOUR LIBRARY AND SERVICES: CASE STUDY OF RABINDRA LIBRARY

AK Sharma[1], Apurba J Majumdar[2] and Amit Uraon[3]

In today's world libraries are no more a silent place to sit and wait for users to provide them services. Importance of the library users has evolved as customer in the market and library has to do all its best to attract the library users to the library and prove their relevance and importance in today's competitive world. The librarian and library has to establish themselves as a brand and take its product to the potential customer. The decreasing footfalls to the library had been a major issue to the librarians and statistics of the library resources usage and of course the survival of libraries and librarians also. Why the libraries should not be replaced with the internet cafe(s) and computer terminals where the users can sit for hours and search for the information required by them? Why should they require an intermediary man like librarian, are the topic of discussion that is affecting the existence of the librarians in adverse way? A librarian is a person who is providing personalised services to the user in a tailor-made way. To satisfy the user, librarian has to find the gaps and mismatches between the user and information services that a computer is not able to perform. In e-search engines, 90% of the information are ephemeral and not relevant to the queries of the user. Librarians are filtering the information relevant to the information needs of a user, also the skilled librarians are adding value to the information by providing various kind of information and documentation services. Also, refinement of the content is another job that librarian can perform apart from the machine driven searches and information seeking. Librarians are the professional who are discovering the knowledge or information and passing it to the right user at right time.

Branding and Organizational Branding

Before defining the branding first we should know what exactly a brand is? "Technically a brand is a mark, or logo combined with specific colours and fonts that identifies a particular product or service to potential users. More generally, a brand is shorthand for the story that an organization wants to tell potential users about how it can meet a need in their lives (Docuett, 2008)." The only objective behind a brand is just to establish its relevance for its users. Branding may be defined as "The process involved in creating a unique name and image for a product in the consumers' mind, mainly through advertising campaigns with a consistent theme. Branding aims to establish a significant and differentiated presence in the market that attracts and retains loyal customers (Dictionary, 2017)." The concept of "corporate branding" is still a relatively new phenomenon for scientific investigation and research. There is a growing awareness in the business literature that organizational brands can increase the organization's visibility, recognition and reputation in ways not fully appreciated by product-brand thinking. The importance of employees to organizational branding and the need to better understand their behavior and thus the organizational culture of the corporation have received particular emphasis in recent work (Carsten, 2010).

It is argued that employees are key to building relationships with all the organization's stakeholders as well as contributing to the meaning of the brand. In spite of the complexities of corporate branding, Hatch and Schultz have developed a simple analytical framework, the "Corporate Branding ToolKit". The kit is based in a relational perception of branding. The ToolKit suggests how corporate brands are constituted by the alignment of different elements defined by different stakeholder (Hatch & Schultz 2001).

Shultz (2005, p. 48) defines corporate branding as follows:

"*Corporate branding can best be described as the process of creating, nurturing, and sustaining a mutually rewarding relationship between an organization, its employees, and external stakeholders.*"

The concept of corporate branding or organizational branding is not very old and still a new phenomenon for scientific research. The importance of employees to the organizational branding need to better understand their behaviour and thus organizational culture of the corporation have received particular emphasis in recent work (Carsten, 2010). The brand value of any organization plays an important role in the work culture and behaviour of the employees too. In Indian Scenario, the work culture and atmosphere of the organizations like IISc, IITs, IIMs and IISERs is entirely different and that is reflected in their libraries – including work culture, resources and services also as compared to the academic libraries.

Organizational Branding and Libraries

Libraries in the current scenario of ICT enabled services and competitiveness due to globalization of tools and techniques are forced to compete with the best libraries around. Beyond the boundaries of the institution, the rapid changes in information and communication technologies are driving the changes in libraries. Institutions like academic libraries do not have benefit of quantitative measure such as profit/ loss statements to provide very visual evidence for the need to change, and a reliable mechanism for measuring the outcome. The students and faculties (patrons/customers) comprise a very diverse group and do not typically voice dissatisfaction when they receive mediocre or low quality services from the library. Competitive threats from the external environment may also not be recognized as requiring a response and need for the major change (Jantz, 2012). However, there is a continuous pressure and focus on the incremental innovation in the face of environmental turbulence is a recipe for failure.

Research findings done on the branding of the libraries indicates that the library branding has been left behind as libraries have rapidly evolved and embraced a much broader role. Increasing competition with Google, Amazon and other internet services providers, the changing information landscape and challenges of the digital visibility appears to be viable threat to the perceived value of the library and its staff. However, the complexity of the environment means that the role of the librarian and the institution of the library is needed more now than ever before (Kenneway, 2006).

Branding is one component of marketing strategy. Branding is the process of defining a library's story, distilling that into one short, appealing sentence that tells the whole story, and then visually conveying the story via the library's logo and other branding elements. The story is meant to inform anyone considering using the library about what makes it special and worth visiting. The story can be about the details of the library including great customers, great collection or a beautiful building or it can be about needs that library could fill in the lives of its patrons. The story might be that the library is a place where the community connects and comes together. The branding of the library can be seen in it's logo and its colours, specific typefaces that might be used in the library building, library cards, name tags worn by the staff- any visual representation of the library and its services (Docuett, 2008).

Promoting your library

Libraries have made a grave mistake of the assuming that everyone knows how important and relevant

they are. Administrators and librarians have failed to realize that they truly need to promote what they have to offer (keller, 2008). In this direction there is a big need of the branding and marketing your library services. How this can be done? This can be understood from the managers' point of view as illustrated in the figure given below.

Source: https://www.google.co.in/search?q=steps+of+branding&site=webhp& tbm=isch&tbo=u&source =univ&sa=X&sqi=2&ved=0ahUKEwjbmJSx6IfUAhVoIFQKHd YBAgEQsAQIgAE&biw=1920&bih=971&dpr= 1#imgrc=tkaRVObGAivC_M:

However, in libraries perspective and managerial perspective following are the steps to be taken into consideration for building the library as a brand.

Targeting the Library Patrons

The primary stake holder of any library is agency providing finances to the library. In case of government agencies, the sanctioned budget is to be taken into the consideration as under what Heads it is to be utilised and how best it can be utilised. Library users or patrons or customers are the stake holders of the library. The library should have a continuous communication with the stakeholders or patrons through all possible media of communication. This communication will help the library in knowing the exact information needs of the patrons as well as the mode of service delivery. A constant communication gives a feeling of personalised service and sense of satisfaction among the users. This sense of satisfaction helps in mouth publicity of the library and its services. To know the exact needs of the library patrons, they could be approached through various mode and occasions. This could be the orientation or frequent service feedback from the users through suggestion box and personal discussion.

Market Research to understand your target Audience

Before any kind of branding and marketing, a better understanding of the target users is required. A librarian has to make a clear understanding, who the target user is? Whom we are going to serve? The library need to focus on the WHO it serves best and most often. After making a clear understanding of the target patrons, the needs of the patrons are addressed. After identifying the needs of the library patrons, there is need to review the resources including documentary resources, ICT infrastructure available and services provided and required. There is a great need of finding the gap between demand and supply (keller, 2008).

To identify the best target audience for your library, there is a need to start by honestly assessing your current library users considering following questions-
1.   If you are a public library, what percentage of your community has library cards? Who uses your virtual

library and for what purpose?

2. If you are an academic library, what percentage of students use the library, either virtually or taking the books out?

3. Does your community support your library? How do you know- through financial support, through feedback you get from the community surveys or through some other mechanism?

4. Is your community aware of the services offered by your library?

The bottom line is through the questions, you are trying to understand how much support and your library receives (Docuett, 2008).

In academic library environment like Assam University library, students, research scholars and faculties are the major stake holders for whom the budget is to be spent widely by procuring the relevant resources in terms of documents, technology and other resources. During the period of 2014-2017, the analysis of gap in supply and demands was done and subsequently changes in the delivery mode and arrangement were made. For example, the circulation counter is the mirror of library services in an academic institution of higher learning like University Library. The circulation counted by loaded with the heavy traffic of books as the stack room of Social Science was located on first floor and library building is lacking with the ramp or lift to transport the books from Circulation counter to the Stacks. Subsequently, the Reference Section (earlier located at ground floor) and Social Science Stack (located on first floor) were shifted and problem was resolved. Understanding the needs of the target audience, a good comfortable furniture with nice chairs and table, was installed in the stack room to give the audience a feeling of being cared in all respects. Subsequently, library started receiving higher number of readers and footfalls increased drastically.

Marketing your library services
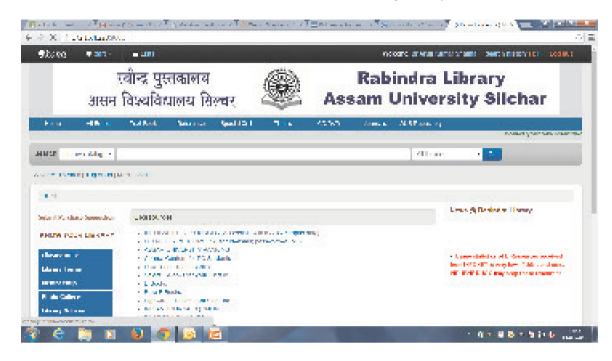
Although the librarians are not trained marketing experts but they have to understand basics of marketing to promote their library brand. Promotion, advertising, direct marketing, public relations and sales are all marketing tactics that are to be used by the librarians and libraries.

1. Promotion- In a library the main objective is to create awareness about resources and new activities and services of the library and that can be done through the promotions. A promotion can be simple printed flyer about the library or putting its activities on library or institute website using all the possible tools of web2.0. The Rabindra Library did promotion of all its changes using its WebOPAC as the library portal and uploading the latest photographs of a transformed library on the University website. The specific events such as orientation, product demonstrations, etc. were promoted by the library and other library can do promotion of their activities with the help of resources available with them.

2. Advertising- Advertising of any product needs lot of financial involvement and the commercial products can be advertised through various paid channels of communication. Advertising is the action of talking about your product and services to the potential users of your product or services and tell them how the product and service can fulfil the needs of their lives. Although the advertising of the product in corporate world is done through radio, television, or website but for library the job is little tricky. After implementation of changes, the Rabindra library did it advertisement by making visibility of its services on Facebook group, Whatsapp Group and through personal discussions. The satisfied users did lot of advertisement work for the library and that attracted a lot of users and helped library for increased footfalls.

Screenshots of Library Reading Facilities in Social Science Stack Room

3. *Direct Marketing-* Direct marketing includes selling the product or services directly to the beneficiary without spending much on advertising. Libraries tend not to do much direct marketing because generally seen as intrusive to send specific offers to library users and because there are not many situations in which specific offers would be appropriate (Docuett, 2008). The librarians can simply build and develop the personal profile of the users and can interact with the users directly on specific occasions only. In Rabindra Library, most of the users are taken care personally giving them personalised reference service on many occasions.

4. *Public Relations-* Public Relation (PR) is an important component of Marketing. Generally it helps to build a bigger image of the services provided by you. Whenever a new activity, happening is taking place in the library, a third party such as newspaper, local channel or media, is involved to publish the stories and ideas of the library. This require lot of public relations with the media and depends on the reputation and relations maintained by the librarian with the third parties. For this, the Rabindra Library is sending small write ups and stories to the local newspapers about the happenings and discussing the activities of the libraries and getting huge supports from the society also.

5. *Sales -* the notion of sale is little ambiguous in the library as it's a not-profit organization or entity. But library can generate funds through its various activities by providing the services to the users. Rabindra Library in its Executive Council resolution introduced concept of corporate membership, short time personal membership, consultancy to the college libraries for automation on payment basis and lastly the fine system. Although the sales does not contribute a lot to the library but the small activities like orientation, seminars, etc. can be managed through this.

WebOPAC of Rabindra Library working as Advertisement Board

Evaluation of Branding and Marketing

Evaluation includes the changes that incurred after branding and marketing of the library services. Is it cost effective or the efforts are becoming futile? For this a short term evaluation of services is required. For this a chart can be prepared that can analyse the statistics of usage of library services. The users who are coming to the libraries are not necessarily coming to the library to avail the borrowing facility of the library. They may use its sitting or reading space for peaceful reading or use the net services or may come to the library to read newspapers or may be some serious research scholars. Libraries have to maintain separate statistics of individual categories of the users and kind of services used by them. Sometimes the users may have reference or information queries. To evaluate the services of the library, survey at regular intervals is required to evaluate the gap between service and demand and for further improvement. This is done to measure the level of satisfaction among the library patrons and establish the justification of library and its services.

Conclusion

Although the libraries in academic institution are not profit making entities but their presence should be made visible by providing the users best services to their satisfaction. The customer and marketing approach is helpful in incremental changes for better services. Library can establish itself as a brand by providing better services to best satisfaction level of the patrons. Development of the library and marketing its services to the patron is a key component of library promotion and show your visibility among the patrons. For branding and promotion of library services the branding, marketing plan and advertisement are to be coordinated properly to bring the desired result. As a brand ambassador, librarians have to tell the stories of their success to the patrons to attract more and more footfalls to the libraries. Working in the competitive world of consumers will help the librarians to be more competitive and service oriented and help them to reallocating their resources for better services and more satisfaction of their users.

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BEST PRACTICES IN COLLEGE LIBRARIES OF DHEMAJI DISTRICT, ASSAM : A CASE STUDY

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Abstract:

Libraries play a significant role in the lifelonglearning process of students. UGC and NAAC has framed its own guidelines for adoption of Best Practices in libraries of College and Universities. These Best Practices if applied will undoubtedly make the library ambience more healthy and its services more user friendly. Adhering to the guidelines of NAAC, the college and University libraries of Assam are following Best Practices keeping in mind, user needs and user Studies. This paper provides an indept of the present status and the Best Practice methods adopted by the provincialized college libraries of Dhemaji Districts, Assam. The paper also highlights the problems and challenges faced by the academic libraries and suggests remedies to overcome these.This paper also stresses on the adoption of Best practices for continuous improvement and overall performance of Academic Libraries.

Keywords: NAAC, IT, Best Practice, User, E- resources, Digital Libraries.

1. Introduction:

The library is the backbone of academic institutions. College plays a major role in contribution to growth and development of human resources by converting, interpreting and advancing knowledge. With the emerging trends in IT, libraries all over the world are undergoing a tremendous transformation. Development of recent technology has changed the library scenario which is a far cry from the olden days. Today, the trend is to make libraries reach the homes of the user.

Libraries are much more than just a storehouse of books. They are about ideas, imagination, curiosity, wonder, hope and possibilities. A library is one of man's greatest inventions. A library that is well equipped with qualitative collection of study, research material and infrastructure is an asset to any educational institution. A college library acts asan important and attractive hub of campus life. It educates us and provides us the opportunity to look beyond. In this age of ICT and various e-journals and on-line courses students still find campus library to be of much relevance. Therefore the campus library is often one of the most sought after facility. Many a times, it is the library that is taken into consideration by students while taking admission in a college or university. Libraries play a significant role in the lifelong learning process of students through dissemination of knowledge and information. UGC and NAAC (National Assessment and Accreditation Council) has framed its own guidelines for adoption of Best Practices in libraries of College and Universities

Best practice is a working method that has shown consistent superior results in an organization, institution, business or industry. It can be defined as a set of guidelines, or ideas that represent the most

effective courses of action, to improve performance and to accomplish desired results. The Oxford Advance Learners Dictionary describes Best practices, "as quality of high standard, excellence, highly improved, outstanding, as par excellence service". Since Best Practices are an inherent part of a curriculum, these motivate engage and prompt students to learn and achieve. Such practices add commendable value to an institution. As a storehouse of information and related resources, a library makes these, accessible to its users for reference, research or borrowing. Great libraries make the learning process an enlightening experience.

According to NAAC "Best Practices may be innovative and be a philosophy,policy, strategy, program or practice that solves a problem or create new opportunities and positive impact on organizations."

NAAC has played a significant role in the development of colleges and Universities in India. It has also framed its guidelines to develop college and university libraries by setting up best practices to be followed in order to achieve maximum results. These are classified under the following four broad areas:

1. Management and Administration of Library
2. Collection and Services.
3. Extent of User Services.
4. Use of Technology.

This paper has been prepared keeping in mind the guidelines for Best Practices in Academic libraries, developed by NAAC, besides own innovative ideas.

2. Objective of the Study:

The object of this paper is to –

1. Make a survey of the provincialized colleges of Dhemaji district and to study their present status besides the best practices adopted by them.

2. To find out the different library services offered by these libraries.

3. To study the problems and challenges faced by the libraries in implementing the best practices to uplift the quality of library service.

3. Area of study:

Assam has 33 districts of which,Dhemaji, one of the most remote districts of India, was recognised as a full-fledged district in 1989 at the Easternmost corner of Assam. Situated at the foothills of the Lower Himalayas Dhemaji is relatively a small town and has a good number of colleges .Total number of six (6) provincialized colleges has been taken as the area of study. Besides, there are some Junior colleges and B.Ed. College, which have not been taken into consideration for this study.

4. Methodology:

The methodology used for this case study of college libraries of Dhemaji District is based on the survey research method. For authenticity of data, a set of questionnaire and interview method has been used to collect data from the library professionals.

5. Data Analysis and Discussion
5.1 College libraries of DhemajiDistrict

The colleges of Dhemaji district offer courses in all faculties of arts, scienceand commerce under Dibrugah University. The basic information of all Provincialized college libraries of Dhemaji district have

Table No-1 List of Surveyed Colleges with Location (Chronological order)

Sl.No.	Name of the College	Year of library establishment	Location
1	Dhemaji College	1965	Dhemaji
2	Silapathar College	1979	Silapathar
3	Gogamukh College	1981	Gogamukh
4	Dhemaji Commerce College	1982	Dhemaji
5	MurkongSelek College	1982	Jonai
6	Moridhal College	1988	Moridhal

Dhemaji district has six(06) provincialized colleges of which Dhemaji college is the oldest.

5.2 General aspect of College Library

A library cannot render effective services without adequate and competent staff. Fully trained professional staff is a must for any type of library. For implementing automation in the library, it needs sufficient qualified staff. The college library serves the students, teaching and non-teaching staff of colleges of Dhemaji .The students are the main user of the libraries. The following table- 2 shows the opening hours, type of access, stream, users, library committee and existing library staff in the college libraries of

Table: 2 The General aspects of College Library

Name of Colleges	Opening hours	Type Access	Stream	Library Staff	Library Users (2016-17)			Lib. Committee
					Students	Teaching Staff	Non-Teaching	
Dhemaji College	8.30 to 5.30	Open Access	Arts & Science	Professional - 1	1150	47	17	Yes
				Non-Professional- 4				
Silapathar College	9.30-4.30	Open Access	Arts	Professional - 1	1006	30	11	Yes
				Non-Professional-2				
Gogamukh College	10.00 to 4.00	Closed Access	Arts & Science	Contractual-1	700	40	12	No
				Non-Professional-2				
Dhemaji Commerce College	9.00-4.00	Open access	Arts & Commerce	Professional - 1	1200	40	12	Yes
				Non-Professional-2				
MurkongSelek college	10.00-4.00	Open Access	Arts Science	Professional - 1	800	32	7	Yes
				Non Professional -2				
Moridhal College	9.00-4.30	Closed Access	Arts & Science	Professional - 1	1800	65	22	Yes
				Non Professional -5				

Table no-2 shows that Dhemaji College Library offers the maximum hours of serviceof 08 hrs. Gogamukh College does not have a permanent librarian and the library is being managed by a Contractual appointment. Moridhal College has the highest enrolment of students andmaximum number of library staff.

5.3 Best Practices of college libraries

5.3.1 Collection development

Collection development is one of the most challenging and imaginative processes of the library professional whereby, the library staff acquires a variety of materials to meet the demands of its users. Library collection development is the process of planning and acquiring a balanced collection of library materials of many formats such as textbooks, reference, Journals, Magazines and Non-print materials. Table -3 shows the Collection Development of the surveyed College libraries.

Table -3

Name of the college	Print collection	Non-print collection	Periodicals			Bound Volume	Resource sharing
			Journals	Maga zines	News papers		
Dhemaji College	18505	CD-140	21	23	6	524	No
Silapathar	15213	CD-30	15	12	6	210	No
Gogamukh College	8650	Nil	6	6	4	Nil	No
Dhemaji Commerce College	18300	CD-40	12	8	6	250	No
MurkongSelek college	11052	Nil	6	8	6	30	No
Moridhal College	23045	1800E-Book	20	26	7	300	No

Table no: 3 shows that MoridhalCollege has the maximum print collection of 23045 and non-print collection of 1800, followed by Dhemaji college with18505 books. Except Gogamukh College, all the colleges have a good number of books and periodicals. Dhemaji College has the maximum number of bound volumes.

5.3.2 LibraryAutomation andIT Infrastructure

Library automation refers to the use of the computer systems to promote the library services and to save the time of users. Library automation covers all house-keeping operation i.e acquisition, cataloguing, circulation, OPAC etc. Today IT has become an inseparable part of library services and its impact is profound. The potentialities of IT are unlimited and contributes immensely in improving the quality, productivity and efficiency of services offered to users. Libraries of today largely depend on the development of IT, for it is effective utilization and user satisfaction. As result of IT, resource sharing has become a possibility from within the confines of a library which has led to the exploitationof knowledge and newer technologies. In this competitive world, it is an utmost necessity for libraries to IT in its services, in order to survive. The table No- 4 and 5 gives the details of computers, status of automation and other It infrastructure.

Table No-4 Library Automation and IT Infrastructure

Name of the college	Automation	Software	No. of Computer	use of Barcode	OPAC	Barcode Scanner/Scanner	LAN/ Campus LAN	Reprography
Dhemaji College	Partially	SOUL 2.0	6	Yes	Yes	Scanner-1 Barcode-2	LAN	Yes
Silapathar	Partially	SOUL 2.0	10	Yes	No	Scanner-1 Barcode-2	LAN	Yes
Gogamukh College	Nil	Nil	1	No	No	Scanner-0 Barcode-0	No	Yes
Dhemaji Commerce College	Partially	SOUL 1.0	5	Yes	Yes	Scanner-1 Barcode-2	LAN	Yes
MurkongSelek college	Partially	SOUL 2.0	5	No	Yes	Scanner-0 Barcode-0	LAN	Yes
Moridhal College	Partially	SOUL 1.0	9	Yes	Yes	Scanner-1 Barcode-3	LAN	Yes

It is found that all of these college libraries have at least 1 computer, LAN and Xerox Machine in the libraryand 3 libraries are using SOUL2.0; 2 libraries are using SOUL1.0 and remaining 1college has no used any library software. Silapather college library has the maximum number of computers and Moridhal College has maximum number of Barcode scanner. Out of 6 colleges 4 colleges has OPAC terminal. Except Gogamukh and MurkongSelekCollege,the other College libraries areusing the Barcode Technology.

Table No. 5

College Name	Internet for users	Type of Connectivity	Mode of Power Backup	N-list Membership	Institutional Repository/ Digital	Wi-Fi for Users	CCTV	Webpage
Dhemaji College	Yes	Broadband	Inverter	Yes	No	No	Yes	Yes
Silapathar	Yes	Broadband	Generator	Yes	NO	Yes	Yes	No
Gogamukh College	No	No	No	No	No	No	No	Yes
Dhemaji Commerce College	Yes	Broadband	Inverter	Yes	No	No	Yes	No
MurkongSelek college	NO	No	Generator	Yes	No	No	No	Yes
Moridhal College	Yes	Broadband	Online UPS	Yes	No	Yes	Yes	Yes

Table no 5 clearly statesthat 04out of 06 college libraries have internet service for its users. Except Gogamukh College, all 05 college libraries have Broadband connectivity. While Gogamukh college library has no alternative arrangement of power back up, the other colleges use inverter or Generator in case of power failure. None of the college libraries have institutional repository (IR) yet. Presently, 02College libraries offer Wi-Fi to itsusers.02 College libraries have not installed CCTV in their libraries. Except Silapathar college and Dhemaji Commerce College theother colleges have their respective webpage.

5.3.3 Extent of the use of services

No one can deny the fact that libraries play a very important role in offering qualitative information services. Collection of information, sharing and providing easy access to all are some of the basic priorities

of any library. Library services should be consistent and such that users get to trust them. Libraries should offer updated information and in multiple ways to satisfy both new and experienced user. A wide range of information tools for securing information should be provided to users.

Table -6 Extent of the use of services

SL No	Best practices for college libraries	Dhemaji College	Silapathar College	Gogamukh College	Dhemaji Commerce College	Mudoni Sdd. College	Moridhal College	%
1	Providing sufficient information about the library in the college prospectus	Yes	Yes	Yes	Yes	Yes	Yes	100%
2	Display of new arrivals of the library	Yes	No	No	No	No	Yes	33%
3	Information about new arrivals to concerned departments	Yes	No	No	No	No	No	17%
4	Periodical display of newspaper clippings, on the notice board	Yes	No	No	No	No	No	17%
5	User education/orientation programme for new comers at the beginning of academic session (Information Literacy Programme)	Yes	Yes	No	Yes	No	Yes	67%
6	Compilation of students/teachers attendance statistics	Yes	No	No	No	No	No	17%
7	Notification of attendance, on Library notice board	Yes	Yes	No	Yes	No	Yes	67%
8	Separate reading room for Girls, Boys and Faculty	No	No	No	Yes	No	Yes	33%
9	Compact storage of low used collection	Yes	No	No	Yes	No	Yes	50%
10	Regular maintenance of service area	Yes	Yes	Yes	Yes	Yes	Yes	100%
11	Basic amenities (Drinking water, Urinal)	Yes	No	Yes	No	Yes	Yes	67%
12	Career/ Employment information Service	Yes	Yes	No	Yes	Yes	Yes	83%
13	Overnight issue system	Yes	No	No	No	No	No	17%
14	Book Bank facility for poor students	Yes	No	No	Yes	No	Yes	50%
15	Suggestion Box and timely response	Yes	Yes	No	Yes	No	Yes	67%
16	Book exhibition on different occasions	Yes	No	No	No	No	No	17%
17	Organizing various competitions annually	Yes	No	NO	No	No	No	17%

Table-6 shows that all the surveyed colleges include sufficient information regarding college libraries in their respective prospectus. Only 02 College libraries display the arrival of new books in the library. Only 01 College library circulates the new arrivals information to the concerned departments and periodicaly, display newspaper clippings on the notice board. 02 college librarians do not conduct user education classes for new comers. 02 College libraries have separate reading rooms for boys and girls. 02 College libraries do not compile the attendance of students & teachers. 02 College libraries do not have Urinal or Drinking water facility inside the library.

5 Findings

The following observations have been made through our survey.

- Of these 06 College libraries, Moridhal College library has the maximum number of books and non- print materials. The collection status of Gogamukh College library is found lesser in number as compare to other college libraries in Dhemaji district. Except Gogamukh College, all the colleges have a good number of books .Mordhalcollege has subscribed maximum number of Journals followed by Dhemaji college. Dhemaji College has the maximum number of bound volumes.
- Out of 06 college libraries of Dhemaji district Dhemaji College library offers the maximum hours of service of 08 hrs.
- 4 (four) college libraries are using SOUL2.0 and 2 (two) college libraries use SOUL1.0 and 01 College has not yet started library automation.All the surveyed libraries have at least 01 computer and Xerox machine. Except Gogamukh and MurkongSelek College, the other College libraries are using the Barcode technology.(Table No -4)
- All the libraries do not have adequate professionals. The number of existing Non-Professional staff too is very low. Gogamukh College does not have a permanent librarian and the library is being managed by a contractual appointment. None of these college libraries have the sanctioned post of Assistant Librarian.
- Most colleges are not well equipped with required infrastructure.
- Majority of college libraries are using barcode technology.Except Gogamukhcollege , all the other colleges have the membership of N-LIST, which is very beneficial for all users.None of these college libraries have Institutional repository (IR) yet.Moridhal College however is preparing for it and is in its initial stages.(Table No-5)
- Only Silapathar and Moridhal College libraries offer Wi-Fi to its users.Silapathar and Gogamukh College libraries have not installed CCTV in their libraries. Silapathar college and Dhemaji Commerce College   do not have their respective webpage (Table No 5)
- All the surveyed colleges include insufficient information regarding college library in their respective prospectus.Dhemaji and Moridhal College display the arrival of new Books in the library.Dhemaji College circulates the new arrivals information to the concerned departments and periodically, display newspaper clippings on the notice board. GogamukhangMurkongselek College libraries do not compile the attendance of students & teachers.(Table No -6)
- Gogamukh and Murkongselek college librarians do not conduct user education classes for new comers.
- Dhemaji Commerce College Moridhal College libraries have separate reading rooms for boys and girls. Silapather College and DhemajiDhemaji Commerce College libraries do not have Urinal or Drinking water facility insider the library.
- Only Dhemaji college library issues books for overnight use on special request.
  Dhemaji College also organises Book exhibition and various competition annually.

ı Dhemaji College and Dhemaji Commerce College and Moridhal College libraries have instituted 'Best User Award', to encourage its users in the form of cash prize and certificate.

ı No other college library, other than Dhemaji College library, issues books to its ex -students and outsiders on recommendation of college authority.

ı From the survey it is clearly observed that compared to other college libraries, Dhemaji College Library has adopted the maximum methods of Best Practice which are useful in providing support to students ,faculty and external users.

On interaction with librarians it has been understood that the librarians face many problems such as

ı Poor connectivity, low bandwidth and insufficient power backup, internet facility is not available all the time in most of the colleges.

ı Inadequate Man power acts as a hindrance in offering quality library service to the users.

ı Some faculty members and students do not seem keen to make good use of latest technologies in library.

ı Non allotment of scheduled Library Class in College time table hinders the librarians from conducting user education / orientation class.

ı Constraints in Library budget, restricts the librarian from organising various competitions and events.

7. Recommendations/Suggestions

1. College authority should take immediate measures to appoint librarian and library staff where required.

2. Librarians should conduct "User education class" for new comers, to familiarise them with the library and its services. It should be included in the college routine.

3. Librarian should keep themselves updated about the latest technologies for developing the library.

4. College authority should extend full support and co-operation towards library staff in upgrading of library.

5. Funds should be specially allocated for conducting exhibitions, information literary programs, quiz, book reviews etc. Often lack of funds stand as a barrier.

6. Librarians should be permitted to attend workshops, seminars for latest information and library upgradation.

7. Library services should be prompt and user friendly.

8. Faculty and outgoing students should be motivated to donate books for the Book Bank.

9. Online power backup facility should be available throughout the service hours.

10. Campus LAN should be available to benefit the users.

11. College Authority and librarian should take keen interest to set up an IR.

12. Web OPAC facility should be available for wider access.

13. CCTV should be installed in all college libraries.

8. Conclusion:

Academic Libraries are an integral part of a student's life. Today's libraries are competing with one another in pursuit of excellence yet libraries that are situated in remote and backward districts still have a long way to go. Although, Best Practices are being adopted to make the libraries more attractive and user friendly, there appear to be many challenged and hurdles implementing these. Most libraries are working towards it within their limited facilities. Therefore, it is the need of the hour that libraries face these obstacles in

a positive manner and strive for success. Libraries need to be upgraded frequently in order to satisfy its users. They must be such places where users feel the desire to spend their maximum time a fruitful manner.

The success of a library largely depends on the quality of books, infrastructure and skill of its staff. Further, the quality information environment of a library depends upon the efficient delivery of information services to the users by the capable library staff.

In order to offer library services to the right reader, with right documents at the right time,and live upto the expectations of NAAC and achieve a superior grade from their end, it is pertinent, that every college library takes up Best Practices to excel in their field. It is equally important for college authority to give priority to the development of library besides other fields. Only then can college libraries live upto their Mission and Vision.

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CONNECTING SOCIAL MEDIA WITH MARKETING OF LIBRARY AND INFORMATION PRODUCTS AND SERVICES

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Abstract: Library and Information professionals must understand that it is indispensable to actively market their products and services. Library marketing is critical for any information professional in order to spread the word about their library. Due to information and communication technology libraries entire face change and also users demand change. Social media has a great impact on information promotional activities by bringing tremendous changes in the field of marketing. It helps the users to possess interconnections among the community members and remix the library products and services to brand them visible in a broader way. This paper highlights the concept of marketing, what are the library products and services and the reasons to market library products and services. The paper also discusses the various social media and how they play in the marketing field to bring a new array in the library services.

Keywords: Marketing, Library Marketing, Information Products and Services, Social Media

1. Introduction: The present society creates, collects, manages, diffuses and makes use of information for its development. Library marketing and promotion always help libraries to reach to its end users. Libraries are always using various media like brochure, newsletters, broadcasting etc. to promote its services & products. Due to Information and Communication Technology (ICT), libraries entire face change and also users demand change. Social media provides several opportunities to reach and interact with the community. Hence, Social media and Social networks have grown rapidly over the past few years. It allows users to create, connect, converse, contribute, vote and share information. By using social media libraries can spread news about events of libraries and also alert users about publicized new acquired material by libraries. The concept of marketing is not restricted only to profit-making organizations. Researchers believe that marketing is relevant and also beneficial to the library environment. Social media is being used worldwide for diverse purposes in libraries and information centers: marketing, branding, building customer relationships, reference services, quick dissemination of news. Libraries and information professionals constantly debate and recognize the importance of marketing. They try to come up with new strategies to market their products and services. Traditionally marketing was primarily done to promote information products and services in order to ensure their optimum usage. Today technology has endowed information seekers with varied options to satisfy their information needs. Libraries no longer have the traditional monopoly of being the only information providers. New technology has confronted librarians and information professionals with a huge challenge to survive and thrive in this digital age, where user community can access online information resources at any time of the day from where ever they are. Therefore all types of libraries and information centers need to be marketed more than ever before. Traditional marketing was wearisome

and costly, in terms of time and money both. This has evolved into online marketing, which is both time and cost effective. Different applications of social media are useful for libraries for obtaining their patrons feedback and to ensure the maximum engagement of their users in promotion of their products and services.

2. Concept of Marketing: Marketing is an act of analysis, planning, implementation and control of carefully formulated programs designed to bring about voluntary exchanges of values with target markets for the purpose of achieving organizational objectives. It has a special meaning in terms of library services as the core product of library is "information", marketable goods and is intangible in nature through considered to possess the qualities of any given commodities. The horizon of library marketing strategies has developed from library home pages to social media applications due to the revolutionary changes in the 'information society.'

3. Library & Information Products and services:

3.1 Information Products:
i) Current awareness bulletins
ii) Results of literature search
iii) New additions list
iv) Bibliographical lists
v) Information bulletins
vi) Selective dissemination of information bulletins
vii) News bulletins
viii) Directories
ix) Abstracts
x) Indexes
and xi) others

3.2 Information Services:

i) Literature search
ii) Current awareness service
iii) Notification about newly published research
iv) Notification about conferences/seminars/workshops
v) Selective dissemination of information
vi) Photocopy of periodical articles
vii) Reference services
viii) Circulation of periodical contents
ix) Abstracting services
x) Indexing services
xi) Newspaper clippings
xii) Translation services
xiii) Inter library loan
xiv) Patent information
xv) Standard information
xvi) Repackaging and condensation services
and
xvii) others

4. Why to market library and information products and services: In today's information explosion

era there are plenty of reasons to substantiate that marketing of library and information science products & services is necessary and these are:

· To orient & inform what we are doing for users
· For the promotion of the use of information resources
· To capitalize the use of information
· To build up the collection & services of library
· Rising cost of resources
· Information explosion
· Impact of ICT
· Increasing information demands of users
· Lack of budget
· To introduce the new array of services
· To market the R & D activities
· To accept, adopt and change with time
· Efforts in assessing user requirements and selecting target audience were not sufficient
· Competition from other sectors
· Effective strategy is required to reach the user needs
· Categorization of potential users, regular users and non-users is needed

5. Social Media tools: Social media is the interaction among people in which they create, share or exchange information and ideas in virtual communities and networks. It brings different community of people together in one centre place like libraries done and where they can share, communicates with librarian. It acts as an online marketing tool for making of traditional library services feasible widely. Following are the some social networking sites which helps librarian to market and promote its products and services beyond the boundaries of libraries and hence it increases active participation and communication of library.

i) Facebook: It is very user friendly and interactive social networking site for connecting library services to the users. With the help of Facebook libraries can advertise their upcoming events and also share the information about new arrivals and editions of books. Better and faster distribution of library newsletter uploading broachers about academic activities such as schedules of conference, seminar can be done in no time on face book.

ii) Twitter: It is kind of micro blogging application to keep staff and patrons updated on daily activities, like frequently updated collections, workshops, new arrivals and new services through short messages either through web or through SMS using a mobile phone with a limitation of 140 characters. It helps to provide online reference service. Twitter post can be linked to the home page of library blog posts, wiki, online archives for detailed information. It is highly effective for increasing library users.

iii) LinkedIn: It enables patrons to connect with subject specialists in their particular field of internet. Library professionals can use this platform to render specialized services such as selective dissemination of information. It also facilitates to create professional connections and to market library services among other professionals working in different libraries of the world and can also solicit their idea and professional experiences.

iv) Pinterest: It is a social networking platform focused on visual content that allows users to create virtual pinboards of images from across the web, similar to the way that previous generations might have clipped images from magazines to create a scrapbook or a physical bulletin board. Users can create a variety of topical boards, and " pin" images from other places and around the web by pasting a short bit of code into their borrower's bookmarks bar, as well as by uploading their own images. These images serve as links

to the original source of the material. Users can also browse the pinboards of other members that they follow within the service, or popular pins from all users and are able to 'repin' items into their own boards. This wonderful tool can also be used by library as illustrated guide for library's classification system, book trailers (pinning book cover photos taken by the library), historical photos (owned by the library), visual resource guides, digital collection promotion or collaborative gathering of images or promotion ideas.

v) Instagram: It is relatively easy to use and is a great platform for sharing photos and interacting in a photo/video format with the community. Facebook owns this community, so integration between the two platforms is great. This is a primary mobile app, will require having a cell phone with photo taking capabilities. It is a photo based communication service rather than the traditional text based. Like Twitter this involves a time commitment as well. The most important part of choosing social media sites is only using the ones which you will have time to update. Cross posting is very popular and makes it easy to update several sites at once. All libraries at the very least should have a Facebook page, but the option to expand further and get more from digital marketing is there.

vi) Ning: It facilitates people to create custom social network where community web pages can be created and be connected through network. Communities on Ning can associate with online services like Facebook, Twitter. People can create their own social network to build up discussion on a particular topic. Ning has a potential to converge their information professional together and thereby the marketing of information among the libraries would be much effective than ever. It works like a bridge connecting librarians with users and library associations.

vii) Flicker: It is a website that is used for photo and video management/sharing. This application facilitates sharing images of library, cover page and content page images of new arrivals of books and journals can be diffused among the users community. Academic events such as seminars, workshops and conferences through images may be shared to public for the awareness. Libraries can use Flicker to upload library images and the picture of different services offered.

viii) YouTube: A popular audio visual application where videos can be uploaded, searched, accessed and downloaded throughout the world. Video clippings of documentary films of libraries and information centre give users a grid view of intact collection and environment of the library. The users can even comment on the video which may be considered for the feedback. Library products such as e-learning tutorials are promoted through virtual tour.

ix) Slide Share: It is a platform for slide hosting service. It allows users upload files privately or publicly which can be viewed by users. Slide share has been playing a vital role in the field of education and e-learning. Sharing ideas, conducting research, connecting with others have been much effective through slide share. Anyone can view presentation and document on topics that interest them, download them and reuse or remix for their own purpose. Presenting prepared slide that contain information about library products and services will notify every user who visits or shares.

x) Blogs: Blogs is one of the oldest but excellence web base information logging tool that allows individuals and groups to share knowledge and opinions. Here, librarians can periodically post messages, share information on a particular subject or issue, and allow users to contribute to content. They can write articles, news on topical issues and expect an instant reaction from their users.

xi) Library Thing: This is a tool that enriches Online Public Access Catalogue (OPAC). For this, an account is created then the lists of books with ISBN are sent to the library thing which then sends back a piece of code which is pasted on the footer of the library OPAC. Librarian can utilize this to send a list of current publication to the users.

xii) What's App: What's App Messenger is a proprietary cross-platform instant messaging subscription service for smart phones that uses the internet for communication. IT is useful for libraries to market

library reference/research services. It helps to keep staff and users informed about events, new arrival and program of library, workshop and new services through short messages. It is also useful to send images, video and audio media messages of library program and activities using integrated mapping features.

xiii) Wikis: It is a free online encyclopedia that gives a background knowledge and definition of concepts. It offers a platform for users to access, edit and contribute to content. This is a collaborative web page for developing web content.

xiv) Delicious: It is a social bookmarking service that facilitates discovering, gathering and sharing bookmarks. It has created a platform for the users where they share web resources in an effective manner. It also means of organizing the huge stock of information, a user come across in his daily life by bookmarking them from different sources like LinkedIn and Facebook for future use. A detailed document on library services offered and their usefulness can be created online and bookmarked which itself would be an activity of library marketing. This link can be tagged at later stages for keeping everyone in this community informed of the latest updates.

xv) Google+: It is a social networking and identity service that is owned and operated by Google Inc. It helps libraries to post upcoming events, programs of library, new arrivals of books. By creating circles library can send specific information to that group. User can also give their comment on library program and services. By using Hangout feature library can do video conferencing call to user to give information about activities of library.

6. Implementation Factor: Most librarians in the developing countries are not aware of social networking services, even the few that are aware and still struggling to find out the productive uses of these sites for library services. Users are also not aware of the protocols involved in social communication. Many students and possibly even some of the academic staff may be unaware that there is a subject specialist in their discipline. Most institutions have limited bandwidth to support this practice. Poor connectivity can frustrate effective online participation. The low supply of electricity discourages people from participating in the online forum. Many librarians and users are afraid of handling computers. They make the traditional library services their comfort zone and are not eager to embrace change. Most lack the 21st century skills that could be required to adopt the social networking tools for effective library services. Lastly, the free access to information where people copy, paste and edit without acknowledging the authority is a serious challenge to copyright management.

7. Conclusion: It is very important to explore the perceptions of the librarians in using social media tools. Every stage of library marketing can be effectively incorporated by social media. Almost all activities happen in a library can be brought under this umbrella. Being a marketing tool social media provide quick updates to the users of new generation. It is necessary for libraries to adopt and accept the social media tools and techniques to market their library and information science products and services and thus outreach the casual and potential users. By doing so it can be envisaged that information hubs are really worthy for society but now there is need to promote and make the users' aware about the activities performed or can be undertaken as per the information needs of the user community. Further, these marketing tools and practices will help in wider promotion and generating revenue to introduce new array of services, collection development and modification as per the users' requirements. To accomplish the library mission and vision, social media is the soul of library marketing strategy and that is how connecting the whole world in the web of information sharing. If social media is effectively used innovative marketing proposals and experience is possible among the professional contacts.

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CHANGE MANAGEMENT IN NEW AGE LIBRARIES: A CASE STUDY OF CENTRAL LIBRARY, NIT SILCHAR

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ABSTRACT

Change is an inevitable part of any progressive society. Change management is the competitive advantage of an organization for sustaining in the competitive world. The organization has an internal environment but exists in the external environment. To function efficiently and effectively, theorganization has to maintain equilibrium between external and internal environment. The external forces which constantly affecting for change in organization are-technology, increased global competition, economic, workforce, social trends, political, government policies, financial and increased customer needs and preference etc. and internal forces are – managerial and administrative forces, individual and group expectation, organization design and structure, system dynamics, technological changes and style of tasks etc. Change management is the strategy for theorganization to maintain the equilibriumbetween external and internal environment by managing efficiently and effectively the 8Ms i.e.Man, Machine, Material, Money, Maintenance, Methods, Measurement, and Market. This paper discusses the change process, change strategy and role of change agent

The library is the knowledge resource center of any educational organization which imparts service to the user community. With the introduction of ICT, Web 2.0 and various pattern of user's demand and preference, library too faces both external and internal forces. To work efficiently and effectively and to provide quality service to the dynamic environment to the diverse nature of user community/ customers, Library has to adopt astrategyfor change management to meet the technology trends of providing information. In this connection, Librarian acts as a Change Agent to manage change management in the library.

Central Library, NIT Silchar has taken change strategy for the development of the library and the library team has taken aproactive role in this direction. This paper enumerates issues and challengesfaced by Central Library, NIT Silchar for adopting change strategies as well as managing change with ICT environment.

Keywords: Change Management, Library Management.

1. INTRODUCTION:

Change is an inevitable part of any progressive society and change is the law of nature. Change involves organization's structure, system, and design, technology, people & culture according to the strategy. The organization has an internal environment but exists in the external environment. To function efficiently and effectively, theorganization has to maintain equilibrium between external and internal environment. The external forces which constantly affecting for change in organization are-technology, increased global completion, economic, workforce, social trends, political, government policies, financial and increased customer needs and preference etc. and internal forces are – managerial and administrative forces, individual and group expectation, organization design and structure, system dynamics, technological changes and style of tasks etc.

For effective change management, change agent plays an active role. Change agent may be internal or external who involves in the strategy and procedures for change management in an organization. Change agent serves as consultants, trainers, catalysts, interpreters, and synthesists who are responsible for bringing about change in theorganization and often work behind the scenes. Change agent acts as a proactive rule in this direction for effective change in theorganization to fulfill organization's goal and vision. In library, Librarian acts as the change agent to bring about change in the library.

2. WHAT IS CHANGE AND WHY IS IT NECESSARY

Change is an important characteristic of an organization. Every organization has to adopt the change management strategy for organizational development and for sustain. All the organizationsare facing both internal and external forces. The organization has to maintain equilibrium (which is dynamic in nature) between internal and external forces.

Change can be defined as analteration in the existing field of forces which tends to affect the equilibrium. Increased competition, price cuts, technology, laws, customer/ user demand- are the general change drivers. There are two major forces of organizational change such as:

2.1. External (macro)environment

- Change in technology and equipment
- Market situation or customer's dynamic demand
- Social & political
- Economical and financial
- Workforce
- Government policies
- Legal etc.

2.2. Internal (micro) environment

- Organization's vision, mission, and goal
- Change in managerial personnel
- For organizational development

- Adoption of new technology and equipment
- Demand for new technocracy workforce
- Re-design of organizational structure

In addition to the above, an organization feels to adopt astragey of change when it faces the following few factors:

➢ Rapid technological evolution

➢ Increased competition

➢ Strategy as per present scenario and as per the needs of the situation

➢ Organization's structure, systems, and procedure

➢ Organization is running through deficiencies'

➢ Customer's demand and protection

➢ Organizational values

➢ Management styles

➢ Human resources: knowledge, skill, attitudes, and values

➢ Change is needed for psychological changed

➢ Demand for apositive attitude towards theorganization.

➢ Employees demand for abetter job, more salary, better status, and quality work life.

As the external forces i.e. PESTEL (Political, Economic, Social, Technological, Environmental and Legal Forces) affects constantly internal environment of an organization in terms of consumer's change of demand and service. The organization has to adopt strategy as per the demand of the external environment for organizational development and for sustainability. The organization has to identify and evaluate external opportunities and threat to take aproactive strategy to achieve long-term mission and objectives and also develop policies for short-term goals.

Thus change management strategy is the organizational sustainability and competitive advantage. According to Mckinsey, effective change management of an organization depends on thecomplex relation of **7S i.e. strategy, structures, systems, staff, style, shared values, skills and superordinate goals.** This
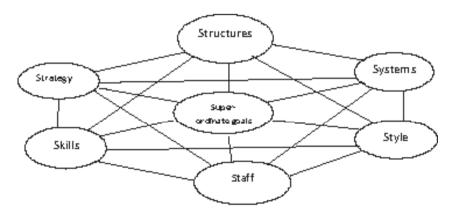
Fig1: The McKinsey 7-S Framework
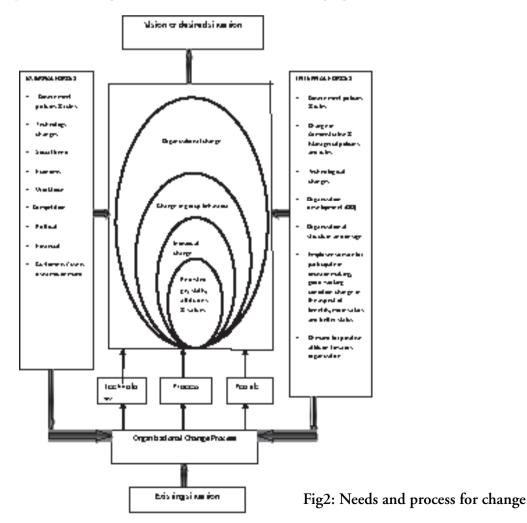
Organization change through people. People are the driving force to change management from vision to reality. Change pattern takes place from individual level to group level then to organizational level. The totality of organizational change depends on groups and groups of individuals. Therefore, change is a long-term process to reach the mile-stone of the desired state. For effective change management, change agent plays an active role.

3. CHANGE PROCESS

Change is a process of moving all variables (technology, structure, system, human resources, culture, process etc.) as per strategy to desired state (vision). Change can be evaluated and analyzed by 5W & 1H formula.

➢ Why: Why change is necessary for organization

➢ What: What factors to be changed-technology &equipment, man, and money etc.

➢ Where: Where to change

➢ When: When to change

➢ Who: Responsible management or change agent

➢ How: How much needs to change

The needs and process of change can be described as the following figure:

Fig2: Needs and process for change

Change involves organization's people & culture according to strategies, structures, process, and systems to reach the milestones.

The change process moves through four steps till it reaches the vision (goal) and it also needs continuous re-engineeringprocess to sustain the competitive environment.
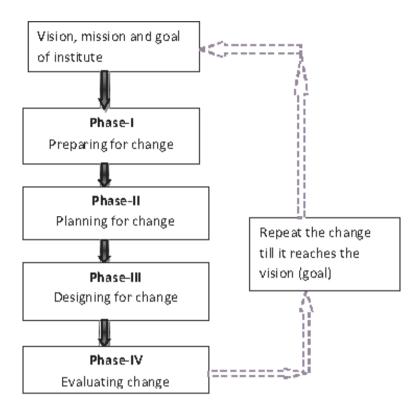
Fig 3: Steps of change process

According to **Kurl Lewin** successful of change in anorganization depends on three phases -unfreezing, intervening (moving) and refreezing. The three steps is shown in the figure as below:
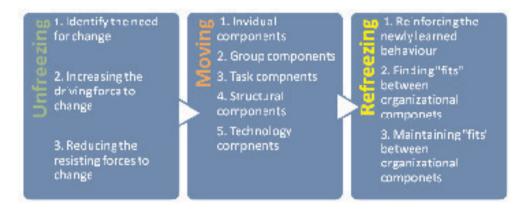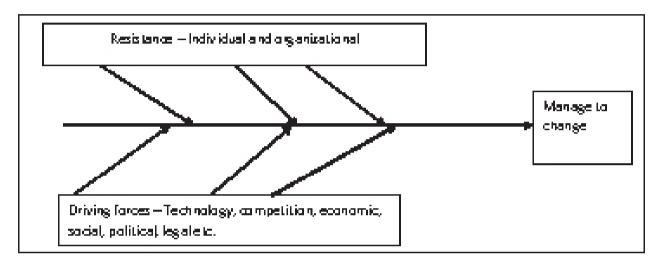
Fig 4: Three phases of change process

3.1. Unfreezing: According to the1ˢᵗ law of motion states "Every object remains in astate of rest or uniform motion in astraight line unless and until an external force is applied to it". A similar situation exists in theorganization. Unfreezing involves the following steps

- ➤ Recognizing the driving force
- ➤ Increasing the driving force
- ➤ Managing the resisting force

Change is possible when Driving force > Resisting force

3.2. Intervening (moving):

Moving involves changing in organizational components-Task, Technology, Structure sand Human resources. In this phase, thenecessary change should make in a planned manner considering all aspects.

3.3. Refreezing:

The final phase involves the paradigm shift from original condition to thedesired stage. It involves reinforcing newly generated changes by subsiding instability, resistance, and marching towards compatibility ensuring various subsystems. This is the phase for stabilization and integrating the change.

4. STRATEGY OF IMPLEMENTING CHANGE

Organization change through people. People are the driving force to change management from vision to reality. For effective change management, manager or change agent has to adopt the following strategy to implement change in organization

a) Top down strategy

b) Bottom-up strategy

c) Contingency strategy

5. WHO IS CHANGE AGENT AND WHAT IS THE ROLE OF CHANGE AGENT

A change agent is a person who leads the change management process from planning to reality.He/shemay be from inside or outside from organization who is responsible for effective, improvement and compatibility for change management process of an organization. Change agent serves as consultants, trainers, catalysts, interpreters, and synthesists who is responsible for bringing about change in theorganization and often

work behind the scenes. The change agent acts as aliaison between the change agency and client systems. He/she should have abilityto understand people in terms of explicit and implicit communication.

The role of the Change Agentcan be viewed as

- Consultant
- Trainer
- Counsellor
- Catalyst
- Facilitator – process helper
- Solution provider
- Resource linker and
- Researcher.

Change agent generates new ideas, useful knowledge about the process of change, change methods and techniques and about specific changes of technical, structural, process and new means to resolve problems.

To be a successful change agent should have the following competencies/qualities

➢ Have cognitive competencies-analytical thinking and conceptual thinking
➢ Have confidence in the intervention process
➢ Have breadth and depth of knowledge
➢ Trust own skills and experience of reality
➢ Communication skill and relationship building
➢ Tackle any resultant stress appropriately
➢ Reduce discrepancy between his ideas and actual behavior
➢ Cognisant of his impact on the client system
➢ Generate trust in the client system
➢ Problem-solving and decision-making skill

6. CHANGE MANAGEMENT IN LIBRARY & INFORMATION CENTRES:

Demands are for change are both external and internal. As we have seen, outside factors include legislation, technology,Socio-economic forces, the political agendas, etc. Those from inside include re-orientation, the new function of libraries, leaders and reorganisation.However, changes does not happen by itself;people make it happen. To be successful, change has to incorporate the mission, goals and objectives of the organisation (Lawrence, 2002).

Organizations/libraries are required to maintain harmony with their ever-changing environment. They have to maintain compatibility with the environmental changes for their survival, growth and prosperity. Otherwise, the organizations/libraries may fall back in the changing scenario of the world (Purushothama Gowda, 2015). According to Jayaprakash and Ramanaiah (2001), "The organizations which fail to change are sure to fail. Library and information centers are not exception to these phenomena". Organizations must carefully observe the environment and incorporate suitable changes the situation demands. They

must be proactive in affecting change.

Nandagopal and Sivakumar in 'Change management in library and information services' (2005) writes that "Library is considered as an organization within organization". Library is a part of an organization/ institution be it a business enterprise, corporation, research institution, university, college or other educational body.

In order to implement changes, the library need to develop a strategic plan. Its vision and value should be evaluated and redesigned based on critical success factors (CSFs) (Smye,1994).

7. CHANGE MANAGEMENT IN CENTRAL LIBRARY, NIT SILCHAR

The National Institute of Technology, Silchar is one of the premier national level institutions for technical education in North East India. The Institute transformed and upgraded from REC (Regional Engineering College) to National Institute of Technology, Silchar with a Deemed University Status with effect from 28.06.2002, and subsequently the institute the institute was converted in to Institute of National Importance. It offers both under grad & post grad course with PhD programme.

The Central Library which is the heart of the Institute was established in 1977. It is a hybrid library with the state-of-the-art technological applications. Presently the Library is a part of the LTT building & having more than 96,000+ collections. New Library Building Construction is in the final stage. Total carpet area is 7630 SQM.

With the conversion of REC to NIT, to meet the National standard steps were taken to enhance the library collections, the number of users of the library grown substantially in recent years with the introduction of MTech, MSc, MBA and PhD Programmes. As a result of which the work load of the library has grown in manifold. Therefore, Central Library faced the need for change in the terms of technology, equipment, structure, system, and type of workforce. Moreover, with the introduction of ICT in thelibrary, Web 2.0 and various pattern of user's demand and preference, Central Library has faceda challenge for change to combat both external and internal forces.

Therefore, keeping in view the scenario, it was felt to adopt the change management strategy to meet the new challenges. Thus, Library has adopted astrategy for change management to meet the technology challenges. In this direction, Library Teamtook aproactiverole asthe role of achange agent to bring about changes in terms technology, equipment, system and skilled workforce to the Central Library to give the real shape of the desired vision.

Change management process is a long-term process, hence it needs critical analysis of both external and internal environment for successful change strategies.

Before starting change policy, we had tocriticallyanalyze the following issues:

- ➤ What are the Strengths, Weakness, Opportunities, and Threats (SWOT) library have? SWOT analysis has helped to summarize the key issues from external environment and the internal capabilities of thelibrary for strategy development. It has helped also identify the strength and weakness of the library.

- ➤ What is the goal of the library? Is there any long term plan? What issues are to be considered while planning for change strategies for thelibrary?

- ➤ Is the library structure and system fitted for the strategy of change?

- ➤ Is the present technologies and equipment fitted for change strategy? Is better technology available in the market? What are the problems library will face while changing technology?

- What is the capacity utilization? How could it be improved? What is the level of inventory? What is the wastage? How can wastage be reduced?

- Being in North-East India, there is frequent power cut due to athunder storm, hail storm and rainfall. How frequent the breakdown can be managged? Is the new technology viable for this environment?

- What type of the workforce presently having? Are they skilled and knowledgeable? Are they competent? If not, how to cope up with the change? What is the personnel policy of the organization? What are the attitudes of the people with work? Is training required for the existing workforce? If required, where to train the people in-house or outside?

- What is the financial condition of the Institute? Will the institute do investment in change management in ICT environment? If not, what are the sources of finance?

- What type of service customers/ library users expect from the library? Are the present structure or system and human resources competent for proving the expected service?

- Does the Institute agree with thelibrary for change management in terms ICT application? What is the administrative views and opinions towards library?

Considering and analyzing all issues and challenges, we had taken key initiative and proactive role for change management in Central Library, NIT Silchar. Under the dynamic leadership of the Library Management, Central Library started marching towards a new era in the North-East India, especially in southern Assam

7.1. Change Management in Technological Front:

In order to meet the challenges of find crunch & technological issues, we had to write projects & approach different funding agencies to fund & some of the projects that helped us in change management is given below:

S. N.	Role/Project Description/ Amount	Period
1	Library Up-gradation Project under Centre of Excellence Scheme - Funded by MHRD, Govt of India (131 Lakhs)	1997/99
2	"Virtual Classroom for Quality Improvement of the Technical Professionals & Teaching Faculty" Sanctioned by MHRD, Govt. of India (10 lakhs)	2004/06
3	"Development of a Digital Library" Sanctioned by MHRD, Govt. of India. (10 lakhs)	2005/06
4	"Up gradation of the Library" Sanctioned by MHRD, Govt. of India under TEQIP, World Bank Project (47 lakhs)	2006/07
5	"Electronic Resource Management" Sanctioned by NIT Silchar (2.6 lakhs)	2010/11

Because of the successful implementation of the above projects, central library could achieve the following mile stones:

RFID Technology Initiative: Central Library, NIT Silchar is perhaps the first Institute in North-East India to implement RFID system in Library in 2006-7.

Digital Library & E-LearningInitiative: Central Library, NIT Silchar is perhaps the first NITs in North-East India to establish the digital library in 2006 &established a virtual classroom platform. Under the Digital Library project, the Library has starting digitizing thesis,manuscripts, and documents. 3000 E-books have already been put in the digital library server for the access of the student in the campus LAN. Under this project,library has scanned the photographs of the Institute and its programs and has created a digital photo gallery.

Electronic Resource Management: Central Library has developed a model electronic library with the state-of-the-art technological applications. The electronic library has online databases, CD-ROM databases, e-journals, and e-books. It provides a single window access to all electronic resources and is accessible through the Institute's intranet. **On-line Public Access Catalogue facility is available in the Library. OPAC can also be accessed through any terminal on the Campus Network. Library collection can also be searched through** OPAC.

The Library offers a range of information services to support the learning process set to the highest professional standards. The library has become the membership of E-ShodhSindhu, NDL and DELNET in order to avail the benefits of various services. In addition, library enrolled as Institutional membership of British Council Library, and American Library to avail the service of ILL.

Library 2.0 Service: Library started providing services to the users about the latest updates/happenings in the library through library blog at http://library-nitsilchar.blogspot.com/ and Facebook group at http://www.facebook.com/groups/369833813038102/.

7.2. Changes in the Human Resource Development Front

NIT Silchar has developed the policy to educate Library staff to ensure for receiving up-to-date knowledge and skill to maintain thehighest level of competencies and maintain quality services at all times. The library has oriented different groups for development of different skills in the areas as below:

- Management and leadership skill
- IT and digitization skill
- Information and literacy skill
- Technical service and e-resources
- Research and support services
- Quality Assurance
- Training and development

Following are the few examples of initiatives taken by Institute:

Professional Training by library staff at International level for last two years:

Sl. No.	Organization	Period	Details of Training
1.	University of Illinois, USA	9.12.2013-13.12.2013	Higher Education Management Program
2.	University of Illinois, USA	29.05.2014 24.06.2014	International Library Associates Program "Imagine Question, Connect A Professional Development Program for Library Leaders and Innovators" http://www.library.illinois.edu/mortenson/activities/OldPrograms.html

Professional Training by library staff at National level for three years

Sl. No.	Organization	Period	Details of Training
1	IIT, Kharagpur	13.06.2016-18.06.2016	Open Source Software for Library Management (OSSLM 2016)
2	MizoramUniv, Aizawl	21.06.2016-23.06.2016	National Workshop-cum-Training Programme on "Koha"
3	CSIR-NISCAIR	14.03.2016-18.03.2016	TEQIP, NIPU, New Delhi sponsored program on E-Learning.
4	CSIR-NISCAIR	08.02.2016-12.02.2016	Design and Development of Digital Libraries using DSpace
5	JNU, New Delhi	04.11.2015-06.11.2015	18th International Symposium on Electronic Theses and Dissertations (ETD 2015)
6	IIM, Shillong	25.03.2014-27.03.2014	National Workshop cum Training Programme on "Management of Libraries and Information Centers in Digital Era"
7	NIT Warangal	12.07.2013-13.07.2013	National Workshop on "Promoting Excellence in Research among NITs through E-Journals"

Professional Training by staff at Institute level for three years

Sl. No.	Organization	Period	Details of Training
1	NIT Silchar	30.03.2016-01.04.2016	Installation of KOHA Open Source Software in Library and training to staff
2	NIT Silchar	03.11.2016	Workshop-cum training on Anti –Plagiarism Software
3	NIT Silchar	09.03.2015 & 27.11.2016	Workshop-cum training on Anti –Plagiarism Software

Library Management also encourages the LIS professionals to attend the conference/ workshop both locally and outside for delivering a paper/ poster, to become members in organizing committee like INDEST, ILA, IASLIC, SIS etc. It also organises programme to train the manpower's in the region. Some of the programs are enumerated below:

Programme Organised (Summer School/winter School/Seminars/Exhibitions) for last three years

S.N.	Name of the program	Duration	Funding Agency
1.	Summer Training Programme for the Students of DLIS, ICFAI University, Tripura	27.06.2016 - 8.07.2016	
2.	Summer Training Programme for the Students of DLIS, Assam University, Silchar	26.10.2016-03.11.2016	
3	AIU Workshop on Emerging Trends in Information Technology in University Management http://aiuworkshop.blogspot.in/	25.08.2015-27.08.2015	AIU, New Delhi

4	International Conference on "What's Next in Libraries? Trends, Space and Partnerships" jointly organized by Mortenson Center for International Library Programs, theUniversity of Illinois at Urbana-Champaign, USA and NIT Silchar at NIT Silchar. http://whatsnextinlibraries.blogspot.in/	21.11.2014-23.11.2014	Various Source
5	10th Annual Meet & Workshop of INDEST-AICTE Consortium of MHRD in collaboration with IIT Delhi at NIT Silchar.http://indest2014.blogspot.in/	05.05.2014-06.05.2014	MHRD, GoI
6	National Workshop on "Innovation India" held from jointly organized by CSIR-NISTADS, New Delhi; NIT Silchar&IIMKashipur under TEQIP II. http://iiworkshop.blogspot.in/	25.11.2013-26.11.2013	CSIR-NISTAD, Delhi & NIT Silchar

7.3. Change Management in International Front - Collaboration and Partnership

Central Library NIT Silchar has bonded strong partnership and collaboration with thevariousInstitute, stakeholders, and universities for effective training and crucial development process.

In this connection, Central Library, NIT Silchar has entered into a collaborative MOU with University Library & Mortenson Centre for International Library Programme of theUniversity of Illinois at Urbana-Champaign, USA to create world class LIS facilities at NIT Silchar. The MOU was signed by Prof. N. V. Deshpande, Director and Dr.Kishor Chandra Satpathy, Librarian on behalf of NIT Silchar and by Paula Kaufman, Interim Director; Susan Schnuer, Associate Director of Mortenson Centre for International Library Programs; and Walter K. Knorr, Comptroller on behalf of University of Illinois at Urbana-Champaign on 6th June 2014.

The main purpose of this MOU is to facilitate the creation of a world-class, innovative, inviting and flexible library system to enhance campus learning, support research, and provide community outreach and service at NIT Silchar, through consultation and collaboration with the University Library of University of Illinois at Urbana-Champaign, USA. The planned collaborations of the MOU are:

- Development of technology road map for the new library at NIT–Silchar.
- Assistance in planning library facilities that support research, services, and studying.
- Professional development for staff.
- Exploration of possible exchanges of academic staff.
- Assistance in collection development.
- Support in the development of a community outreach program.
- Other areas of collaboration identified during the initial assessment visit.
- Joint library projects involving research or training.
- Consultation on the design of an online Digital Library course.

Further for effective change management strategy for sustaining in the ever changing ICT environment, library has invested 44 crore rupees to create a world-class, innovative, inviting and flexible library system at NIT Silchar with 1 lakh sq. ft. carpet area and soon it will be operational.

8. CONCLUSION

Change is an inevitable part of any progressive society. All organization faces both external and internal forces. Change management is a continuous process, to sustain in theequilibrium position, change management is the strategic tool for organizational development.The librarybeing a service sector in an organization, it too faces both external and internal forces. With evolution and application of ICT in libraries, libraries have to adopt ICT for quality and value-added service to the user's community. Hence, Library has to adopt change management strategy for sustain and development. It is the competitive advantage for thelibrary.

Central Library, NIT Silchar has adopted change management strategy, to cope up with the ICT environment and also to provide quality service to theuser community. In this direction, the library team after critically analyzing all issues and challenges adopted change management strategy andmarched ahead for thedevelopment of the library and has started a new era in this zone. As change management is a continuous process, it has to go miles and miles……

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CENTRAL OPEN ACCESS REPOSITORY:
AN INITIATION FOR OPEN ARCHIVES IN NEPAL

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Abstract. Many research works have been done within Nepal but they have not been published nor have they been made available to others through appropriate channels. There was not any system for archiving such works. Nepal Library and Information Consortium took an initiative for the establishment of an open archive named Central Open Access Repository in Nepal. Anyone interested to submit their works ranging from articles, book chapters, theses, and research papers can archive in this repository making them publicly and openly available. This will help in some extent to find hard -to-locate information and literatures for other research and study.

Keywords: Digital repository; Web archive; Institutional repository; Open Access; Digital libraries; e-resources

1. Introduction

Central Open Access Repository in Nepal is a web archive run by Nepal Library and Information Consortium (NeLIC) for the collection, preservation and dissemination of intellectual output of institutions or an individual. The outputs may be journal articles, conference papers, research reports, theses and so on, which are freely accessible to anyone interested.

2. Background

Information is the backbone of every research and study. Sources of information may range from books, journals, proceedings, reports and various reference tools. Due to rapid growth and explosion of information, it is quite difficult to publish in time and or difficult to manage and store all published materials in a retrieval form. Internet is only the means which helps archiving and managing all published and unpublished resources. Information available in the Internet is easy and speedy to retrieve.

Various publishers publish their publications online. Many learned societies, universities and research institutions archives their work either in their own institutional repositories or in online databases hosted by others.

Clifford Lynch describes institutional repositories (IR) as "a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members" (Elizabeth Yakel, 2008).

But universites in Nepal do not have such institutional repoitory.

Nepal has a growing community of researches and specialised publications in different fields of study.

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1 Author is directly involved in the establishment of this repository.

However, dissemination of the research works and access to these has been confined to few urban centres. This has limited the scope and utility of research being done within and about Nepal.

Though Nepal Library and Information Consortium (NeLIC) has provided access to some international journals to its members, most of the students and researches are dependent either to the print materials or to some international databases which are open for the information required in the research and study. However those are mostly written with international perspectives rather than Nepalese perspectives.

In Africa also, there have been similar initiative to establish digital archive for the availability of African scholarly works. The Aluka Project was launched by Ithaka and JSTOR to develop a mechanism for electronic content concerning Africa and other parts of the global south that could be made available online. (Isaacman, Lalu, and Nygren 2005)

In Nepal, a lot of research output is also generated and for use by development organizations, especially big multilateral institutions and a few large government and non-government organisations. These reports are not widely disseminated when their nature and usefulness to other researchers and practitioners is very high.

Another kind of scholarly research articles that do not get archived are the ones presented in seminars and conferences organized by various organisations and institutions. These papers tend to be comprehensive in their coverage and raising of issues in specific thematic areas.

Nepali researchers writing on Nepal contribute scholarly articles to international journals and book chapters nationally and internationally. However, these articles are not accessible to the general researchers in Nepal due to their unavailability locally and /or due to high cost/ subscription charges.

Though there exist some institutional repositories and open access online system for example Himalayan Document Centre (HIMALDOC), Nepal Journals Online (NepJOL), these are limited to specific discipline or geographic coverage and/or not completely open. HIMALDOC provides information related only to Himalaya and publications of ICIMOD.

Nepal Journals Online (NepJOL) is an Open Journal System supported by International Network for the Availability of Scientific Publication (INASP) for the online publication of Nepali journals. It has been providing access to 119 journals published from Nepal. However not all articles (only 11973 out of 12724) are available full-text. (NepJOL website)

Even NepJOL is limited to journals only. Other works such as reports, conference papers, books, theses in various subjects are still not archived.

To overcome such problems, an archiving system was desired, and Central Open Access Repository was set up. Web archiving system is also widely used in developed countries. The Web at Risk Project is a multiyear National Digital Information Infrastructure and Preservation Program (NDIIPP)-funded effort to enable librarians and archivists to capture, curate, and preserve political and government information on the web, and to make the resulting web archives available to researchers. The Web at Risk Project is a collaborative effort between the California Digital Library, New York University Libraries, the Stanford School of Computer Science, and the University of North Texas Libraries. (Seneca 2009)

3. Central Open Access Repository in Nepal in the Context

Nepal Library and Information Consortium (NeLIC) is a nodal body established by a group of institutions with the idea of facilitating access to electronic resources to Nepali educational institutions. It coordinates with various institutions and publishers for the licensing of e-resources. Beside this, it advocates for use of Free and Open Sources Software (FOSS). Similarly, it advocates for Open Access. This Central Open Access Repository is the one of the part of its activities of Open Access Advocacy Programme with a grant funded by EIFL.

Nepal Library and Information Consortium (NeLIC) with support from EIFL Open Access Programme established a digital repository in 2012, which is publicly open for uploading research works and downloading the works of others. The repository contains various documents ranging from journal articles, conference papers, research reports, to theses, books and institutional publications, policy briefs, newsletters and annual reports.

3.1 Objective

The main objective of this repository is to promote open access system and help in finding information required for the research and study easily through a single portal. It is also a central platform for individual researchers and institutions, where individual researches can disseminate their work for wider audience and an institution can archive their published or unpublished information for future use.

3.2 Platform

The repository has been established using open sources software DSpace and a web cloud server has been taken in lease for the space which helps to protect data from various disasters.

The url of the repository has been linked in the web page of Nepal Library and Information Consortium www.nelic.org so that anyone can find the repository easily. (Fig. 1)
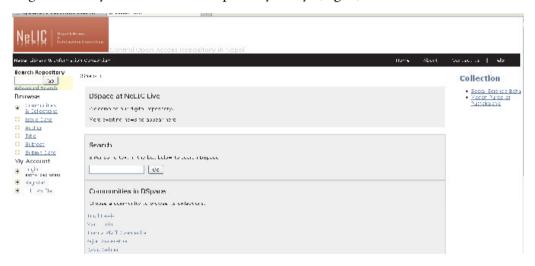
Figure 1: Screen shot of Central Open Access Repository portal.

The resources have been classified according to communities and they have been further catagorised to different collections. (Fig. 2)

Figure 2: Screen shot of Central Open Access Repository, Vidya Bir Singh Collection

Communities are different institutions as well as individual researchers depending upon the contributions they make their available. One of the retired professor Dr. Vidya Bir Singh Kansakar has provided his entire work ranging from PhD thesis, books, book chapters, conference papers, journal articles and some unpublished materials. The repository also contains links to institutional profile of various national and international scholars working in the areas related to Nepal where their already archived

Figure 3: Screen shot of Central Open Access Repository, link to David Gellner's institutional profile page. http://www.isca.ox.ac.uk/about-us/staff/academic/prof-david-gellner/

3.3 Benefits

The repository in particular benefits three groups:

i)   Researchers and students will have access to hard-to-locate research materials through a single point open access system.

ii) Researchers/authors will have the opportunity to disseminate their work through the repository.

iii) Institutions and organizations which do not have a repository and /or archival system of their own can use the repository to store their research work. Additionally, institutions which have their own repository can link their collections in this central platform for greater publicity/exposure.

1. Challenges

Too many challenges have been faced during and after the establishment of this repository. These are listed below.

i)   Task of coordinating with scholars, researchers as well as to various institutions was very difficult. Series of meetings and presentations were organised to make people aware about open access and advocate on this issue. It was essential to collect their views for building a central repository which would be open to all and could archive their work.

ii) After the establishment of repository again it was the same problem to make them aware of availability of such repository. A workshop was organized to disseminate the information about this. Also the pamphlets

of Central Open Access Repository in Nepal were distributed to various institutions, scholars, researches, students and teachers, editors and many other who concerned this.

iii) People are idle unless they are poked. The researchers have not submitted their work sufficiently in this repository. Many attempts have been continuously made to request them and motivate them to archive their own work as well as institutional archiving.

iv) There are not any concrete policies and guidelines regarding the submission and use of this repository rather it has been lead by conventional decision. But a draft of open access policy and guideline has been prepared which will be implemented soon for this repository as well.

v) Researchers and other scholars do not have proper skill for the submission of their work in the repository directly. It has been planned to conduct some trainings to the individual researchers as well as the institutional representative in order to make them able to upload their collection them shelves. Right now Nepal Library and information Consortium has been assisting in archiving those who want their work to be archived.

vi) There is a financial constraint to run this repository and conduct trainings. Nepal Library and Information Consortium has managed this repository anyhow till yet but it is not sure how will it be sustainable. This is the main challenge identified.

vii) Copyright of the published materials is another challenge.

Some suggestions were received during the dissemination workshop. The workshop was followed by a group discussion they were mainly focused on identification, collection, archiving procedure and dissemination of the resources for the repository.

They have identified 12 different types of resources to be included in the archive and mixed approach was suggested for the collection and archiving procedure. Similarly suggestion for building network of librarian as disseminator was received. These matters will be discussed while implementing the policy.

2. Future Plan

As this is open access and central repository in Nepal, it has been desired that all other institutional repositories are linked in this repository. All institutions archive their published and unpublished work in this repository. Researchers and scholars submit their articles, research papers, conference papers and book chapters to this repository. It is expected that the collection of repository expand gradually to optimum so that sufficient information can be found. This will ensure the availability of essential information for gaining the quality education through the process of study, teaching and research works.

Hence it has been planned that Nepal Library and Information Consortium will continue running the repository with the help of its members and support from various national and international bodies.

It will follow up the various organizations and institutions to archive their collection. It will request individual researchers/scholars to provide their work. It has planned to conduct various trainings for the individuals and institutional representative to provide know how knowledge on uploading their work in the repository.

It will disseminate the information on availability of this repository and its contents among the university students, teachers, professors, researchers and other interested.

It will implement the open access policy and guideline for the repository soon which will be helpful in various issues regarding submission and copyright of the resources. This will also help in monitoring and supervision of the repository.

3. Conclusion

　　Central Open Access Repository in Nepal is a milestone for the open archive system in Nepal. It is a big web archive run by Nepal Library and Information Consortium for the preservation and dissemination of research work, institutional publications, and individual authors' outputs in terms of journal articles, book chapters, books, theses and conference papers. It is open to all any one students, teachers, professors, researchers, policy makers and other interested. This helps to increase the quality of education and research output. Similarly it will reduce the dependency of scholars in foreign publications and online databases in some extent. It also helps to control plagiarism seen in the field of academia.

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COSTING AND PRICING OF LIBRRAY PRODUCTS AND SERVICES: A THEORITICAL STUDY

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ABSTRACT

Marketing of library services and products is the need of the hour. Since the introduction of economic and financial deregulation and free market policies of Government since 1990, libraries cannot think to avoid marketing. They are bound to sell certain high tech services for the sake of the survival of their own as well as for the sake of their respective institutions. The paper has discussed the implementation of marketing in the library and information centres. The paper has discussed the costing and pricing of library products and services. It has covered the aspect of price which governs the very feasibility of any marketing programme. There is discussion on the cost accounting and its application in library marketing. The paper has also stated a process of cost estimation of library products and services.

Key words: - Marketing, Price, Pricing Strategy, Price Estimation, Cost Accounting, Cost Estimation

INTTRODUCTION:-

Library and Information centres are organizations and as an organization they have to achieve high level of customer satisfaction. It is quite natural that they want to enhance the perceived value of their services and also want to ensure the survival of their respective institutions. So to achieve these objectives there is no other alternative than to adopt the Marketing strategies in the management of library services. Contemporary management practice has strongly suggested that Marketing is an essential component for any organization's business plan.

With of adoption of Information and Communication Technology (ICT), all the commercial and competitive activities started in the library's scene The technology has compelled the libraries to begin selling certain high tech services to their users beginning with the Xerox copies in 1960's, online search services in 1970's and access to online search services in 1980's. The idea of marketing library services is not new to the library world. The recorded history of library marketing is dated back to 1876 when Samuel Swett Green had advocated "improved personal relations between librarians and readers" in his often quoted speech at the ALA Conference. The concept of marketing is often misunderstood that it is profit, sales and advertising only (Uppsala :1997). But after 1960, the marketing paradigm change from selling concept to customer centre perspective and concepts like product differentiation, customer service, service quality and sustainable relationship emerged.

LIBRARY MARKETING:-

There are lots of discussions on adoption of marketing strategies in library management. Whenever

there is discussion about marketing, the question of profit and lose in terms of money has into being. But in the contemporary management practice, marketing is more than making profit or lose only. It is true that the profit or increase funding resource could be a result but that alone is not the reason to implement marketing in anywhere.

Marketing is nothing but the process of planning and executing conception, pricing promotion and distribution of ideas, goods and services to create exchange that satisfy individual or organizational objectives. Non-profit making organizations like libraries have been experiencing increased problems in the market place, declining customers, dwindling contributions, decreasing demand etc. Marketing appears to be the only management function that offers this organization a hope. In the fields of library and information science, the term marketing means, "to create the demand and interest among readers to use the library resources and services". Economically also Libraries are a big investment of Government in the form of books and other collection. The libraries can solve their problem of under utilization of library resources and services and user satisfaction by implementing the Marketing techniques

Every public and private sector business in our country has undergone enormous changes since the introduction of economic and financial deregulation and free market policies of Government since 1990. The impact of this new set of policies is visible on every organizations, institutions and enterprises etc. Libraries are not exception and have had to fight for adequate support funding for survival. Further Library and Information centres are bound to change the style, strategies and ways and means of providing services, which required reviewing the old paradigms and search for new ways of managing the environment. To reduce financial constraints on one hand and increased demand for services from the users on another hand some type of library services and products must be charged for.

PRICING:

Among the four Ps of the marketing mix, the price is the most complicated one. People have still many doubts about assigning of price to a library product and service. But as the concept of marketing has come into being in the library scene, it is the need of the hour that they must step forward towards pricing also. Price is a fine mechanism to convert the perceived value of a product into rupees and paisa to a customer at a point of time. It governs the very feasibility of any marketing programme because price is the only element in a marketing mix accounting for demand as well as income or revenue.

Price of a product consists of a physical product plus the bundle of expectation or satisfactions of a customer or user of a product. It must be equal to the total amount of benefits, which may be physical, economic, social or psychological. We may have a kind of price equation where

Money Price= Bundle of expectation.

Bundle of expectation on selling points are:-
a) Physical product
b) Brand name
c) Package and label
d) Product benefits
e) Delivery
f) Warranty
g) Service after sale and so on.

Philip Kotler, a marketing guru has written extensively about marketing of services and marketing in non- profit organizations like libraries. Kotler has redefined the 'P's of the marketing mix as 'C' s. in this new system, 'price' become ' cost to the user'. This is a useful reminder that a user may look at all the time,

the money and the energy they have to expend in order to use the service, not just the part that is charged for. Therefore, it could be expected that users might be willing to pay extra for a service that delivered information directly to their door. The reason of it is that the overall cost to them would be lower rather than paying less and have to collect the information by them.

PRICING STRATEGY:-

In order to price something, it is needed to know how it must cost. The cost may be either –a) fixed or variable cost or b) direct or over head cost. Fixed cost are those which are the same whatever the usage and variable cost are those which vary according to usage. The direct costs are those which are associated directly with the service and overheads are the costs which benefits a range of service.

The pricing strategy needs to fit with the overall mission of the organization which is a part of a marketing plan. It must reflect the financial objectives of the organization. The following diagram illustrates the process of the deciding pricing strategies:-

Marketing objectives

↓

Pricing objective

↓

Examination of determents- e.g. costs, demand, competition

↓

Decision on the role that pricing will play in the marketing mix

↓

Development and evaluation of the effect of pricing strategies
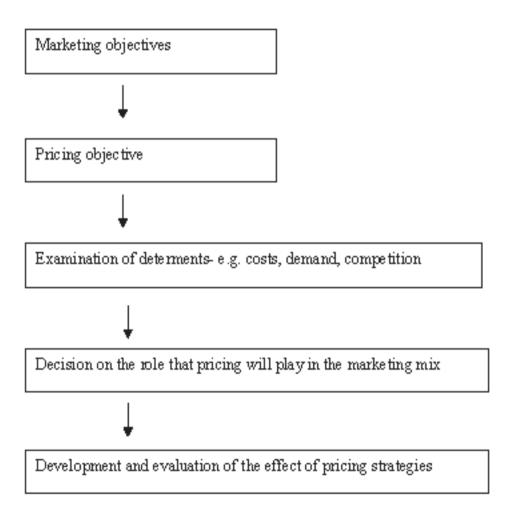
Fig :- Process of deciding pricing strategies
Source:- http:// dis.shef.ac.uk/shelia/marketing/source.html

For pricing one has to adopt a policy based on cost recovery, demand, computation of marginal costing. The three primary pricing strategies are as follows:-

a) Cost- based pricing :- This is the most easiest way of determining the price of a product. The objective of this type of pricing is to attain a breakeven point where no loss is incurred on. In this type of pricing fixed cost and variable cost are recovered.

Cost – based pricing includes varieties of pricing strategies such as – full cost recovery, partial cost recovery, cost –plus pricing ,

Product → Cost → Price → Value → Customer

b) Demand- based pricing: - In this type of strategy, prices are based on demand. The price is low where demand is less and higher [prices where demand is high. This is generally the preferred approach for those who take marketing seriously. However, the cost and cost- recovery objectives are obviously still relevant in this type of pricing strategy.

c) Competition- based pricing:- In this type of strategy, the prices of product and services are based on what other competitors are charging for a similar service or product , irrespective of demand and cost incurred.

Before going to determine the pricing strategy, it is very much essential to look the position of the product and service of the organization in the market place. An organization must gear its pricing strategy towards its key target market. While going to implement any pricing strategy it is needed to look whether the strategy will encourage repeat- buying or not. (http:// dis.shef.ac.uk/shelia/marketing/source.html)

PRICE ESTIMATION:-

The price of each product/ services is calculated by adding the profit to the total cost of product/ service.
Price of item = Cost of the item + Profit

COST ACCOUNTING:-

Cost Accounting is an important factor in library management. Cost can be defined as the consumption of resources in order to produce or maintain goods or services. Services always need activities and activities consume resources. The consumption of resources causes the costs. Therefore, costs include more than the expenses of a certain period. There are hidden costs that do not appear on the library's bills or payrolls, such as utility cost and depreciation costs.

Cost accounting tries to assign costs to the different products and services of the library and to answer the question:-

v   What types of costs arise?   Cost type accounting
v   Where do the costs arise?   Cost centre accounting
v   For what product/ services do the cost arise   Cost unit accounting

Cost type accounting means identifying all types of costs that arise by the production of library services during a specified period i.e accounting period. The broad groups of cost types in a library are:-

v   Staff Cost
v   Collection building costs
v   Administrative costs
v   Utility costs like heating, electricity, water sewage, cleaning, security etc
v   Calculatory depreciations of assets (Buildings, IT and other equipment)

For calculatory depreciation the easiest method is to define a minimum useful life- time for groups of assets (e.g 4 years for a PC). The purchase price is divided by number of years of the useful life- time, and for each of these years the annual depreciation can thus be calculated.

The assessment of the total costs of a library during an accounting period and the assessment of the percentage that is consumed by different cost types, give a first overview of the cost structure. Staff costs will probably be predominant. For management decisions, it is necessary to know not only what costs arise, but also where they arise, in which cost centre.

Cost centre accounting assigns the costs to the working areas of the library and usually follows the departmental structure as for example lending service, reference service etc. It is a necessary step when trying to assess the costs of separate services or products.

Some costs can be assigned directly to each cost centre. The other indirect costs like utility costs, depreciation cost and IT cost can be assigned by using keys. Utility costs and building depreciation costs can be assigned per square meter. The IT costs can be calculated according to the number of PCs in the department. In most of the collection building cost is regarded as a separate item with the help of which the products and services are produced by the library. The services and products of the library consist of collection, offering and supporting the use of information and media.

Cost unit accounting is the last step in cost analysis. Cost centre accounting shows where the costs have arisen, but does not help to identify with which product/ services the costs are associated. To assess the unit costs it is essential to list all activities occurring in cost centre and to note down the time spent on each activity during a specific period.

The result of cost accounting can never be the sole basis for management decisions in libraries, but it is a part of the controlling system of the library. It has more often been used as a retrospective documentation of costs than as an instrument for controlling costs of existing services. The cost accounting should also be an instrument for future- oriented planning. (Poll: 2004)

COST ESTIMATION OF LIBRARY PRODUCTS AND SERVICES:-

The steps involved in the procedure of costing information products and services are as follows:-

Step I   Calculation of Man- Hours require:-

The approximate time required to complete any product or service could be calculated in Man- Hour.

$$\text{Man- Hours Cost} = \frac{\text{Total No of hours taken for preparation of a product/service}}{\text{No of products and services}}$$

Step II :- Calculation of Manpower Cost

$$\text{Manpower Cost} = \frac{\text{Man – hours for the preparation of a product / service}}{\text{No of working hours in a month}}$$

Step III:- Calculation of Material Cost

$$\text{Material Cost} = \frac{\text{Total Price}}{\text{No of items}}$$

Step IV:- Calculation of Final cost

In this step overhead cost is to be calculated first. Overhead cost which includes in relation to equipment,

power etc. is calculated as 10% of the total production cost.

Final cost:-

a) Manpower Cost (Mc)

b) Material Cost (mC)

c) Cost of total no of copies (Cc)

d) Overhead Cost

$$\text{Final Cost} = \frac{10 \times (\text{Mc} + \text{mC} + \text{Cc})}{100}$$

Therefore, total cost of producing No of copies= (a + b + c + d)

$$\text{Average cost of one copy} = \frac{\text{Cost of total no of copies}}{10}$$

CONCLUSION:-

Library marketing is the need of the hour. Though there are lots of debated and doubts about the implementation of marketing strategies in libraries, still marketing is must for the survival of the libraries and also for their respective institutions. It is fact that it would be against the ethics of librarianship if all services and products would be charged for. But for certain high tech services and products, there is need to be charged for the sake of the quality and for the sake of the library too. Again, quality is associated with the satisfaction of the clients.

The profit or increased funding resources could be a result but that alone is not a reason to implement marketing. Increased customer satisfaction may result in increase willing to use and pay for the services offered. The services which are surveying today are the ones which have tackled pricing as a part of their overall marketing strategy and are managing their strategy in response to their market. The strategy of pricing may be varied from library to library. Still there must be some uniformity in the cost of services and products which are considered as commodity of library marketing. Therefore, it is very much essential for the libraries as well as for the library scientist to develop some suitable model of pricing of library products and services. Now the time is already over to think about "should libraries engage in marketing?" or not. Certainly there are differences between the pure products and the products and services of a nonprofit making organization like library. It is true that services are totally dependent upon satisfaction of the customer whereas the pure products depend more on advertising. But the contemporary management has also given lots of stress on marketing of nonprofit making organizations. The eminent marketing guru Philip Kotler and Sidney J Levy has broaden the concept of " service" from " physical products" and to " customer satisfaction engineering " from " Pushing Products".

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CONSIDERING SOCIAL INCLUSION IN E-LEARNING IN DIGITAL AGE AND INDIAN DEMOCRACY: INTERROGATING THE SHIFTING PARADIGM

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Abstract

There is a strategic shift in addressing the question of why to include citizens in an increasingly information driven society towards how to make the inclusion in more relevant way. The abundance of new information and communication technologies (ICT) has transformed the global economy. From education and social inclusion to careers and politics, societies are increasingly networked; participation in an information - driven society necessitates access to technology and the motivation to use it. However, there are increasing concerns that differences in technology access and use have an impact on social inclusion, educational outcomes, and learning. Boosting digital participation, or e- inclusion, has become the aim of policy decisions, but how best to accomplish this goal remains uncertain. E - Inclusion has been conceptualized in many different ways. In the 1990s, the concept of a "digital divide" emerged, focusing on whether or not people had access to computers and the Internet. Looking at this global demand the democratic nation of India started showing its concerns for encouraging social inclusion in digital education and digital world. The recent political economy of Digital India Campaign is hence an extension of the dream of shifting the traditional classroom environment learning to digital learning. But in a nation like India this has to do with many socio, cultural and economic handicaps. It is quite evident that the major issues of digital divide and exclusion i.e. access to Computer knowledge and Internet infrastructure still shows a significant gap in technology uses between regions in India. Therefore, in this paper it is aimed to discuss about the issues of social inclusion in e – learning in India and the responses of Indian state in an analytical framework. The paper will adopt a historical analytical method to analyze the data collected from secondary sources like book, article, e-resources and government reports.

Keywords: *Social Inclusion, digital divide, e-learning, Indian State, Democracy etc.*

I. PROLOGUE:

In the present scenario people's everyday life is entirely depending on the technology, it is so much so that society's caliber and nation's development has been judged on its ability to mingle with Information and Communication Technology (ICT) tools. Authors like Bijker and Law (1992:3) therefore has rightly remarked that, *"technology mirrors our society"[1]*. As society shaped the technology, so as the technology shaped the society. The character of the society as the Marxists believes has been mostly shaped by the use of technology. To quote what Karl Marx said, *"the windmill gives you society with the feudal lord; the steam mill, society with the industrial capitalist"[2]*. But this statement also depicts the brutal truth of technology which

has a class character. The global debate on digital divide is a classic example of that issue. It is imperative to note that the growing digital divide in the world created two different classes of people; the haves and the have-nots, based on their access to use of internet in general and ICT in particular. Interestingly many claimed that the divide does not remain as a global phenomenon as the digital disparities have also been felt at domestic level. There is a serious disparity in using of ICT tools in learning and access to ICT infrastructure among the people living in different locality. The case has become more acute in the developing nations, which are marked by severe gender, caste, class, age disparities. India being one of the largely populated nations has been a classic example of such disparities. The social exclusion has been a common feature of Indian societies and also of the social character of the state. Therefore it is assumed that deepening democracy and encouraging social inclusion in government agendas will be the only solution to this problem. Therefore, Indian state has a dual responsibility one to eradicate age old technological barriers among the different sub groups of the society and also to facilitate provision for greater access to education in this digitalized world. On the light of this the present paper has discussed about the prospect of E – Learning in bringing social inclusion and the responses of the Indian state in this connection.

II. OBJECTIVES:

The major objectives of this paper have been mentioned as under:

1) To retrospect the link between E – learning and social inclusion.

2) To find out how far e-learning initiatives are socially inclusive.

3) To evaluate whether e-learning drives conducted by the democratic governments in India are successful in encouraging larger participation of people.

4) To find out the problems in E-learning in reference to social inclusion.

5) To suggest some solution to these problems.

III. METHODOLOGY:

The methodology adopted is mainly qualitative in nature but substantiated with quantified information. For the collection of data many secondary sources such as – relevant books, journals, internet sources, government reports have been referred. The paper adopted historical – analytical approach while presenting its analysis.

IV. SOME CONCEPTUAL CLARIFICATIONS: E LEARNING AND SOCIAL INCLUSION

The two key concepts which have been used in this paper – e – learning and Social inclusion need some further clarification. Etymologically E-learning is electronic learning, and typically this means using a computer to deliver part, or all of a course whether it's in a school, college, part of training or a full distance learning course. E-Learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely. In fact, the face of education has experienced a sea change over the decades. Once characterized by the traditional classroom model, education has metamorphosed into learning that is instant, online, self-driven and on the go. The journey of education in India, too, has been dotted with innumerable milestones. In other words, e-learning can also be described as learning that is delivered online, via the internet, ranging from Distance Education, to computerized electronic learning, online learning, internet learning and many others forms. So e-learning can be defined as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. It is interactive learning in which learner can also communicate with teachers, professors or other students in the class. Sometimes it is delivered live; where one can "electronically" raise

hand and interact in real time and sometimes it is a lecture that has been prerecorded. Normally, there is a teacher or professor interacting/communicating with learner and grading the participation, assignments and tests. E-Learning has been proven to be a successful method of training and education. It is becoming a way of life for many citizens in our country e.g. farmers education, adult education, pre-primary and primary education as well as in higher education.

However, Social Inclusion, the concept is related to social exclusion. It is a strategy to fight against social exclusion. To be more specific, social inclusion, the notion, fights against exclusion of individual or group within a society. "Social inclusion is a strategy to combat social exclusion, but without making reparations or amends for past wrongs as in*Affirmative Action*. It is the coordinated response to the very complex system of problems known as social exclusion. The notion of social inclusion can vary, according to the type of strategies organizations adopt."[3] It is the inclusion of every individual in socio-political and economic affairs of a society. "Social inclusion is based on the belief that we all fare better when no one is left to fall too far behind and the economy works for everyone. Social inclusion simultaneously incorporates multiple dimensions of well-being. It is achieved when all have the opportunity and resources necessary to participate fully in economic, social, and cultural activities which are considered the societal norm."[4] It is an important for addressing a myriad social issues covering income disparity, skill level, health inequalities, housing affordability, work-life balance and many more. "An indicator of social inclusion in a society is the extent to which members express a willingness to cooperate with other members irrespective of the subgroups to which they belong."[5]

V. SOCIAL EXCLUSION AND DIGITAL INCLUSION:

India has an age old education system which is transforming to the modern education system long before it has enters the digital phase. But even today social disparities are prevalent in our society, access of education is still limited to certain pocket of the society, institution of social exclusion is still active. This can be realized from the following information: the male female literacy rate is 82.14% and 65.46% respectively, whereas caste based literacy also shows a negative picture, the total literacy rate of SC is 54.69% and among it female literacy rate is far lower than the national average i.e. only 41.90. Literacy rate of ST is only 47.10 and female literacy is only about 34.76%. This shows that there is a serious literacy gap among people of different stratum. It is also important to note the urban – rural literacy which also depicts a serious concern. In urban areas in India total of 84% and 68% in rural areas have been noticed till 2013[6]. Data processing, multimedia and the Internet are techniques sorted out and utilized by people. They are conveyed and utilized as a part of a specific social setting. They are deployed and used in a certain social context. The Internet is, however, a technical object, as it concerns communication modes between people as well as information circulation, storage, sharing and access. The internet is an adaptable procedure which can be spread, learned, changed and adjusted in a generally brief time. Its development can in this way turn rapidly in unexpected directions: as all systems, socially included, it can add to smoothing inconsistencies or to produce new disparities. In that way, since it permits new correspondence and association modes, data and correspondence advances are regularly exhibited as having the capacity to lessen a few differences. It is then attractive to believe that the technique will reduce the disparities. Yet disparities observed in access and uses are the continuation of pre-existing social disparities. Now, in an information based society, the internet's non-homogeneous distribution risks further increasing economic and social disparities.

Digital inclusion means paying proper attention to the social and cultural contexts and not merely to teach people how to surf the web or how to send e-mail. These are only the building blocks. We need to make a lot more than that to assure that excluded people can use ICT to expand their functioning and capacities to empower themselves and achieve a better life.

Finally, It is also becoming clear that the small community and local actors voluntary associations addressing these social exclusions are also in danger of exclusion from the information society for various reasons including law and uncertain funding, lack of awareness of the opportunities offered by these technologies and lack of technical expertise. Therefore only digital inclusion can eradicate the problem of social exclusion, only if it has adopted an inclusive agenda.

VI. DIGITAL INCLUSION, E LEARNING AND INDIAN DEMOCRACY:

The digital learning initiatives are quite new in India. It is only after the adoption of internet service in India in 1995 it has marked the starting of e learning education[7]. It has further given momentum by the then Unite Progressive Alliance (UPA) government and latter enhanced by the NarendraModi lead National Democratic Alliance (NDA) Government in the center. The brief development has been analyzed as under.

i) The E learning Initiatives in India during Congress Regime:

After the adoption of the Internet it is the Congress (I) led UPA government which adopted many important plans to popularize E – learning in India. The UPA Government launched National e-Governance Plan (NeGP) in 2006[8]. The vision of the plan was to "Make all Government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realize the basic needs of the common man."[9] It shows that the government had a governance policy (also including education as a key indicator) socially inclusive. This plan also emphasized on Common Service Centers (CSC).

Followed by that, under the auspicious of the Planning Commission of India a committee on Vision 2020 for India was formed in the beginning of this millennium under the chairmanship of Dr. S.P. Gupta[10]. Education is one of the main thrust areas of this report. Greater coverage and better quality education at all levels ranging from literacy to advanced science and technology is the essential prerequisite for the following reasons:

- v   Raising agricultural productivity and quality of industrial production,
- v   Spurring growth of India's budding Information Technology and Biotechnology sectors,
- v   Stimulating growth of manufactured and service exports,
- v   Improving health and nutrition and
- v   Quality of governance.[11]

The report calls for coordinated endeavors to abrogate illiteracy, and to extend the entrance to higher education and professional preparing through both conventional and non-conventional delivery system. Recent twelfth five-year Plan from the Planning Commission of India has additionally maintained speedier, comprehensive and more practical development in the field of education achievable by boosting the advancement frameworks alongside solid sponsorship from substantial associations and funds[12].

ii) NDA Government's Initiatives:

The Digital India programmed is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. It was launched by our present prime minister in July 1, 2015.[13] The three pillars of the Programme are – Boradband Highway, Universal Access to Mobile Connectivity and Public Internet Access Programme, which will facilitate e-learning in India.

During the last budget (2016-17) it is marked by the allocation of funds to launch two schemes: 'National Digital Literacy Mission' and 'Digital SakshartaAbhiyan'[14], in support of digital literacy (knowledge to handle digital devices like computers, tablet PCs, smartphones, and internet usage) additional rural

households. If these efforts become the launch pads for the presence of digital paraphernalia in every Indian rural household, 'Digital Inclusion for all' would not be a far-fetched dream. The NDA government also engaged in encouraging on new e-learning programmes such as – Massive Open Online Courses, massive stress on Inflibnet, e-Kalpa, SAKSHAT, National Digital Library, E-Yantra, emphasize on distance Education etc[15].

VII. PROBLEMS:

There are several problems in e-learning in India which hinders it to resolve social exclusions are as follows –

1. Economical consideration: Economical problem is one of the major problems towards the success of the plan because the cost of data is so high in India. Though the programmes ensures us to provide data service at low rateto all citizens. Still there is no problem regarding economical services but it needs constant attention.

2. Accessibility in villages: People's awareness in the village is another major problem. Village people of India do not think about the e-system in any sector. They fundamentally keep confidence upon the printed copy or printed material framework. Positive outlook of the village people is necessary to succeed the programme. Educated youths of the village should take the responsibility of awareness. It is an important fact that in a common parlance distance mode of education has been considered as a second choice for the people in rural area.

3. Technological Barrier: Severe limitations of technology infrastructure also serve to hamper enthusiasm and the widespread use of e-learning technologies. These restrictions range from inadequate network speed and bandwidth capacity to incompatibility across different platforms and between different content materials.

4. Social Handicaps: In India another important problem in imparting e – learning in social inclusion are the social handicaps rooted in Indian society. The severe lake of information awareness, huge cultural differences, strong sentiments of regionalism, increasing poverty, moribund economy in many rural areas, gender gap[16] have all contributed in social exclusion which further generated digital exclusion. It is a fact that many rural and frontier regions of India still lacking behind in e-learning and implementation of ICT tools because of these social handicaps.

VIII. SUGGESTIONS:

To resolve the problems the following suggestions are proposed:

a) Self Learning: Self learning is an important ways to make the e learning process a fruitful business. Important source of learning digital skills is 'learning by trial and error' methods or what Van Dijk called '***do it yourself approach to develop digital skills***[17]'. A large portion of our policies are guided by this assumption that making ICT available to all segments of the general public will connect the digital disparity, as individuals will get digital education through experimentation strategy. However, it has been found that disparities of aptitude won't disappear and disadvantaged users may find themselves in a vicious cycle of lack of skills leading to irregular use of Internet. It is also to be noted however that Self-learning generally does not reduce inequality in digital skills.

b) Virtual Classroom Approach: Virtual classroom approach[18] is promising and it should be deployed to get the privilege of interaction with other learners and teachers for resolution of doubts and development of competitive spirit in the remote learner. Tests should be conducted at regular intervals and test score comparison of the learner with other students should be displayed to assess the performance. Virtual classroom indeed could provide a platform for group projects among students to develop their

behavioral and communication skills. College credits should be rewarded to the online students similar to those who pursue formal education for employment.

c) **Social Solutions to Social Problems:** Social practices interact with technology, and one influences the other. If we want to have a really inclusive information society, we need to address the social problems that have turned people into digitally excluded, and not only consider the ones derived from lack of structure. When digital divide is considered, not everyone has been created equally. There is an important qualitative difference between someone which is already excluded and need to understand and use ICT and someone which only needs some formal knowledge to jump in. This is a general principle which we think should permeate any type of e-learning strategy directed to e-inclusion. Otherwise it may become a total failure. Hence a reformist outlook towards the social structures of exclusion is highly recommended.

d) **The "Widening Participation" Agenda:** This is a UK based agenda which can be summarily applied in India[19]: This agenda has been applied in e-learning by the U.K. government's to increase efficiency and reduce costs as well as widen participation in U.K. higher education to close to U.S. levels. The declared target is that 50% of the U.K. population should have some kind of higher education experience by 2010. This target is set in part by economic considerations; as conventional industries disappear or are transferred to the developing world the U.K.'s future is seen as lying in a better trained workforce working in high-tech industries. In addition, the current Labour government retains enough of its social democratic origins to want to address a "social justice" target and e-learning is seen as an important resource for achieving that target.

IX. CONCLUSION:

Digital divide is an extension to the social disparities the society have. To wither away there must be some cohesive effort from the government side and proper research must be done to make E – learning and ICT tools available to all sections of the society. It is also imperative to conduct area based and risk based research on the disabilities people specifically have in an area. As opined in the beginning we cannot make a water tight compartment between digital tools and society as both them are linked with each other, therefore a proper linking of ICT with Culture and social status is imperative. Looking at the necessity the e-learning must be participative, peer to peer constructed and most importantly it should be blended so that the digital barrier can be completely dismantled.

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COLLECTION AND ORGANIZATION DEVELOPMENT IN ACADEMIC LIBRARIES OF SELF FINANCED COLLEGES IN UP *A OVERVIEW*

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Abstract : *This paper will study about the collection of libraries of self financed colleges. In today's scenario productivity of academic colleges are moving down towards. Mushrooming of self financed colleges reduced the quality of education. This paper will study about the implementation of ugc and university norms in colleges. It will check the current status of libraries. With the help of questionnaire a study will be conducted in selected state universities affiliated self financed colleges. It will take 13 colleges of each state university. Study will be included about the staff , their qualifications , salary status , collection of books, their organization and management, Impact of digital environment in collages , user environment , book purchase policies .*

KEYWORDS : State Universities, Academic Libraries, UGC, AAACR II, CC, CCC, DDC, CAS/SDI, self financed colleges, Collection Development , organization Development , purchasing policies.

INTRODUCTION

Library is the heart of any academic institution. Libraries are rightly called the storehouse of valuable. Knowledge in the form of valuable books, journals and other information materials. The colleges Libraries are the fulcrums of college education Libraries are mainly entrusted with a host of pre-determined roles, viz, acquirer, organizer, preserver, retriever and disseminator pertinent information to their clientele. Libraries are the repositories of the wisdom of ages stored in the form of recorded information for use of present and future generations. The survival and existence of academic libraries, its relevance and its suitability to the objectives of the organization are totally dependent upon the adoption of latest technology by the Libraries. There is no doubt that the information and its retrieval and storage are becoming faster day-by-day, but it should also not be for gotten that it is becoming costlier also like all other fields and jobs the position change in the post two decades. In modern time Libraries are facing a number of challenges due to increased and comprehensive information needs, explosion in information and documents demands for modernization of libraries and information services. There has been various applications of IT in Libraries and developed of IT infrastructure, database creation, and electronic collection building for the better functionary of Library Library collection has ranged from tablets to papyrus shuts, paper documents, and silicon chips, optical and magnetic disc and so on. In every age libraries have used the latest technology. The current trends in digital environment suggest a complete revolution in the status of collection development. The book collection in college libraries should be adequate, comprehensive and current to meet the educational needs of students & faculty. It should include all recommended or prescribed text books, journals, magazines etc. Besides the collections should also included standard reference books, career oriented competitive examination books, recreational and general books. Generally the college Libraries maintain separate collections books bank scheme. In advance information environment, multimedia CD Rom collections are essential for college Libraries. They should also provide net based access to global

information. And thus conventional library can be converted into dynamic library that can become a more useful component of information transfer system.

STATEMENT OF THE PROBLEM

The problem undertaken for the study is " **Collection and organisation Development in Academic Libraries of self financing Colleges in UP: An overview"** To provide better services it is extremely important to develop human resources for the better management of library. In modern time libraries are facing a number of challenges due to increased and comprehensive information needs, explosion in information documents demands for modernization of libraries and information services. The information materials are increasing exponentially in all areas and the users need to access these materials fast even instantly to satisfy then just for information of serve this purpose there is an important need to develop an effective organizational structure in the library.The librarian should be well versed in the selecting and acquisition of documents and their preservation. The above topic is taken to gain knowledge about the actual position of degree college libraries of UP and challenges faced by its managing staff.

SCOPE OF THE STUDY

In this study an effort has been made to know about the establishment, organization collection management, working and development of College libraries. The study has been conducted by employ the proper means of the collection of data by conducting a survey. For this purpose a questionnaire has been prepared after due consideration. So that all the related data is made available accurately and effectively the study is based on various aspect & related with the nature and functioning of college libraries. Analysis has been made after collecting and studying the date comprehensively and some suggestions have made for the improvement and better functioning of these libraries so that their could play an important and constructive role in its chosen field.

HYPOTHESIS OF THE STUDY

In concern of self financed degree college Libraries of UP following hypothesis are taking for study

1. These colleges have lack of staff in their libraries.

2. The staff members are not as per UGC norms and they will not be library professionals.

3. Salary status of the library staff of self financing colleges in UP will be very poor. It will not according to the UGC norms.

4. Ratio of library books as per students studying in colleges will be very poor and books are not as per latest syllabus.

5. College libraries expenses very poor amount on the journals /magazines.

6. Due to lack of professional staff, classification of books in self financing college libraries will be very rare.

7. Cataloguing of library collection in self financed degree colleges will be very poor.

8. Self financed degree college libraries will not providing documentation services.

9. There will be lack of availability of modern equipment like computers, photocopiers etc.

10. The collection which available in colleges libraries are not in use. Libraries are like storehouse of books.

11. Self financing degree colleges will have no any collection development policy.

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve a research problem. It may be understood as a science of studying how research is done scientifically. Research is a rational process aiming at discovery of the relationship among the phenomena. It is the way to systematically solve the research problem. In this research we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. This means that it is necessary for the researcher to design the methodology for his problem as the same may differ from problem to problem. He has to specify very clearly and precisely what decisions he selects and why he selects so that others can evaluate them also.

Research methodology is wider than that of research methods. We can say that research methodology has many dimensions and research methods to constitute a part of the research methodology. Whiles describing the research methodology used to search answers to research questions an attempt has been made to describe about acquisition, cataloging classification etc. selected for analyzing preferred, questionnaires and schedule used to called date procedure for data collection and techniques used to analyze and present the data.

DESIGNING OF THE QUESTIONNAIRE

The draft and design of question was an important controlling factor. Before planning the questionnaire it is essential to set out in details the ideal data which one desire, the answer to the study. Questionnaire is a tool to collect the data from a diverse large and widely scattered group. It is called the heart of the survey operation. The important step in this method is to take care in the design of questions. question is given to the person concerned and the opinion or factual information is requested. The questions are formed in such a way that the relation of one question to another can readily be apparent to the respondent. Question sequence must be clear and the respondents have to answer the question on their own level. In this study all those have been well taken care of.

The study required data on the current status and conditions of the Colleges libraries in UP. The descriptive survey method was used for the systematic collection, analysis, and interpretation of such data. This method can save time and energy. In order to do so an structures questionnaire instrument developed for the survey contained multiple item questions which were design to access the current libraries in selected self financed colleges of UP. The questionnaire considered of approx 30 questions focused on Administration, organization, collection equipments. Questionnaire is given in annexture 1.

COLLECTION OF DATA

 Data was collected from self financed colleges of ten state state universities(list attached in annexure 2) of Uttar Pradesh. Only those universities are selected which provided academic degree in their affiliated colleges from urban to rural. Central universities, technical universities, special universities, private universities, and deemed universities are not included in this study. Thirteen colleges was taken from each university which make 130 questionnaire. A well structured questionnaire was designed, which is attached in annexure 1. 30 questions are included in this questionnaire. Questionnaire was send by post, email and on personal level. out of 130 only 110 questionnaire returned. This whole study is based on these questionnaires. In this study it is tried to take maximum number of colleges from rural area.

DATA ANALYSIS

After collection of data regarding a research problem, the data have to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. It is necessary that the data is analyzed properly and statistically valid conclusion are drawn. Otherwise the

survey report is likely to degenerate into a collection of opinions without any worthwhile analysis.

The analysis of data requires a number of closely related operations such as establishment of categories, the applications of these categories to raw data through coding tabulation and then drawing stateside inference. Certain steps such as the tabulation of data and the of central rending and measures of dispersion of regarding of the range of observations are adopted for the service analysis of data.

%	No of colleges	Designation
22.72	25	Librarian
4.54	5	Assistant Librarian
1.81	2	Technical Staff
38.18	42	Supporting Staff
70.9	78	Non Professional Staff

TABLE 1

Table - 1 furnishes information regarding the post of main functionaries of libraries under references such as librarian, assistant librarians. Only 25 colleges (22.75%) have regular librarian which is very unfortunate for libraries future. 5 colleges (4.54%) are appointing assistant librarians due to their huge collection. 2 colleges was appointed technical staff for classification, cataloguing and other activities. 42 Collages (38.18%) was appointed supporting staff to run the libraries. 78 colleges (70.9%) have no any professional staff for library activities.

%	No of colleges	Qualification
00	00	Phd/NET
18.18	20	MLIS
9.09	10	BLIS
72.72	80	Non Professional

TABLE 2

Table -2 denotes about the qualification of library staff of self financed degree colleges of UP. No any librarians have Phd/NET degree, which is essential qualification for college librarian. 18.18% librarians are Master in Library and Science. 9% library staff have bachelor degree in library and information science. 80% library staff have no professional degree who are working in college Libraries.

%	No.of colleges	Salary Amount
43.6	48	2000-5000
31.81	35	5000-8000
16.36	18	8000-11000
6.36	7	11000-13000
1.81	2	13000-16000

TABLE 3

Table - 3 shows the actual salary status of those people who are working in college Libraries. 43.63% colleges are providing less than five thousand to their library staff which is very less. 31.8% Colleges paid less than eight thousand remuneration. 16.36% Colleges provide less than eleven thousands and 6.36% paid less than thirteen thousand. only 1.81% paid less than sixteen thousand . No any college Libraries staff get more than sixteen thousand which is very less than UGC salary norms.

%	No.of colleges	No.of books
24.54	27	>1000
32.72	36	1001-3000
29.09	32	3001-6000
10.90	12	6001-9000
1.81	02	9001-12000
0.90	01	12001-15000
00	00	<15000

TABLE 4

Table 4 is the analysis about collection of book in self financing degree colleges librarians 24.54% college have less than 1000 books which is curse in the name of library . 32.72% colleges 36 have less than 3000 books and 29%Colleges have less than 6000 books . colleges 10.9% have less than 9000 books .only colleges 1.8%have less than 12000 books and one college 0.9%have less than 15000.

No.of colleges/ Online journals	No.of colleges/ Seminars	No.of colleges/Bound volumes	No.of colleges/Journals	Quantity
3	21	7	63	>5
00	00	00	8	6-10
00	00	00	00	11-15
00	00	00	00	16-20

TABLE 5

Table - 5 shows the collection of journals, bound volumes, seminar/ conference proceedings and online journals. 53 colleges are purchasing less than five journals/ magazines for their libraries and 8 colleges subscribe less than 10 journals/ magazines. No any college Libraries purchase more than 10 journals / magazines for the libraries. only 7 college libraries have less than 5 bound volumes. 21 college libraries have less than five seminar/conference proceedings available in libraries. only 3 colleges have online journals which is less than five.

%	No. of colleges	Classification system
13.6	15	DDC
00	00	CC
00	00	UDC
86.36	95	No system

TABLE 6

Table 6 denotes the classification system adopted in the college Libraries. 13.63% are adopting Dewey Decimal Classification System. No any college are using Colon Classification or Universal Decimal Classification System for classification of library collection. 86.36% have no any classification system.

%	No. of colleges	Cataloging system
00	00	ALA
10	11	AACR-II
00	00	CCC
90	99	No system

TABLE 7

Table 7 shows the cataloging system for collection in libraries. No any libraries are adopting ALA or CCC. 10% colleges are adopting AACR - II cataloging system. 90% colleges have no any cataloging system in their libraries.

%	No. of colleges	Documentation services
7.27	8	Reprography
4.54	5	CAS/SDI
2.72	3	Online services

TABLE 8

Table 8 denotes the documentation services provided by the college libraries.only 7.27% colleges are providing reprographic services in their libraries. 4.54% College libraries providing current awareness services or selective dissemination services to their users. No any other documentation services are providing

%	No.of colleges	IIT tools
47.27	52	Computers
10.90	12	Software
00	00	Digitised collection
00	00	Membership of library networks
00	00	OPAC

TABLE 9

Table 9 shows about the information technological tools used by the library and librarian. 47.27% College libraries have separate computer system for libraries. But it uses only for stores of data. 10.9% College libraries are using library software. Mostly these software's are customized and locally developed. No libraries have any type of digitized collection. College libraries have no any membership of any library networks like DELNET, INFLIBNET etc.

%	No.of colleges	Users
79	87	Faculty members
00	00	Research scholars
56.3	62	Students
21.9	23	No users

TABLE 10

Table 10 tells us about the nature of users who visited libraries of self financed college.Faculty members are using libraries in 79% colleges. But no any research scholar are enrolled in libraries for study. In 56.3% Colleges students are enrolled in libraries for study. 21.9% Libraries are always closed.

%	No.of colleges	Purchasing
6.36	7	Every year
10.90	12	Every two year
72.72	80	Only for inspection
10	11	Never

TABLE 11

Table 11 shows that what is the status of book purchase policies in these libraries. 6.36% Colleges are purchasing books every year but in very less number of quantity. 10.9% Colleges are purchasing after a gap of one year. 72.72% Colleges are purchasing books in libraries only for inspection purpose. 10% colleges never purchased any book after the beginning of library.

FINDING OF THE STUDY

The test of hypothesis of the present study has covered 11 aspects.

1. The first hypothesis is pertaining to the library staff. It found that 70.98% libraries have no ang regular staff which shows the poor condition of self financed degree college libraries. These libraries are only open on the time of team visit of universities. 22.72% colleges was appointed librarian only to secure books.

2. The second hypothesis is about the qualifications of library staff in self financing degree colleges in UP. No any college library has appointed librarian according to ugc norms. 18% colleges are appointed MLIS degree holders on the post of librarian. It is very unfortunate that 72% libraries are running by non professionals.

3. The third one is related to the salary states provided by self financing colleges to their library staff. It found very poor 75% library employees are found less salary that MANAREGA labour which is another unfortunate position.

4. The fourth hypothesis is about to book student ratio according to university or UGC norms. 24.54% colleges have less than 1000 books These libraries never open for users. Even students of the colleges don't know about the libraries and library services. 32.72% libraries have less than 3000 thousand collection which serve only their faculty members not students. But near about 40% libraries issue the books to its students and faculty both.

5. The fifth one is about the journals, bound volumes, seminar/ conferences and online journal collection. 53 College purchased less than 5 journals/ magazines for student and staff. Eight college libraries have less than 10 journals/ magazines for students and faculties. only 7 colleges have bound volumes of old journals but again it is very less number. 21 college libraries have seminars/ conference proceedings which is less than five was putted in the libraries for use. only 3 colleges have few online journals.

6. The sixth hypothesis is about the classification system adopted in the libraries to classify the documents. 13.63% of colleges have adopted Dewey Decimal Classification System in their libraries to classify the document but documents are only classify they are not putted according to the class numbers in library shelves. No any library using Colon Classification or Universal Decimal Classification System in their libraries for classification of books. 86.6% colleges have no any classification system.

7. The seventh hypothesis of the study is about the cataloguing system adopted in college libraries. 10% Colleges are doing cataloging according to AACR- II. No any other cataloging system is adopted in any college library. 90% college libraries have no cataloging of their collection. Lack of collection and lack of staff are two basic reason behind it.

8. According to eight hypothesis no libraries will providing documentation services like CAS/ SDI but data got a little bit of change. 7.2% libraries providing reprographic services in their libraries. 4.5% libraries are providing CAS/ SDI services to its users. 2.27 % libraries providing online services to its users.

9. In this digital era self financed colleges are very backward 47.2% college libraries have computer

systems, which is only to show the inspection team not to use.10.9 libraries are using library software to store data but they are not using any other services like issue/return, acquisition, general circulation etc.Their is no digitized collection in college libraries.Neither colleges are using OPAC nor any membership of institution like DELNET,INFLIBNET,ILA etc.

10. 20.9% college libraries have no users these libraries are just like store house of the book 79% college libraries were used only by facility members of the college for the textbook purpose.56.3%college libraries are used by students these all data shows that use of collection in libraries are very poor.The purpose to teach student is just not on ground.

11. The 11th hypothesis is about the book purchase policies of libraries 72.27% libraries are purchasing the books only when university team visits to the college for inspection.It is very unfortunate that 10% libraries never purchased books from the establishment of libraries.10.9% libraries are purchasing books according to the needs of the users time to time. These libraries have no certain purchasing policies of book.Only few colleges are purchasing books every year according to changed syllabus.

SUGGESTIONS AND RECOMMENDATIONS

1. Library professional should be appointed in libraries.

2. Non Professional should not be appointed in libraries.

3. Universities should appointed a separate committee to observe the libraries of their affiliated degree colleges.

4. Approval of librarian should be done by university like teacher's approval.

5. Universities should consider the UGC guidelines about the libraries which provides equal status to teachers and librarian.

6. Universities should appoint a separate committee to regularise the salary status of the librarian and library staff to their affiliated college.

7. Higher education department of state should take initiative for the betterment of college libraries of self financed college.

8. Librarian should prepare collection development policy manual for proper guidance of the total collection development process.

9. Library committee should be appointed by college and its meeting should be held every year.

10. College should make provision to purchase journal/magazines regularly.There should be a separate budget provision for it.

11. Technical experts for classification and cataloging should be appointed.

12. Computer system should be made compulsory for storage and dissemination in libraries in this IIT era.

13. User orientation programs should be conducted by libraries for student and faculty both.

14. Internet facility should make available in libraries.A lot of study materials are available on internet at cheap rate or free.

15. A separate budget allocation for libraries from college budget.

16. Books should purchase every year according to the latest syllabus.

17. State government should donate some funds for self financed colleges.

CONCLUSION

In UP maximum number of collages in the state are governed by the private management.Their are no fixed staff formula here.The appointments in libraries are made according to the need of individual colleges. The number of staff ranged from 1 to 10. So for as the status of the librarian and other library staff is concerned. They have always been treated as non teaching staff. The librarians have never been treated as teachers as UP university / college status does not provide them such a status as recommended by the central government.

In colleges, education's primary objective is to cater to the needs of the students interested in higher education. A college mainly students for higher learning where scholars and faculty members are head, students are the body and library is the heart. A library is a centre where collection of documents is done to promote their use and also facilitate information dissemination.The fundamental role of the library is to import education and also to support and promote the teaching means of the facility, research, extension and publication programs.

This study deals with the analysis with regard to assessment of libraries efficiency and effectiveness in terms of collection development, organization and services by the libraries,acquisition library and the users, particularly the faculty members and students quality of higher education fall down in UP due to these self financing colleges. These colleges are not following the UGC standards the department of higher education of uttar pradesh as well as university authorities are responsible for these irregularisation it is observed in this study that position of libraries is very poor in self financed colleges of UP.It is found that colleges are running without libraries.Some libraries are the curse on the name of libraries some books are put in few almiras in random manner and it is called libraries. So it is very necessary for government to take action against these colleges.

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CALL FOR TRANSFORMING LIBRARY: SOME STRAY OBSERVATIONS AND THINKING

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Introduction

While going through the main theme and subthemes of the this international conference, I found all the topics equally important and timely. In fact, there is hardly any recent topic uncovered. Rightly thought, that if transformation is to be brought, it has to be brought at all levels from collection building to processing, organization, dissemination and generation of services. All contributors might have been allotted respective topics by the organizer, however I was privileged having giventhe autonomy to make choice of writing on any of the topics. This made my choice more complex under the circumstances of shortage of time and preoccupationin other assignments. I could write a few pages worth or not so worth on every topic. Then I thought, let me put some stray thoughts before this august international audience on the theme of the conference that may generate more thinking on contemporary issues in the profession. When we think of innovating or transforming library, it is imperative to review the present status and identify collectively where further changes can be brought in. I, being in the profession for many decadeshaving gained some working experience which I would like to share with other professionals with this understanding that our collective thinking may bring better results by innovating something new which may interest our users. I believe that every experience good or bad is educational. The present digital age is both with challenges and opportunities to our profession as all of us know. The challenges and the opportunities are well placed before us to be met and availed respectively. What could be more challenging than tothink and discuss about 'Transforming Library'. Techno-Savvy new generation of librarians has the potential and capability if not to transform, at least can add more value to the profession by improving andinnovating the services and compete doing better than other service providers.*'Transforming library'* means to me restructuring and evolvingnew model(s) over the present structure of hybrid nature of libraries. We may realize that bringing radical changes is neither possible nor so much required. Aim is to provide effective library services to the utmost satisfaction of the user and prove that there is no substitute to libraries and has the potential to dobetter which other service providers including search engines cannot.The foundation and the roots cannot be changed but can only be further strengthened and nurtured.

Changing scenario

Libraries did not change in their basic philosophy of service to the users. Change is in techniques and tools which will go on further changing from time to time. Therefore, status of libraries would continue to be transitional. As soon as we settle with adoption of today's available technologies, a few more are there at your door to knock, calling for application. How long 'library would continue to change the existing technologies? Improved technologies are always likely to come on our way to replace old ones. We know how difficult it is to adopt and adapt to these frequent changes. CD ROM technology which revolutionized our services, we adopted that successfully, then came Internet, WWW and Google Guru,

we are making use of all these technologies. Changing nature of libraries will continue but basics cannot be transformed. It cannot be ruled out that our old literature published during 19th century or earlier has no relevance today in this technological age. Problem is that we have to live in the present digital age and adapt with our old background and professional knowledge being taught under LIS education system in place. Librariesare heading towards more and more digital which includes creation, acquisition and use of digital resources which need special skills and competence. Teaching departments perhaps have a big challenge today as to what curriculum should be adopted; entirely new or combination of old theories and new technologies applicable in libraries. Problems are being faced both by teaching and practicing professionals, but definitely more in libraries. Solution lies in collaboration of teaching community, practicing professionals, publishers, aggregators, and above all the users.

User attitude

Expectations of users are high at times, but with passive attitude and non-participative nature in library activities. However, advocates of participatory librarianship plead for involving users in all activities of librarianship right from creation to dissemination and use of information and information products. But the pertinent question is where are such users and how libraries can involve them in such activities. Sometime they exclusively depend on libraries, sometime least, sometime not at all. Despite, such unpredictable attitude and behavior, libraries have to be as close to their customers as possible and feel their nerves properly. Our clientele is too diverse too difficult to identify and meet their needs. We should admit that our customer service needs a lot of changes and improvement despite the fact that our Library & Information Science Departments worldwide have done a lot of research on user studies. In India, maximum PhDs have been produced on user studies and this trend is still going on.

Innovation, constant changes, experimentation are not options but compulsion to survive failing which other service providers may leapfroglibraries.Our jobs are becoming tougher and tougher day-by-day, therefore something new has to be evolved to attract users to use our available resources.

Where are we today?

Libraries have been changing from time to time responding to every call of technology. Some have done expected advances, some could not do so much due to various reasons. It is important to note that despite passive attitude of users and the administration, libraries still have been progressing. Professionals are left with no enthusiasm in this environment. Services so generated are under used, even unknown to most of the usersand are unaware about the resources available to them.There is hardly any motivation and incentive for professionals. It is difficult for libraries to build good and representative collection without the active participation of communitywhich is basic function of every library.As stated above that dependence of users on libraries is declining in view of information available on Google or any other search engine. First preference of users is to search on Google.They may go to library resources in case they don't find required information on search engines. Millions of resources are available on various websites and search engines, which take library users away from the libraries. All we need is to do some introspection and visualize what is to be done and perform better.

Where we would like to be

What is our mission? Our role should not only be important but indispensible. User dependence on libraries must be restored as it used to be in the absence present technology. Think on the following issues and decide as to what can be transformed, innovated, modified and improved. Most of the libraries are already on these jobs, nevertheless reviewing and revisiting them may be of worth consideration.

i) Review existing operations and services.

ii) Find the gap between services being offered and customers' satisfaction and use.

iii) Again go to your clientele to fill up gap.

iv) Make necessary innovations, modification improvement based upon the findings and your perception and future vision.

v) Generate valuable services that can meet needs, wants and demand of your immediate users.

vi) Create more and more quality digital contents.

vii) Manage and Integrate all resources under single interface.

viii) Make all services web enabled on library websites or library portal.

ix) Provide all services on preferred devices of users wherever they are.

x) Apply marketing approach to advertise your services.

xi) Be always close to your customers and develop harmonious relation with them as emphasized by S R Ranganathan in his laws and other writings.

Transforming What?

We may recall again and again and quote Ranganathan's laws which will not be out of context while discussing any one of the topics of this conference. The simple messages contained therein will never lose their relevance and their fulfillment will continue to be a challenging task. I often think that technology entered our profession as commandments in compliance to these laws. Technology says, I am here and would be ever there to help your professionals in achieving their changing goals. These messages are concomitant to 'transforming library'. What is to be transformed and innovated? Our physical landscape has already been changed to digital space, Libraries as an institution has also been de-institutionalized. Our basic resources have multiplied that are coming in different formats and typeswhich are to be acquired, processed and managed for easy access. Ownership is being replaced with accessibility, etc. Who brought these transformation, is the question before us. We the professionals, or the users, may be none of them. It might be the impact of technology alone which itself forced us to adopt and apply, that resulted in new services and dimensions of the profession. What are the contemporaryareas where we need rethinking to bring transformation. Transformation for me is to bring changes in exterior structure without disturbing the basics. Our basic philosophy is to provide better and better services. Some transformation is required in the following areas in particular:

i) Leadership

ii) Library staff

iii) Users.

Transformation of leadership is prerequisite for all other transformation and innovation. If leadership does not want to change, nothing will change. Leadership has to be visionary, innovative, receptive and enthusiastic to bring changes wherever required. He also has to make his staff willing who will deliver the goods. Equally important is to transform your user, some of them may be non-user, some passive and some active and potential keeping in view that whatever is being done, all is for them only.

My experimentation

Creation of digital content

All libraries are launching digitization projects at small or large scale. Mission is to create more and more digital resources. Libraries are confronted to make right choices of material to be digitized. What is important and useful to be digitized are under copyright restriction. In a knowledge society, knowledge is expected to be available and accessible to all. But fact is that your own publications which were written

and published at the cost of the institution is neither available to the authors nor to the institutions. Libraries were enthusiastic to build institutional repository, but I doubt the success of any of them. I happen to be associated to develop digital repositories in three universities. Snapshot of Sikkim two university repositories are given below:

Sikkim University

Community in NEHU Digital Repository

· Administrative Documents	2816
· Central Library	2499
· Department of Anthropology	189
· Department of Biochemistry	262
· Department of Biotechnology and Bioinformatics	33
· Department of Botany	466
· Department of Chemistry	500
· Department of Commerce	60
· Department of Economics	233
· Department of Education	64
· Department of English	84
· Department of Environmental Science	163
· Department of Geography	111
· Department of History	68
· Department of Khasi	118
· Department of Library & Information Science	218
· Department of Linguistics	20
· Department of Mathematics	40
· Department of Physics	251

·	Department of Political Science	90
·	Department of Sociology	31
·	Department of Zoology	320
·	Examination Question Papers	46
·	NEHU JOURNAL	159
·	Thesis and Dissertation Digitized	1131
·	Administrative Documents	2816
·	Central Library	2499
·	Department of Anthropology	189
·	Department of Biochemistry	262
·	Department of Biotechnology and Bioinformatics	33
·	Department of Botany	466
·	Department of Chemistry	500
·	Department of Commerce	60
·	Department of Economics	233
·	Department of Education	64
·	Department of English	84
·	Department of Environmental Science	163
·	Department of Geography	111
·	Department of History	68
·	Department of Khasi	118
·	Department of Library & Information Science	218
·	Department of Linguistics	20
·	Department of Mathematics	40
·	Department of Physics	251
·	Department of Political Science	90
·	Department of Sociology	31
·	Department of Zoology	320
·	Examination Question Papers	46
·	NEHU JOURNAL	159
·	Thesis and Dissertation Digitized	1131

First and foremost problem is to establish a good digital lab, which is not affordable to all libraries. This is followed to decide what to digitize and why. Though it is useful to digitize all possible resources, but right priority and choices have to be taken, considering many factors. Regarding developing institutional repositories, which is a common preference have many problems which we may not perceive in the beginning. Some may think that faculty would themselves upload their publications and extend their all possible cooperation. The reality is that most of them are unwilling to participate due to some or the other reasons, predominate among them is copyright issue. I could only succeed due to my personal contacts with the faculty after a lot of discussion and persuasion. I thought of arranging the publications in the following order:

    i)   Department (Community)
    ii)   Authors
    iii)   Publications

One can go to his or her department and click on it to reach all the authors of the department and find his or her name, on clicking on respective name, all publications are listed to browse and download.

Administrative documents of the University and other resources as displayed below were added in the repository. These were difficult to index due to their different nature. Integration of agenda and minutes of various meetings of the University like EC, AC, etc. required splitting and merging of relevant pages to combine agenda and the minutes together as expected to be at searching level. It was perceived that digitization of collection on North East which was readily available in the Library and in other libraries in Shillong should be digitized being main area of research. The same was taken up. All books were digitized

Discover

Author		Subject	
Bhattacharjee, J B	19	Assam	191
Gassah, L S	17	North East	130
Dutta, S	13	Meghalaya	112
Goswami, Shrutidev	11	Manipur	107
Nag, Sajal	11	Arunachal Pradesh	105
NEHU	11	North East India	84
Sen, Soumen	11	Tripura	71
Sharma, Manorama	11	Mizoram	64
Ghosh, G K	10	North-East India	57
Gopalakrishnan, R	10	Nagaland	49

Other initiatives
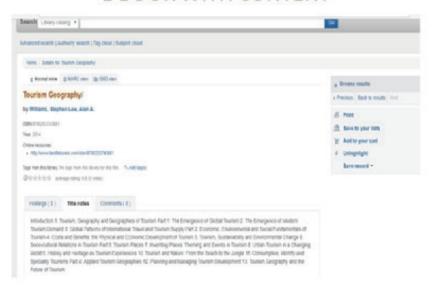
Like all other libraries, we also subscribe to more than 250 journals in printed format in addition to some e-journals. In view of under-use of the current issues, we thought it worth to digitize contentpages of all the volumes available in the library andmake the contents searchable in DSpace with cross reference from serial catalogue. Serial OPAC provides access to current and back volumes available in the library or at publishers' website. All e-books of different publishers have also been put on OPAC alongwith their searchable table of contents, Keywords and subject headings given by the publishers.

Integration on single interface

All resources of all types have been brought under library website developed in-house with all possible access points. Library apps also was developed to reach all users on their mobile with interactive facility with the users.
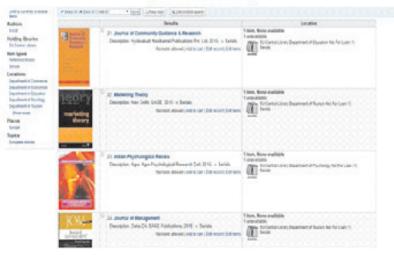
E BOOK WITH CONTENT

Serial OPAC

JOURNAL

Conclusion

Libraries have been accepting and managing frequent changes and responding to the calls of technology applicable in library organization and management. The progress is not discouraging. Libraries of 21st century have come a long way which are today with a new vision and look. Young library professionals are increasingly becoming IT-Savvy and improving their IT skill and competence. Some of them aredoing exceptionally well. Technology not only changed library scenario but society itself was massively effected and benefitted. The advent of IT proved boon for the professionwhich not only added prestige to the profession but also changed the old image of libraries and librarians. Nevertheless, profession has many challenges, and more to come in future also. Resources have multiplied; their selection, acquisition, processing and management are becoming increasingly complex. Publishers are bringing new upon new information products, but too expensive to afford by every library. It is a dilemma to the libraries what to select and de-select.There is a tough completion among publishers also who are bringing better and better products, hence choice is becoming difficult for librarians. Digital products and byproducts are growing at a fast speed. Even technology may not be able to have complete control over them. Library budget remains almost constant, or may have cuts without realizing the importance of these new resources.

Creation of digital resources is the priority of every library. All material cannot be digitized nor it is worth the efforts. Whatever is being digitized must be made effectively searchable, keeping in view all possible approaches of the users. Content analysis and indexing part is most important to organize resources for accessibility and use. This requires subject as well as professional knowledge, which most of us may not possess. Digitization, no doubt looks attractive, but the task is not easy. Every record to be put on web must be accurate and authentic. The process includes conversion of visible documents to virtual or invisible and then these are to be restored back with original and added features that could be conveniently used. Pre-requisites for transformation or innovations arethinking,reviewing and planning. To do so, seniors professionals shall have to come out from their routine work to innovate and search for better ways of doing thingswith the application appropriate technology. This requires transforming leadership and team work of motivated staff members.Mere planning is not enough, implementation and execution is equally important, in which willingness, involvement with mission by the competent staff is required. They should have the ability and skill to do things in a better ways.

Admittedly, some of the professionals might have improved their services by creating and adding valuable information products. Value is also measured in terms of demand and usage. My personal experience is thatthere is low or under-usage of even usefulresources. In such cases, efforts and money spent become counterproductive. Our customer services are not up-to the mark neither at teaching level nor in practice. If some innovative marketing strategies are adopted, we may be able to change our users' attitude and behviour and achieve our objective of being close to your users and know them better and give them better.

DIGITAL OBJECT IDENTIFIER: FINDING A NEEDLE IN A HAY STACK

Bharati Banerjee*

Abstract

The current digital environment has posed many challenges to librarians. The users, who have access to a plethora of information, expect to be able to link seamlessly through the maze of citations and full text across vendors and platforms. It is therefore essential for librarians to understand the behind-the-scene linking technology to better serve their clientele. The paper first discusses the background which necessitated the launch of the Digital Object Identifier (DOI) system that emerged as an international effort. It then explains the mechanism behind the DOI technology. The "plumbing" underneath DOI called Handle System technology is explored further. The Handle system acts as an automated directory in which DOIs are registered by their owners. This registration process enables the directory to route questions about an object identified by a DOI to the URL that contains information about that object. Due to their inherent stability, DOIs are well suited for providing direct and stable access repeatedly to library users. Finally, it outlines various applications of DOI system which enable librarians to bring the right information to the right user at the right time.

Keywords: Digital Information; electronic resources, linking technology, DOIs, Digital Identifier Systems

1. Introduction

Over the last decade, the world has witnessed phenomenal growth of the web and its impact on every aspect of human life and society in general. The growth rate of the Internet exceeds that of any previous technology. Measured by users and bandwidth, Internet has been growing at a rapid rate since its conception, on a curve geometric and sometimes exponential. The transience of Web sites coupled with the difficulty of discovering and retrieving their contents, causes serious problems for libraries and other institutions that attempt to integrate Web documents into local systems.

The transience of Web sites coupled with the difficulty of discovering and retrieving their contents, causes serious problems for libraries and other institutions that attempt to integrate Web documents into local systems.

Electronic publishing now extends beyond access to an electronic version of a printed article. Today, electronic objects include datasets, graphics, data visualization, videos, and other multimedia attachments associated with a particular article. With the mushrooming of these electronic sources, a need for new and more efficient ways to track these digital versions is experienced as never before. The Uniform Resource Locator (URL) is one solution to designate the location of a particular resource. However, as reported by <u>Arms</u>, "URLs are fine for locating digital objects, but digital libraries need names that identify the actual content, not merely the location where it is stored, just as we know a colleague by their name not by the

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number of their office (**1**)." The URL system works okay most of the time, except that URLs are changed, relocated, or deleted without notification. So, if the library were to change web services, its URLs might also change. The frustration of broken and nonexistent links is a common experience with dynamic URLs. It was increasingly perceived that many of the problems with the internet were due to the function of the URL, which was never meant to be an identifier but only to designate the location of objects.
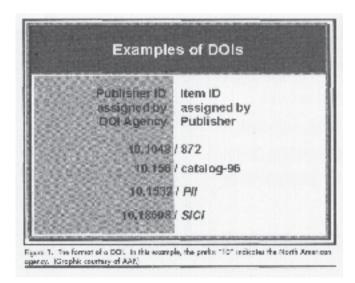
Electronic publishing produces classic dilemmas for publishers as digital materials can be copied easily and distributed freely, with or without authorization to any number of users. This involves considerable financial loss to the right holder and yet making the material inaccessible through encryption can lead to dissatisfaction among the potential users.

To combat this issue, the Association of American Publishers (AAP) set up the Enabling Technology Committee in 1994 to design a system that would protect copyright while facilitating commercial transactions. It soon became clear that "no single identifier is capable of serving all purposes and the committee finally decided that its first step should be the introduction of an industry-wide standard identifier that would facilitate the control of transactions and other operations, support systems interoperability between publishers and their clients, and serve as the underpinning of a workable rights-and-permissions-management system (**2**).

AAP in partnership with the Corporation for National Research Initiatives (CNRI) developed the Digital Object Identifier (DOI) system specifically for digital materials. The DOI System was officially launched in the second half of 1997 at the Frankfurt Book Fair and was demonstrated again at the October 1998 Fair. The IDF defines DOI as an entire system for "persistent identification and interoperable exchange of intellectual property (IP) on digital networks" (**3**). DOI is used to identify ownership and track the use of IP in cyberspace. DOI has been called "*the barcode for intellectual property*".

2 DOI

DOI consists of a unique and persistent identifier designed to provide a link between a user and rights-holder or distributor. It's like a universal accession number that travels with the work forever. Unlike URLs, DOIs don't change and go out of existence. In many cases, DOIs resolve the case of frustrating "File Not Found" and other error messages. DOIs can also be embedded as watermarks. All DOI applications are based on the following objectives: linking customers and content providers irrespective of location and facilitating e-commerce, identifying and protecting intellectual property, and creating a basis for an

Source: DOI: A new identifier for digital content by Berinstein, Paul
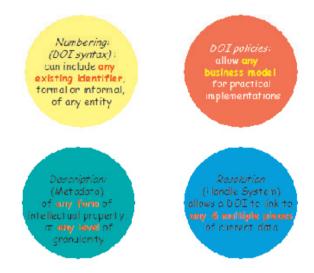
A DOI is made up of two components, a prefix and a suffix (4). In the above example, the prefix would be the information before the slash: 10.1048. The prefix itself is made up of two parts. The first part of the prefix is the first two digits, 10. This first part identifies this as a DOI. The second part of the prefix, 1048, is an assigned organization code. A DOI registration agency assigns this code to an organization. This value is unique to an organization, and all documents published by an individual organization will have the same prefix. The suffix of the DOI, 872, is a user-defined character string that uniquely identifies the resource. This string can contain any alpha numeric string so long as the data is unique to the organization. This could range from an ISBN to a local control number.

This is comparable to the URNs of the national libraries where the Library of Congress takes over the central administration but the individual national libraries allocate the URNs. The difference is, however, that DOIs are fee-paying Persistent Identifier systems since they were developed for commercial applications. The DOI Foundation is a nonprofit organization and merely recoups its costs by membership fees, the sale of DOI prefixes and the allocation of DOI numbers and in exchange provides a uniform technical and organizational framework with the DOI.

3 The DOI Mechanism

The "plumbing" underneath DOI is called Handle System technology (5). The Handle System, written in Java, can be freely down-loaded for research and educational purposes.

The DOI System has four components (6):

Source: http://www.doi.org/handbook_2000/intro.html#1.5

I. Numbering: assigning an alphanumeric string (a number or name) to the intellectual property entity that the DOI identifies. DOI is an implementation of URI (Uniform Resource Identifier) and URN (Uniform Resource Name). The numbering mechanism follows a syntax standardized as ANSI/NISO Z39.84-2000. The number may incorporate any existing identifier scheme (thereby retaining its construction, check digits, etc.) though for the purpose of the DOI System the string is "opaque" or meaningless. DOIs are not case-sensitive and have no fixed field length.

II. Description of the entity that has been identified with a DOI, through associated metadata. The DOI Metadata System is based on the <in*d*ecs> framework. The metadata available with an entity may be derived from many different metadata schemes; the metadata elements needed in a particular transaction

depends on the nature of the transaction; some metadata is likely to be common to all applications and essential for initial recognition. From these principles developed the concept of a small kernel of metadata (compulsory for every DOI) and extended Application Profiles (specific to a group of DOIs) as well as the view that these should be interoperable (so that DOIs and services can be mixed and used from various sources) through common controlled definitions in a structured data dictionary (which enables mapping of existing metadata schemes).

III. Resolution: the Internet technologies that make the identifier "actionable" on digital networks, by providing resolution services. These are currently based on the Handle System; a general-purpose distributed information system designed to provide an efficient, extensible, and secured global name service for use on networks such as the Internet. The DOI System is one implementation of the Handle System.

IV. Policies: the rules that govern the operation of the system in a social infrastructure. The social infrastructure defines the funding and ongoing operational requirements of the system as well as its day-to-day support and management.

4 The DOI Parts
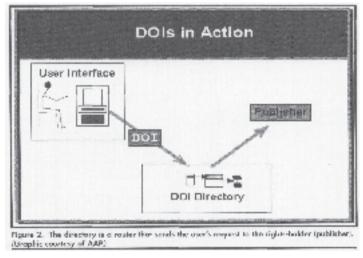
The DOI consists of three parts. The DOI system consists of three parts: the identifier, the directory, and the database.

i. The Identifier

The publisher or rights-holder assigns this set of characters that that identifies the content uniquely. The publisher determines how to formulate the suffix. The length of the number can reach 128 characters. Publishers can assign the DOI to any level of the work or product. Attaching a DOI to the whole does not preclude also assigning DOIs to the parts. For example, a book can carry a number, as can a chapter, illustration, or table.

ii. The Directory

The directory, which functions as an intermediary between the user and the publisher, links DOI numbers with the servers on which the actual content is held.   When a publisher moves, changes servers, or sells rights, the new location is updated in the directory, but the number remains the same, always attached to the same content.

Figure 2. The directory is a router that sends the user's request to the rights-holder (publisher). (Graphic courtesy of AAP)

Source: DOI: A new identifier for digital content by Berinstein, Paul

iii. The Database

The publisher/rights-holder maintains a database that contains the actual content, plus information about the content. What appears in the database depends on the decisions of the individual publisher. The publisher also maintains a response screen, which is the first thing that the user sees after clicking the on the DOI icon. The response screen might comprise the content itself, or it might contain information about how to purchase the content.

5 The DOI Applications

The DOI System offers a unique set of functionality:

· **Persistence** – DOIs resolve to information (metadata) about the identified object in a manner that persists over changes in location, ownership, description methods, and other changeable attributes. If the object ceases to be available, the DOI at minimum indicates a valid but now defunct identifier.

· **Interoperability** – Interoperability enables rich interlinking with related content, so as to increase the content's usefulness and visibility.

· **Extensibility** – In this context, extensibility means the ability to later add new features and services.

· **Efficiency** – Through single management of data for multiple output formats (platform independence) and class management of applications and services, efficiency is gained.

· **Dynamic updating** – Metadata, applications and services need to be quickly and easily updated.

6 Why DOIs are significant for Libraries?

Due to their inherent stability, DOIs are well suited for providing direct and stable access repeatedly to library users. For linking purposes, it does not particularly matter what the suffix looks like. Neither librarians, nor patrons need to construct these nor interpret them; the suffixes must simply be unchanging and available for copying (7). Commonly, several URLs are assigned to each individual DOI. This way, when the DOI is registered with the IDF, the current URL where the electronic document is stored is associated with that DOI. As that URL changes, the publisher can associate new URLs with the original unchanging DOI. When the DOI or a URL containing that DOI is clicked on, it will resolve to whichever URL is currently associated with the DOIs document by the current publisher.

The number of online resources that libraries provide access to is constantly expanding, and it is unreasonable to expect users to wade through dozens, or even hundreds of Web pages and search interfaces to find what they need. From the perspective of a user in an academic setting, a digital repository is just one of hundreds of databases that a library provides access to. However, a repository must also be searchable as part of existing collections as well as others that do not yet exist. This means that it must be able to not only to share information with other systems, but to deliver responses to live searches that can easily be interpreted so that it can be searched alongside other resources using federated search tools. Linking protocols help the user connect to a resource that has been identified. If a user locates an item that is in a subscription database, he needs to be redirected through a proxy server or other form of authentication. This can be accomplished with DOIs.

In Libraries, DOIs can handle a variety of applications including bibliographic control. DOI enables successful implementation of naming objects and treating content as information objects and intellectual content, not simply as packets of bits (8). DOIs are easy to use. DOIs can be cut and pasted like a URL It can:

· Take you to information about the item
· Take you to the full text or the full item
· Take you to other products sold by the publisher

·   Take you to related material

Another noteworthy contribution of DOIs to libraries is that DOI and OpenURL are complementary technologies and work together in several ways. Both DOIs and OpenURLs deal with "frameworks in which the four information-gathering demand-side activities (discover, locate, request, and access) can interoperate in increasingly end-user driven environments" (**9**). The OpenURL standard is designed to enable linking from information resources such as abstracting and indexing databases (sources) to library services (targets), The DOI directory itself is OpenURL-enabled so it can recognize a user with access to an OpenURL link resolver. When such a user clicks a DOI name, the CrossRef system redirects the DOI name back to the user's local resolver and uses the DOI name to pull metadata out of the CrossRef database to create the OpenURL targeting the local link resolver.

An OpenURL link that contains a DOI name is persistent in the same way a DOI name is. Publishers who use the CrossRef DOI system to identify their content, in effect, make their products OpenURL-aware.

7 Conclusion

In comparison to 1997, persistent identifiers have led to great progress in the field of the identification of online publications and their approach for permanent availability. Identifiers are an enormously powerful tool for communication within and between communities (**10**). An understanding of the basics of linking technologies such as the OpenURL and the Digital Object Identifier allows librarians to better serve their constituencies (**11**).The practice of allocating PIs by institutions such as publishers and libraries ensures a certain degree of quality and authenticity for online publications. Nevertheless, further developments are still necessary as well as greater dissemination and above all a standardization of PI systems, both for URNs and for DOIs. In order to make sure that we do not have to look for publications on the internet like the proverbial needle in the haystack, but that they can be found even in such an enormous haystack by means of persistent identifiers, a part should be played by librarians and information professionals in encouraging their wider dissemination, further development and standardization (**12**).

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DESIGNING OF LIBRARY SPACES FOR CHILDREN KEEPING PACE WITH THE MODERN TECHNOLOGIES: A STUDY WITH REFERENCE TO PUBLIC LIBRARIES IN GUWAHATI

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ABSTRACT

This paper briefly discusses about the planning and designing of spaces (both interior and exterior) for children's library. Library space designing and planning comes under the area of librarianship. Librarian is mainly responsible for preparing an effective and functional library design. The main aim of this paper is to study how some selected children libraries of Guwahati are designed and planned and whether they are functional and attractive or not. This paper briefly discusses about the role of sound library design and application of modern technologies in children's library. To carry out the study some tools are adopted includes: questionnaire, interview and observation method. It finally highlights the findings and suggestions to consider designing spaces for children's library as an area of study in library and information science profession.

KEY WORDS:- library design, technologies, furniture, Guwahati

INTRODUCTION:-

Libraries have a hard job to attract children to come to the library and use their services, read their collections, use the computer, and utilize the library space for discussion and many other activities, but it still worth to try to use any method to caught children attention. Of course, one of the attraction methods is through the library design. It is not a secret that appropriate library design can attract children attention and drive them to visit the library. A proper design of a library building is the only means which can increase the rate of accessibility of library resources and concentration, interest of children.

LIBRARY DESIGN:-

The term library design refers to a plan or purpose that exists behind the action or fact of building library showing the look, function and working of the building pertaining to meet the needs of its user community and fulfilling the aim of the main organization. The main goal of an effective library design and space planning is that the facility must respond to the needs of its service population.

In the IFLA Library Building Guidelines Andrew McDonald revises and extends **Harry Faulkner Brown's** *Ten Commandments* and gives them a more holistic and human approach. His *Top Ten Qualities of Good Library Space* are:

i) functional
ii) adaptable
iii) accessible
iv) varied
v) interactive
vi) conducive
vii) environmentally suitable
viii) safe and secure
ix) efficient
x) suitable for information technology

DESIGNING AN INNOVATIVE LIBRARY SPACE KEEPING KIDS/ CHILDREN IN MIND:-

Children space is an area or a place which is fully devoted to children. Very often we find either a separate library building for children or separate children corner in main library building. These children space are intended to support some children activity especially the activities which enhance their intelligence. These spaces should accommodate children needs, hence all of the equipment and facilities should be appropriate for children. That is why, a child space is uniquely designed to meet the children requirement, especially the interior design and furniture.

There are some important parts that should be available on the children space, which are: the interior design that involving combination of many bright colour, pictures, comfortable chair and desk, reachable bookshelf. Designing children space should Consider the comfortable and ease of use, therefore children space should gives choices for children to use chair or floor read their favourite books. Some libraries did not provides chair but put some low desk where children can sit on the floor, this is simply to avoid accident such as fall from the chair, it is also good when there are not many librarian available in children space to supervise their activities.

Here the question arises, '**Who needs to plan for the design?'**

Keeping view of various aspects if we speak, in short, the librarian needs to have studied the needs of the library, and to have drawn up a careful program in shape to withstand question and criticism. Then by the cooperative efforts of librarians, trustees, planners, architects, and public officials, willing to study the problem and placing the objectives and interests of the library and its users first in their thinking and planning, a strategic site conducive to maximum service and minimum operating costs will be assured.

The library's place in the city plan is logically based on (1) knowledge of its function and services, (2) understanding of the habits and routines of its patrons as they affect location, (3) the desire to help it develop as large a volume of business as possible in comparison with its operating cost, and (4) recognition of its right to exist by itself and to advance its public usefulness as much as possible.

ROLE OF A LIBRARY DESIGN IN ATTRACTING YOUNG USERS AND TURNING THEM INTO REGULAR READERS:-

Cristina Garcia, author of *Dreaming in Cuban* once said, "There is no more devoted a reader than a ten-year-old that has found a book they liked." Therefore, *Libraries Designed for Kids* should be such

where this happens often, where the young reader and the book can be connected which will finally turn them into regular users.

Architects and librarian should find interesting ideas as well as practical information to implement exciting new experiences. Moreover, while creating such a place there are some questions which should be clear and they are:-

"Why Children comes to Public Libraries?"
The following can be the reasons behind their visit:-
• borrowing items for personal use.
• borrowing items for schoolwork.
• reading books in the library.
• using the Internet for research.
• study purpose.
• using computers for fun.
• attending events held at the library.

"What draws the children to visit public libraries?"
The rich mixture of books, toys and modern technologies like computers and other audio visual aids are some essential element draws children to public library. Successful children's library designs in the twenty-first century will do the following:-
• Give children a choice when selecting their own materials to take home.
• Provide a comfortable place to use computers and to do homework.
• Provide a variety of attractive programs.
• Support the work of talented and well-trained children's librarians.

People love stories told in all formats, from puppet shows to pantomimes, films, videos, audios, and large-format picture books. The importance of audio-visual aids should not be overlooked when designing libraries for children. Therefore space should be design in such a way that children can use all the modern technologies which are made available to them.

One of the first children's public libraries was initiated by Caroline Hewins in Hartford, Connecticut, just before the turn of the twentieth century. Caroline was a remarkable pioneer in many areas of library service. She had a collection of dolls that she used with children, and she wrote a book about what children read in the 1850s when she grew up. She also worked with families in Hartford boarding houses. Like all great children's librarians, she understood that libraries are about stories. Her library encouraged families and children to see dolls as visual aids to storytelling.

A library building should be designed and built in such a way that it attracts the crowd and forced them to visit the libraries. Spaces of the library should be designed according to needs and taste of the children. For example, in the Point Loma branch of the San Diego Public Library, the entrance to the children's room on the lower level of the two-story library is made through a staircase designed to look like an old sailing ship. When children exit the ship, they see a changing view of the evening sky made possible by fiber-optic lights programmed by a computer. Children are also drawn to a periscope from a decommissioned U.S. nuclear attack submarine that allows them to look out over the surrounding Point Loma Community.

OBJECTIVES OF THE STUDY:-
The main aim of our study is to find out how the selected libraries are designed in terms of flexibility, visibility, safety, furniture etc and whether they are equipped with modern technologies or not.

METHODOLOGY:-

In order to carry out the study, keeping the above objectives in mind the following methodological sequence has been followed:

1. Interview (both personal as well as telephonic interview);

2. Observation method and

3. Questionnaire method.

On the basis of the data and information collected through the interview, analysis has been made under different heads and recommendations are made.

SCOPE OF STUDY:-

To carry out **the study, two govt. funded public library children corners of Guwahati have been selected i.e.** 1. Bishnu Nirmala Children Library; 2. District Library Children Corner, Guwahati.

As it is found that the children libraries in the North Eastern region has flourished in the heart of Greater Guwahati. This is why if one has to know the present situation of children libraries, they can study the children libraries in Guwahati to ascertain the state affairs of the children libraries.

Table 1:- Library surveyed

Sl. No.	Name of the Library	Year of Establishment of the Library/ Children Section	Separate building	Opening Hours	Authority
1.	Bishnu Nirmala Children Library(BNCL)	1987 (5th September)	Yes	11.30am to 6.30pm	Govt.
2.	District Library Children Corner, Guwahati	children section was opened in 2012	No	11.30am to 6.30pm	Govt.

ABOUT THE LIBRARIES SURVEYED:-

Bishnu Nirmala Children Library(BNCL) is a state children library. It is situated at Latashil at the residence of Late Bishnu Ram Medhi. Earlier this library was attached with the District Library, Guwahati. But in 1987, it has been transferred to its present building which was donated by Bishnu- Nirmala Trustee. The membership of the library is open to the children within the age group of 4to 16 years. At present there are 2969 registered members. To be a member of the library membership fees of Rs. 15 is to be paid for once.

The Directorate of Library Services, Assam, procures books for the library.

The library has a good collection of books in Assamese, Bengali, English and Hindi language. Its total collection is13,408. The library also subscribes to a 3 newspapers and 12 popular magazines for children.

In case of arrangement subject wise arrangement is done and classification is done using DDC 22nd Edition. There is provision of open access system for the users.

In Bishnu Nirmala Children Library only story books are issued to the users. A book is issued for a period of 14 days only. The library's opening hour is from 11.30am to 6.30pm. The library is kept closed during all Govt. holidays, Monday and 1st and 3rd Saturday.

The District Library, Guwahati was established in the year 1995 and the children section was opened in 2012. Mrs. Krishna Bordoloi is the present librarian of the library. Along with the librarian the total no. of staff is 16 with 3 professionals. Opening hours of the library is 11.30am to 6.30pm. All sections of the library are automated and the library software used is KOHA. It also has an internet section for the user's access.

Its total registered member is 37,823 among which the children visiting the library are meagre and most of the users are the senior members who come on regular basis. The main reason for such low young users is that the BNCL is situated very near the District Library and children prefer to go more to that library as the collection is mainly meant for children. Again regarding the collection it holds those books given by the RRLF. A physically challenged corner is also assisted by RRLF.

There are few other private funded children library corners which included,

1. Shrimanta Shankardev Kalakhetra Children Library;
2. Bhabendra Nath Saikia Children Library, Aarohan;
3. Jadab Chandra Bhuyan Children Library.

FINDINGS AND DISCUSSIONS:-

1. LOCATION: - The first and foremost step in designing a library is the selection of an ideal location. For this a proper planning is required. Being meant for everyone, libraries need to be accessible. It is essential to provide people with a variety of ways to get there, including transit routes, walk able streets and it should be free from crowds and hassle, therefore location of the library must be connected with these. Nearby streets should be designed so that cars slow down around the library, crosswalks should be well marked.

From the survey it is found that both libraries are conveniently connected to transit routes and walk able streets. As per the survey result, both libraries are found conveniently accessible for the residents of Guwahati. With the easily accessible transportation system both the library staff as well as the handful of people enquired about it, finds the libraries to be located in the heart of the city, the library is truly open to everyone.

2. VISIBILITY: - Library building or children corner must be visible from outside. Multilingual signage system must be used both outside and inside the library so that children can easily and freely explore the various sections of library without any one's help. Moreover, signage systems must be prepared in interesting way so that children easily get attracted towards library.

Picture 1: these pictures are taken as an example of the signage system in BNCL.

3. FLEXIBILITY: - Library building or space should be designed in such a way that they can accommodate any kind of changes in service and structure in future. As development of information technologies in the field of library and information society has forced to reorganize its each and every services and structures with the changing needs of patrons. To satisfy this current development library building or space should be designed keeping in view the principle of flexibility.

When questioned regarding the flexibility, the librarian of BNCL finds it to be flexible enough for future extensions and growth whereas children corner of District library, Ghy is found not so flexible in terms of future growth.

4. ARTISTIC ENVIROMENT: - Aesthetic is an important factor in the library building. While designing children library buildings, attention should be paid towards the expression of beauty as representing knowledge and culture. This idea is shown in the combination of such aspect as exterior look, interior layout, artistic design and natural environment. Public art, fountains or other central features helps in establishing a convivial setting for social interaction, encouraging more and more children to gather and make optimum utilization of library resources and spaces.

The importance of good amenities cannot be overstated for any library that wants to become a multi-purpose destination. The right amenities greatly bolster efforts to attract more patrons and serve a variety of different people. If a library decides to offer Wi-Fi service, for instance, they will optimize public use if they also give web surfers comfortable places to sit both inside the building and outside under shady trees.

Downtown Denver's Public Library, for example is not only a community resource, but a high-profile art center. With sculptures, murals, and other amenities, the library has helped to make downtown Denver a destination for arts fans and tourists. But both libraries are lacking behind creating an artistic environment.

Picture: 2. some libraries interior design of foreign countries taken from internet.

4. SECTIONS: - While designing a library for children an architect should keep in mind the proper allocations of space for different sections such as staff areas, canteen, activity areas, reading rooms, washrooms, parent's area etc.

Picture 3:- **D**ifferent sections of the **Bishnu Nirmala Children Library**

As seen in the pictures there are basically 3 sections within the BNCL named as: 1. Reading, 2. lending, and 3.the children corner. Within the space the librarian's room is made partitioned with wood and glass visible from all the corners of the library. The children corner as mentioned by the librarian is the area where carpet is set by the side of which stacks full of board games are kept.

Parent areas have become quite common in new and renovated children's area. Usually these areas have rocking or oversized chairs to allow parents to put children on their laps for reading stories. Other chairs or benches are required for parents who accompany their children to story hours or special programs. There is no provision of such separate area in these two libraries.

Whereas, in District Library, Ghy no different sections are found for children. Only a particular area is devoted for children and that area simply looks like a store house of books.

6. FURNITURE: - Furniture of the children library should be convenient, durable and comfortable. Furniture should be designed keeping in view the different age groups of the children. Some libraries do not provide chairs to avoid accidents and they are allowed to sit on floors.

The interior scale of the children's space must not intimidate or frighten children. An architect must take into consideration ceiling levels, flooring, etc. in a children's area to a space that is more agreeable to young people. Height of book stacks and furniture must be of a scale to attract and accommodate children.

The design or ambience of the BNCL though not that inviting but the furniture is designed keeping in mind of children within the age group of 4-16 years. Height, etc. of the book shelves, tables & chairs are designed keeping them in mind, so that it is accessible and usable by them.

Whereas in District Library, Ghy no special furniture's are found for different age groups of children. Their children are allowed to use that furniture which are used by adult users. No special attention is given towards children comfort.

7. LIGHTING, COOLING, HEATING AND VENTILATION: - Proper provision of natural and

artificial lighting, cooling, heating and ventilation should be taken into consideration at the early building program stage. There must be provision of adequate windows and doors for easy flow of air and lights.

This criteria is almost found to be satisfactory in BNCL, but in District Library, Ghy children corner is just a storehouse of the books in a small room with inadequate provision of lighting, cooling, heating etc.

8. APPLICABILITY OF EXTENSION SERVICES WITHIN THE SPACE: - Library buildings and their outdoor public spaces (streets, sidewalks and parking lots) should be designed so that the spaces can be used in different ways for different patrons throughout the course of the day, week, and the year. To allow for overlapping and changing uses, form needs to support function.

Moreover, space must be such designed that there is enough space for organising events, competitions, functions catering to the needs of the library, conferences or so on.

Both the surveyed libraries as per data have enough space to conduct such co curricular activities, functions etc for the children. But extension activities like story hour, puppet show, dramatic performance, competitions, lecture and talks are quite absent here which plays a great role in personality development of the young ones. Mrs. Sewali Das, the librarian has decided to make a wall magazine with the writings of the young users about Bishnu Ram Medhi. She thinks it to be the first step towards encouraging the users to come to the library more frequently which will further create an urge in them to demand such services even in their schools. The District Library, Guwahati, apart from an annual seminar organised on the birth date of SR Ranganathan and an exhibition displaying old book no such special extension services are organised for the young ones.

The meagre amount which comes annually for the celebration of librarian's day in BNCL is also utilised for up gradation of the library like organising awareness programmes among the nearby schools, competitions, etc. And both the libraries find the available space to be enough for organising such activities.

Picture 4. Wall magazine and auditorium of **Bishnu Nirmala Children Library trust**

9. PROVISION FOR APPLICABILITY OF MODERN TECHNOLOGIES: - Media and electronic workstations are extremely popular in children's areas because kids have a natural affinity to electronic information and media. Children are very much attracted towards audio visual aids. Therefore while designing children area many new libraries include separate computer labs with internet facilities and centres for children. In those labs or centres children uses to find their required information's and play various types of games for their amusements.

Through survey we found that none of the surveyed libraries provide facilities of computers or any such labs for the young ones. But in BNCL, they are subscribing for cartoon channels, which is an effort from the present librarian's side as no fund is provided for such subscription. There is one computer for the librarian's use with KOHA (library software). Moreover, the librarian also believes that if they would

have been able to provide internet facilities, there would have been more young visitors to the library as nowadays even the young ones are more attracted towards these modern technologies like internet games, etc. and even today's project works are more prone towards the use of the internet. Though estimated regular users is 30- 35 on an average, but it is seen more during summer breaks or such long vacation periods.

Apart from these there are various kinds of board games in BNCL including puzzles and all.

10. SAFETY AND SECURITIES:-While designing a library safety and security of its users and staffs should be keep in mind. In a library there must be emergency exit windows and doors. Safety alarms and CCTV cameras must be installed in libraries. There must be fire extinguishers in each and every section of libraries.

The basic safety and security provisions are available in both the libraries for emergency or such. Regarding the security in BNCL one among the 2 non-professional staff lives within the campus and looks after the library 24*7. Even in the district library for security guard/ chowkidar is there. There is installation of CCTV cameras, another modern security device to keep a view of the regular happenings within the space.

11. FUND FOR MAINTENANCE AND HYGIENE: - It is very necessary to maintain each and every section of library in terms of cleanliness and hygiene .Through survey we found that both the libraries get very poor amount of fund for maintenance of its various areas. BNCL has appointed a part time person meant for cleanliness and hygiene.

RECOMMENDATIONS & CONCLUSION:-

In recent years library professionals have shown their renewed interest in designing library spaces. Librarian is mainly responsible for preparing a functional design of a library building. With passage of time the structure and design of library building has changed .This change has taken place due to increase in different forms of information and their demand from different user's community in digital age. This means that librarian, architects, govts etc must develop new visions, ideas, and concepts for designing a multifunctional library building keeping pace with digital age. Similarly, children libraries or children corners of public library should be designed properly keeping in view the taste of children belonging to different age groups. Very often we see that children libraries are neglected. The needs of designing children library spaces (interior and exterior) are totally overlooked.

During our survey we find that the libraries which are undertaken to carry out our study has failed to attract the attention and interest of the children due to their poor ambience .This leads to lack of utilization of library resources and spaces and existence of library cannot be imagined without its users.

The librarian of District library and Bishnu Prabha Children Library should prepare a proper library design along with an architect. While designing, proper standards for children library building should be followed by the architects. Library space design must have the capacity to attract attention of the children and to convert them into daily library users. Library space should be designed in such a way so that it can meet future needs of the users and allow the library staffs to discharge their services swiftly both at present and future.

Children are among few members in our society who looks up in a building and their design. In fact children are very good observer and interested in their surroundings. They are very much sophisticated and particular about designs than adult. In such case, only a kid –friendly areas can attract the children inside the libraries. Therefore, all spaces of children libraries should be designed keeping in view their convenience and comfort zone. Spaces must be designed in such a way that children should feel comfortable, experience joy in learning and investigation. They should feel library spaces as like "their own" i.e. something totally different and separate from what adult would be using in terms of furniture, collections, activity areas etc.

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DIGITAL INFORMATION LITERACY AMONG THE RESEARCH SCHOLARS OF GAUHATI UNIVERSITY: A STUDY

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Abstract

Digital information literacy is one of the aspects of information literacy which become most relevant for the 21st Century. It enables the users to collect, evaluate the digital resources and to use and access at the right time in a right way. A study on exploring the digital information literacy among the research scholars of faculty of Arts of Gauhati University has been conducted. For the study, questionnaire method is used. This study focused on various aspects such as Computer literacy of the respondents, IT skills, types of digital resources used by the respondents, purpose of using digital resources, awareness about copy right and IRP issues, problems faced by the respondents while using digital resources, and evaluation of digital resources by the research scholars. From the study it has been found that most of the users are aware about digital resources and have the basic knowledge of MS Word, MS Excel, MS Powerpoint and internet. It has been also observed that only a few respondents are aware about copy rights and IPR issues.

Keywords: Digital Information Literacy, Research Scholar, Gauhati University

Introduction

Information is a resource that is naturally needed in all spheres of human activity and it is very crucial to the development of a nation. Without information there would be no society. Thus, there is a close link between prosperity of nation and its information wealth. Information availability and its free flow through an effective dissemination network represent a necessary pre-condition for the emergence of well-informed citizens. In the era of globalization of information it becomes easier for individuals to access information from anywhere and at anytime. Moreover the latest development of ICT and Information explosion has changed the information seeking behavior of the people. Now people needs more and more relevant information in short time in proper way. But only print material cannot meet the people's needs in right time. To cope up with recent development and update knowledge Digital information become need of the hour. To acquire the digital information it is important to become a digitally literate. Digital literacy is the ability to locate, organize, understand, evaluate, and analyze information using digital technology. But due to lack of understanding of technology and the formation of internet based information users are failed to acquire required information at right time.

Digital Information Literacy

The American Library Association (ALA) states that, "To be Information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information Digital Information Literacy (DIL) enables to recognize the need for, to access, and to evaluate electronic information". The digitally literate can confidently use, manage, create, quote and share sources of digital information in a right way. The way in which information is used, created and distributed demonstrates an understanding and acknowledgement of the cultural, ethical, economic, legal and social aspects of information.

Need of Digital Information Literacy

It is the age of globalization of information which becomes important for user to develop their skill in order to cope up with digital environment. For security and safe use of digital resources, digital literacy is a must. Digital natives are always with laptops or smart devices in their hand, but there arise a question that how effectively they are using internet for their capacity building. There are many problems like bullying, cyber crime, copyright issues, security threat, social unawareness causes many untoward critical situation. So, to avoid and prevent all these threats and creating awareness in digital space digital literacy is considered as essential.

Literature Review

Suman & Sharma (2012) in their paper "Information literacy among public library users with special reference to the T S. Central State Library, Chandigarh", found that all the users of T S. Central State Library were able to identify and specify their sources of needed information. They found that out of 88 users, 68 (77.27%) respondents were aware that dictionary is the best source to find the meaning o f a word. They also found that a majority of the respondent's lacked the awareness about the shelf arrangement, bibliography and information search method and thus their information retrieval skills were very low for searching required information from sources.

Asadullah (2014) in his paper, "Digital Information Literacy: A survey among research scholars of Vellore District" found that library has a big role for the promotion of digital information literacy among its user community. From the study he also found that every research scholars of arts & science faculties of Vellore District have computer competencies and digital information literacy at minimal level.

Meenambika, Manoharan & Maidhili (2015), in the paper "Digital information Literacy in RRASI Engineering College" found that Majority of students of RRASI Engineering College are having internet and computer skills but they are not significantly skilled in Digital library literacy, emotional and ethical literacy.

Sinha (2016) his paper "Digital information literacy of post graduate students of Viva-Bharati: A study" has selected post graduate students of four departments of Palli Samgathana Vibhagaa of Visva-Bharati as a target group. Questionnaire method is used for his study. From the study he found that Majority of respondents were familiar with the use of digital resources. Out of 90 (90%) respondents, majority of respondents (78.89%) were not aware about the copyright and IPR issues of using digital resources.

Significance of the Study:

The uses of both print and digital information are considered as important basis for progress and development of users in different aspect in general and academic field in particular. Since the research scholars are the user of information both in print and digital form, so they need to be well versed and acquainted with emerging information sources from internet besides the traditional sources. Thus, keeping

this in view, the present paper aims at studying digital information literacy among the research scholars of Gauhati University.

Objectives of the Study:
ҺTo enlist type of digital resources used by research scholars of Gauhati University.
ҺTo study the purposes of using digital resources.
ҺTo study the frequency of using digital resources.
ҺTo study the acquaintance level of research scholars with different ICT tools, techniques and services.
ҺTo study the evaluation of digital resources by the respondents.

Limitation of the study
ҺThe present study is conducted only among the research scholars of Arts Stream.
ҺThe study is confined only among the research scholar of current session i,e. 2016-2017.

Methodology

The present study is a descriptive study. Data are collected from both primary and secondary sources. For collection of data, investigator has used self prepared questionnaire and percentage analysis is done for analyzing the data. The total population of the study consist of all the departments of Arts Stream (22 departments).For the present study investigator has selected 50% department as sample (11 departments) from total population. The departments are- Assamese, Bengali, English, Economics, Education, Hindi, Philosophy, Political Science, History, Psychology and Library & Information Science. From these selected departments 60 research scholars have been selected purposively for conducting the study.

Data Analysis and Interpretation
Table 1: Response of Respondents

Questionnaire distributed	Questionnaire received	Percentage (%)
60	60	100%

Table 1 shows that distribution of questionnaire among Research Scholars and questionnaire received from the respondents. 60(100%) respondents, responded to the questionnaire

Table2: Aware about digital resources

Response	Respondent	Percentage (%)
Yes	60	100%
No	--	---

From the table 2, it has been observed that All the respondents i,e 60 (100%) are aware about digital resources.

Table3: IT skills of respondent

IT Skills		No. of Respondents	Percentage (%)
MS office	MS Word	60	100
	MS Excel	30	50
	MS Access	5	8.33
	MS Powerpoint	40	66.67
Internet		60	100
Multimedia		7	11.66
Programming Language		3	5
All of the above		---	---

Table 3 shows that all the respondents i.e 60 (100%) are well versed with MS Word and internet. Majority of respondents i.e 40 (66.67%) and 30 (50%) have the knowledge of MS Powerpoint and MS Excel respectively. Only a few respondents are well acquainted with multimedia and programming language.

Table 4: Types of Digital Resources used

Digital Resources	No. of Respondent	Percentage (%)
E-journal	33	55
E-books	20	33.33
E-thesis/ dissertation	18	30
E-database	11	18.33
E-article	51	85
E-newspaper	38	63

Types of digital resources used shown in table 4 reveals that 51 (85%) respondents use E-article and 38 (63%) use E-newspapers and 33 (55%) use E-journal. The use of E-database, E-thesis/dissertation and E-book is less.

Table5: Purpose of using Digital Resources

Purpose	No. of Respondent	Percentage (%)
Learning	50	83.33
Current information	32	53
Update knowledge	45	75
For Seminar	35	58
Writing Article	28	46
For research work	50	83.33

Table 5 shows the purpose of using e-resources by the respondents. It reveals that majority of the respondents use digital resources for the purpose of learning and research work followed by 32 (53%) for current information, 45 (75%) for update knowledge, 35 (58%) for seminar and 28 (46%) for writing article.

Table 6: Frequency of using Digital Resources

Frequency	No. of Respondent	Percentage (%)
Daily	28	46.66
3-4 times in a week	18	30
Once in a week	9	15
Once in a month	5	8.33
Occasionally	--	--

The frequency of digital resource is placed in table 6. It has been found that majority of respondents 28(46.66%) are the daily users of digital resources. But no one is found to use digital resources occasionally.

Table 7: Platform of Seeking Digital Information

Platform of seeking digital information	No. of Respondent	Percentage (%)
Search Engine	60	100
Subject Gateway	7	11.66
Online Databases	12	20
Digital Library	18	30
Web Portal	9	15

Table 7 shows that the entire respondents 60 (100%) use search engine as a platform of seeking digital information followed by 18 (30%) use digital library, 12 (20%) online database. Only a few respondents i.e 7 (11.66%) and 9 (15%) use subject gateway and web portal respectively.

Table 8: Use of Search Engine

Search Engine	No. of Respondent	Percentage (%)
Google	56	93.33
Bing	2	3.33
Yahoo	2	3.33
Any other	--	----

It is observed from the table 8 that most of the scholars 56 (93.33%) use Google while a few are used Yahoo and Bing.

Table 9: Use of Storage media

Storage media	No. of Respondent	Percentage (%)
Pen Drive	43	71.66
CD	7	11.66
Hard Disk	6	10
All of the Above	9	15

From the table 9 it has been observed that Pen Drive is most commonly used storage media among majority of respondents 43 (71.66). 7 (11.66%) have used CD followed by 6 (10%) have used Hard Disk, 9 (15%) have used all the above storage media.

Table 10: Use of Web 2.0 tools

Web 2.0 tools	No. of Respondent	Percentage (%)
Facebook	53	83.33
Twitter	9	15
Google+	14	23.33
Blogs	11	18.33
You Tube	45	75
Whatsapp	49	81.66
All of the above	3	5

The above table 10 depicts that majority of respondents 53 (83.33%) use Facebook. Whatsapp is used by 49 (81.66%) respondents followed by 45 (75%) use You Tube, 14 (22.33%) use Google+, 11 (18.33%) use Blogs, 9 (15%) use Twitter and only 3 (5%) use all the above web 2.0 tools.

Table 11: Awareness about copyright and IPR issues

Response	No. of Respondents	Percentage (%)
Yes	13	21.66
No	47	78.33

From the table 11 it has been found that most of the respondents 47 (78.33%) are not aware about copy rights and IPR issues, while only 13 (21.66%) are aware about it.

Table 12: Problem faced in using Digital Resources

Problems	No. of Respondents	Percentage (%)
Difficult to find relevant information	27	45
Too much information retrieval	21	35
Lack of ICT skill	8	13.33
Problem of Internet	9	15

Table 12 shows that 27 (45%) respondents face problems while using digital resources due to not finding relevant information, 21 (35%) face problem due to much more information retrieval, 8 (13.33%) feel problems for lack of ICT skills and 9 (15%) feel difficulty because of internet problem.

Table 13: Evaluation of Digital Resources

Parameter	No. of Respondents	Percentage (%)
Coverage	25	41.66
Authenticity	15	25
Usability	9	15
Objectivity	7	11.66
Accessibility	4	6.66

It has been found from the table 13 that majority of the respondents 25 (41.66%) face problem of coverage, 15 (25%) authenticity, 9 (15%) usability, 7 (11.66%) objectivity, 4 (6.66%) accessibility in using digital resources.

Major findings:
Major finding of the study are:

➢ All the respondents under study have the knowledge of MS word and Internet. But many of them do not have the knowledge of MS Access, programming language and multimedia.
➢ 100% respondents are aware about digital resources.
➢ Most of the respondents (83.33%) use digital resources for learning and research work.
➢ Majority of respondents 46.66% use digital resources daily.
➢ All the entire respondents (100%) use search engine as an internet search tool.
➢ Majority of the respondents (93.33%) prefer Google as search engine.
➢ Pen Drive is mostly used storage media among the majority of respondents (71.66%).
➢ Facebook and Whasapp are the most popular web 2.0 tools among the respondents.
➢ Majority of the respondents (78.33%) are not aware about the copy right and IPR issues.
➢ While using digital resources, 45% respondents face problems due to difficult to find relevant information, 35% face problems because of too much information retrieval.
➢ Coverage of digital resources (41.66%) creates problem of evaluation of digital resources followed by authenticity (25%), usability (15%), objectivity (11.66%) and accessibility (6.66%).

Suggestions
In order to generate awareness about the use of digital resources among the research scholars of Gauhati University and to improve the literacy on the use of digital resources the following suggestions may be considered:

➢ Library should conduct orientation programmes or user friendly training on how to use the digital resources.
➢ Awareness should be created among the research scholars on the use of digital resources to meet the information needs of them.
➢ Different instructional materials, explaining the availability and procedure on how to use the digital resources should be distributed among the research scholars.
➢ Awareness should be created about the legal issues like copy right and IPR issues among the research scholar regarding use of digital resources.

Conclusion

Advancement of ICT and Information explosion ultimately changed the information seeking behavior of the users. As time is changing very fast, people need more and more information to keep them up-to-date with the present environment. To cope up with this situation, only print media cannot meet the people's information requirements. So, it is important to use digital resources and become digitally literate. The result of present study reveals that majority of respondents are using digital resources and have the basic knowledge of IT and web 2.0 tools. From the study it can be also said that the most of the respondents are digitally literate to some extent but not fully skilled in all aspects of using digital information.

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DISASTER PLANNING FOR UNIVERSITY LIBRARIES OF ASSAM: PREPAREDNESS AND MITIGATION

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Abstract: *A library disaster is an unexpected event which puts collections at risk. Disaster planning is a matter of basic security for libraries, their staff and their properties. Assam, the gateway of the north-east India is naturally hazardous place and very unstable part of world where natural disaster is very common. Library disaster planning, preparedness is to reduce the damage of library property from any disaster strike. The university library, heart of all academic resources needs safe and secure library service for any academic development in the university. Disaster preparedness in university libraries is scheduled of planning process for preventive or precautionary measure to reduce the loss or damage of properties in university libraries from any disaster strike. Disaster preparedness and planning in university libraries is a basic need for safe and secure library services in naturally hazardous region like Assam.*

Keywords : *Disaster Plan, Natural Disaster, Preparedness, Mitigation, Hazard, Risk Management, Emergency*

Introduction:

The State of Assam, popularly known as the land of the red river and blue hills is the gateway to the North East India. Geographically the state extends from 22°19' to 28°16' North Latitude and 89°42' to 96°30' East Longitude between the foot hills of the Eastern Himalayas and the Patkai and Naga Hill Ranges. Most of the common natural hazards like flood, earthquake, landslide, fire, pest attack recurrently affect the state and its libraries. These kinds of natural hazards are not only creating financial loss of the organization but also stand as a barrier for sustainable development of library service in the area. But, it is reported that only a few libraries of Assam take step for planning and preparedness for disaster and mitigation of the problem, if any major incidents occur, damages may be much-more. The university library, a heart of the higher education, centre of high academic environment is not different from rest of the libraries which are always neglecting the disastrous events in their normal life. Therefore, disaster planning in university libraries is most essential in Assam to mitigate sustainable library service development.

Review of related literature:

The amount of information is very limited in library disaster management, but there are enough information resources on the disaster management and disaster in Assam. Both macro and micro literature is scanned out from early period to recently published documents, but more attention has given on recently

published related documents.

In a paper Wise (2006) rightly pointed out that in addition to greater awareness in the library sector (generally of the need for disaster planning on sound principles, significant institutional drivers for academic libraries, have been risk management, risk registers and organizational resilience in general). Arora (2009), a study on *"Disaster Planning, Preparedness and Recovery for Libraries of National Importance in Delhi"* recommended that natural hazards can not be prevented; the vulnerability to these hazards can be reduced by planned mitigation and preparedness measures. Ahenkorah-Marfo & Borteye (2010*)* on their study revealed that the Library is not very prepared to prevent, fight and manage disasters. Hasenay & Krtalic (2010) in their paper studied that Disaster management encompasses all management issues necessary to deal with incidents and awareness, education about the importance of disaster management issues as a prerequisite for efficient, comprehensive and sustainable preservation of library services and collections. Echezona et. al. (2012) in their paper concluded that University libraries should take the issue of disaster preparedness and management very seriously. In an article Issa et. al (2012) revealed that disasters can happen at any time and unexpectedly, library should have comprehensive insurance scheme over the library and its contents so as to reduce and share the possible risk of lose. A study on "Disaster Management in Libraries in India" by Zaveri (2012) suggested that librarian must be ready to use all available knowledge, skills and equipments during disaster stick. Zaveri (2014) in a paper entitled *"Damage to Libraries due to Water Related Disasters"* described preparedness of water related disasters in libraries including how to treat resources damaged from water related disasters. Kuzucuoðlu (2014) on his article *"Risk Management in Libraries, Archives and Museums"* discussed about the importance of risk analysis and risk assessment for Libraries, Archives and Museums. Rehman (2014) on his study pointed out that the library material, physical facilities and human lives destroyed by the various disasters, it is necessary to take precautions is necessary to reduce the loss and damages. Kolawole (2015) on his study finds and recommended that library should has provision of adequate disaster equipments , facilities and increase in the level of staff awareness on preparation for disaster. M. G. Flaherty (2016) in his article pointed out that Public librarians not only serve during times of disasters, but are an integral part of rebuilding post-disasters.

Objectives of the study:
1. To study the effect of disaster on university libraries of Assam.
2. To analyze security and housekeeping operation to preparedness of disaster.
3. To assess the level of disaster preparedness in university libraries
4. To identify the strategies for effective disaster management in University Libraries

Research Methodology:

This study was carried out by means of both survey and case study method to meet the research questions. A structured questionnaire was designed and distributed to university libraries of Assam for fact finding of research problem. In addition to questionnaire method observation and interview method was also adopted to fact find the research questions.
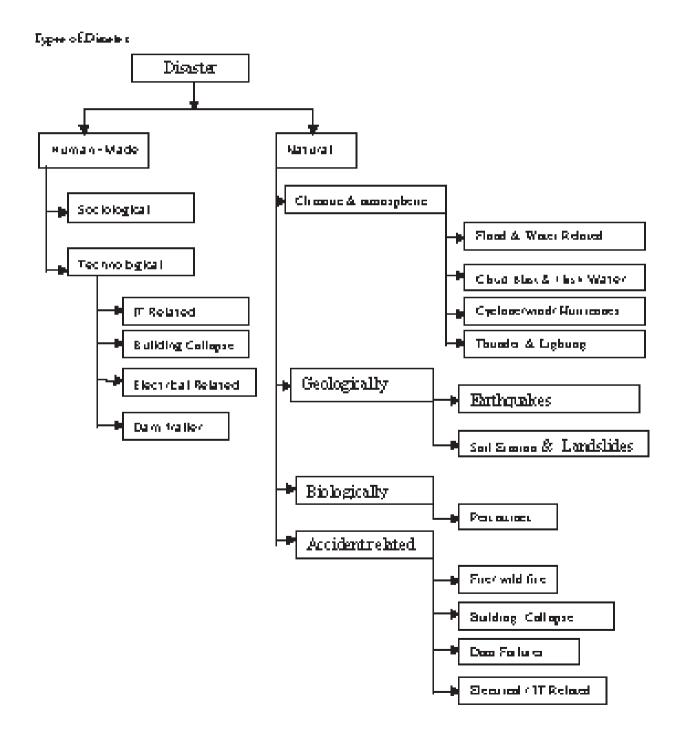
Concept & types of Disasters:

A disaster is the tragedy of a natural or human-made hazard (a hazard is a situation which poses a level of threat to life, health, property, or environment) that negatively affects society or environment. In the Australian Emergency Management Glossary a disaster is defined as: *"A serious disruption to community life which threatens or causes death or injury in that community and / or damage to property which is beyond the day-to-day capacity of the prescribed statutory authorities and which requires special mobilization and*

organization of resources other than those normally available to those authorities".

Paul Eden and Graham Matthews (1996) defined as *"disaster" as any incident which threatens human safety and/or damages, or threatens to damage, a library's buildings, collections (or item(s) therein), equipment and systems."*

The Dictionary for Library and Information Services (2005) defines a disaster plan as a set of written procedures prepared by the library staff in advance to deal with an unexpected occurrence that has the potential to cause injury to personnel or damage to equipment or to collections and/ or to facilities sufficient to warrant temporary suspension of services.

Disaster and Assam: A historical perspective:

Assam is one of the most hazard-prone regions of India, which is frequently affected by natural hazard like earthquake, flood, landslide, cloud-blast, thunder & lighting, wind-cyclone etc. According to Mahajan et al. (2010), geo-morphologically, Assam falls within in an earthquake prone zone (BIS Seismic Zone IV and V) of the Indian subcontinent. It is great historic events of earthquakes in 1897 and 1950 in Assam which level of vulnerability cannot imagine in that period. Earthquakes during non-instrumental period in Assam was in the year of 1548, 1596, 1601, 1642, 1663, 1696, 1756, 1772, 1838, & 1841.

Table 1: Earthquake Hazard History of Assam State (M>6.0)

Date	Epicenter	Origin Time IST/UTC	Magnitude
10th January, 1869	9.4 Km N of Kumbhir (Assam)	17:15	7.5
12th June 1897	14 Km ESE of Sangsik (Meghalaya)	17:11	8.7
9th September, 1923	South Meghalaya, India	22:03:42	7.1
2nd July 1930	3.9 kms NNW of Dabigiri (Meghalaya)	03:23:34.4	7.1
21st January, 1941	Near Tezpur, Assam	8:50	6.5
23rd October, 1943	13.6 kms E of Hojai (Assam)	22:53:17	7.2
29th July 1947	Arunachal Pradesh	13:43:20	7.7
21 Aug 2009	Bhutan	08:53:05 UTC	6.1
15th August, 1950	20.7 kilometers NW of Tajobum (Arunachal Pradesh)	19:39:28.5	8.7
18 Sept 2011	India Nepal Border Region	12:40:48 UTC	6.9
31st December, 1984	SSE of Silchar (Assam)	5:53:37	6.0
6th August, 1988	Indo Myanmar Border	05.03	7.3
Source: CNDM, Assam Administrative Collage, Assam			

According to Flood Hazard Atlas of Assam (ISRO, 2011), approximately 28.31% (22.21 lakh hectares) of land in state of Assam was affected by flood hazard between the period 1998 to 2007. About 7% of land in the state's 17 riverine districts has been lost because of river erosion over the past 50 years (Source: Environment Assessment Report, India: Assam Integrated Flood and Riverbank Erosion Risk Management Investment Program, ADB June 2009). The Brahmaputra & Borak valley of Assam had experienced major floods in 1954, 1962, 1966, 1972, 1974, 1978, 1983, 1986, 1988, 1996, 1998, 2000 and 2004. From the unique experience of devastating flood of Assam in 2004, majority of the libraries are affected, not only the 2004, every year more or less libraries are affected by flood hazard in Assam and it is a serious threat to mitigate problems. According to World Fire Atlas (WFA, ESAESRIN) Fire hazards risk is complex since predicting or modeling its occurrence at a macro level (state level) difficult dataset that North Chachar hills, Karbi Anglong and Dibrugarh are more prone to fire incidences. The district Dhubri, Goalpara, Hailakandi, Cachar and Karbi Anglong located in north-east direction to Bangladesh is highly cyclone/winds prone districts and every year affected more or less by hazards. As per National Bureau of Plant Genetic Resources (NBPGR) report North-East India including Assam is one of the rich

bio-diversity regions of the world and growth and development of the insects & pests more than other region of Indian subcontinent. Therefore, pests especially rodents are more vulnerable to library materials in the region.

Table -2 Extent of Flood Hazard in Assam (1998-2007)		
Affected Area (%)	No. of Districts	Name of Districts
0-10%	4	Baska, Chirang, North Cachar, Karbi Anglong
10-20%	2	Kokrajhar, Tinsukia
20-30%	6	Cachar, Golaghat, Hailakandi, Kamrup (Metro), Karimganj, Udalguri
30-40%	6	Bongaigaon, Dhubri, Dibrugarh, Golpara, Kamrup (Rural), Sonitpur
40-50%	5	Dhemaji, Jorhat, Nalbari, Nagaon, Sibsagar
50-60%	1	Lakhimpur
60-70%	1	Barpeta
70-80%	2	Darrang and Morigaon
Source: Flood Hazard Atlas of Assam, ISRO 2011		
Note: Analysis is based on 10 years (between 1998-2007) data used in above mentioned study.		

Disaster Plan

Disaster planning is a matter of basic security for libraries and its property, staff and other stack holders. It is considered to be an essential part of any preservation programme to be implemented by any kind of libraries. A formal written plan enables an institution to respond efficiently and quickly to an emergency, and to minimize damages in libraries.

Disaster Plan in libraries usually involves four phases:
1. Prevention (Identify and minimize the risks the natural hazards)
2. Preparedness (Getting ready to cope.)
3. Response (activities during Disaster)
4. Recovery (getting back to Normal)

University Library Disaster plan: Preparedness and Mitigation
Steps of Disaster Preparedness in University Libraries:
1. Identification of Risks (Risk may be from Geological, Climate & atmospheric, biologic, accidental)
2. Collection of data and documentation
3. Formation of Disaster Team
4. Training of Team for disaster(training of an emergency action team)
5. A cooperative Planning for risks/ asset management
6. Identify the Resources and linking with Disaster Management Agencies
7. Identification of recovery work areas; and
8. Planning & Setting Priorities of save
9. Ensuring supply of equipment and materials
10. Get Ready Incident for Cope-up.
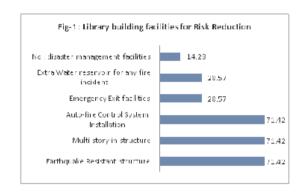
Disaster Preparedness in University Libraries of Assam: Analysis & Finding:

Disaster planning and preparedness is a matter of basic security for library property, staff, and users and to reduce the potential of damages by taking the appropriate measure for any incident. Library building is

the basic infrastructure of libraries. Library building may be reason of risk to staff, users and properties of libraries, e.g. by building collapse, water leakage through damaged or old building etc. A risk assessment of building, installation of the disaster equipments and proper utilization and maintenance of equipments in a building is basic principles of risk reduction and primary step for disaster preparedness process.

Table -3: Library building facilities for risk reduction

Sl. No	Library Building & facilities disaster Management	Frequency Total No- 7	%
1	Earthquake Resistant structure	5	71.42
2	Multi-story in structure	5	71.42
3	Auto-fire Control System Installation	2	28.57
4	Emergency Exit facilities	5	71.42
5	Extra Water reservoir for any fire incident	2	28.57
6	No , disaster management facilities	1	14.28

Fig-1 : Library building facilities for Risk Reduction

Source : Author survey

In this study it was found that 5 nos (71.42%) library buildings are technically earthquake resistant structure, which is the basic necessity for buildings located in comparatively high seismic Zone (Seismic Zone IV and V) of world. 5 nos (71.42%) library buildings are found Multi-story in structure , which is not suitable structure for building located in high seismic zone and may be sometime risk factor to life and properties. 5 nos (71.42%) library buildings have Auto-fire Control System and Extra Water Reservoir for any fire incidents. 5 nos (71.42%) library buildings have Emergency Exit, which is a basic facility and important factor for disaster planning and risk reduction.
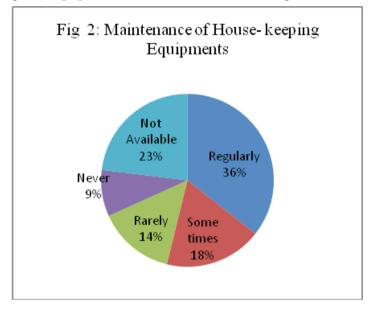
Table- 4: Insurance in University Libraries

Sl. No	Insurance facilities in library	Frequency Total No-7	%
i.	Library building	1	14.28
ii.	Collection (Books, digital books)	1	14.28
iii.	Infrastructure other than library building	1	14.28
iv.	IT & other equipments	1	14.28
v.	For fire	1	14.28
vi.	For Earthquake	1	14.28
vii	For Insect & Pest Attack	0	0
viii	For flood & water Damage	1	14.28
ix	No, any Insurance	6	85.71

Insurance is confidence of security, or helps the library recover after a disaster or accident. It lowers risk and uncertainty of economic cost of loss and promises to reimburse the losses from any incidents of disaster. A university library is a heart and backbone of academic research in universities, where insurance is most impotent for safety and security of valuable resources from any incident. Restart and re-initialization of any service after any disaster strike depend upon the finance. Insurance helps reimbursement of the finance and replaces the damages and loss, recover the losses and helps re-initialization or restoration of service. But from the above table it is revealed that only 1 (14.28%) have insurance for the building,

collection and other properties. 6 nos (85.71%) libraries have not any insurance for recovery of damages or loss due to any disaster strike.

Installation emergency equipments and their maintenance regularly for safety of library is a disaster

Fig 2: Maintenance of House- keeping Equipments

preparedness process to reduce damages of library properties. Regular maintenance of house-keeping equipments is an important and primary duty for safety properties and preliminary step for disaster preparedness and risk reduction. Regular checking and maintenance of basic security equipments like fire extinguisher, alarm system is very important in risk reduction process, but rarely (28.57% rarely checked fire extinguisher) checking of this equipment is a serious threat to organization. In this study it is found that 3 nos (42.86%) library buildings have not installed any alarm systems for any incidents. Automatic tripping of electrical systems in case of fire or short circuit is basic and low cost equipments for safety from short circuit, but 2 nos (28.57%) libraries have not this facilities which is the major drawback of planning of the risk management. After the disaster strike recovery of loss and restoration of service is depend upon finance, insurance promises to reimburse of loss, but this study found that 6 nos (85.71%) libraries have not any insurance for reimbursement of losses. 4 nos (57.14%) libraries have not display of instructions in case of emergency. Proper library building repairing and maintenance is very good practice for risk reduction, in this study it is found that 3 nos (42.86% regularly)and 3 nos (42.86% sometimes) maintained library building which is positive sign among the negative. 6 nos (85.71%) libraries regularly update the IT security (Anti-virus) system and 5 nos (71.42%) libraries regularly back up their databases as security measure of the databases. Three phase analysis of House-Keeping Operation as preventive measure of risk reduction is found regularly (36%), sometimes (19%), and rarely (15%) maintained respectively. 9% found that they are not maintaining the house-keeping equipments properly. It is more serious then never maintains the house-keeping equipments that 23% have not any facilities to cope up the risk and emergency.

Table 5: In-house Disaster Management Preparation

Sl No	Measure	Regularly	Some times	Rarely	Never	Not Available
1	Checking and maintenance of fire Extinguishers/ fire control system	2 (28.57%)	3 (42.86%)	2 28.57%		0
2	Checking and maintenance of alarm Systems	0	1 (14.28%)	1 14.28%	1 14.28%	3 (42.86%)
3	Automatic tripping of electrical systems in case of fire or short circuit	1 (14.28%)	0	2 28.57%	2 28.57%	2 (28.57%)
4	Checking and maintenance of electrical equipment	4 (57.14%)	2 (28.57%)	0	1 (14.28)	0
5	Data backup System & IT security procedures	5 (71.42%)	1 14.28%	1 14.28%	0	0
6	IT Security procedures and Anti-virus	6 (85.71%)	1 14.28%	0	0	0
7	Review of insurance cover	1 (14.28%)	0	0	0	6 (85.719%)
8	Display of instructions in case of Emergency	0	1 14.28%	2 (28.57%)	0	4 (57.14%)
9	Provision of emergency response equipment and materials	1 (14.28%)	0	2 (28.57%)	2 28.57%	2 (28.57%)
10	Maintenance of up-to-date lists of specialized suppliers/services for disaster	2 (28.57%)	0	2 (28.57)	1 (14.28)	2 (28.57)
11	Library exits and aisles are kept Unobstructed	2 (28.579%)	2 28.57%	1 (14.28%)	1 14.28%	1 (14.28%)
12	Use of Pest Control / Pesticides (Termite/mould/fungus checking and Control)	1 (14.28%)	3 (42.86%)	1 (14.28%)	0	2 (28.57%)
13	Proper building maintenance	3 (42.86%)	3 (42.86%)	1 14.28%	0	0
14	Cleaning of Floor, Books Shelves	6 (85.71%)	1 14.28%	0	0	0
15	Lightning arrestors or earthling for thunder	3 (42.86%)	1 14.28%	0	1 14.28%	2 (28.57%)
	Over all maintenance of House-keeping operation for risk reductions	37 (36%)	19 (18%)	15 (14 %)	9 (9%)	24 (23%)
	Source : Author Survey					

Training and awareness is an essential part of disaster preparedness process to develop the knowledge and skill on risk management. Library & Information centre has great role to aware the general people about the disaster and risk management. Training and awareness programme on disaster helping to develop skill & knowledge on risk management accelerates the Disaster Action Team activities and reduces the losses or damages during any incident. The outcome of Disaster Action Plan by Disaster Action Team is gener-

Table 6: Training and Awareness in Disaster Management

Training & Awareness	Frequency	%
Degree or Diploma Course	0	0
Attend Seminar & workshop	2	28.57
Attend in Refresher or Short Term Course	1	14.28
Participated in Mock Drill in disaster management	1	14.28
No Training & Awareness	4	57.14
Source: Author Survey		

ally depending on the knowledge and skill of the on risk management and helps the recovery process after disaster strike. A trained action team can reduce the level of vulnerability by making the people aware of preventive and percussion measure of any incidents. In this study it is found that 28.57% library staff has attended in seminar /workshop, 14.28% staff attended Mock drill on risk management. 57.14% staff has not attended in any training & awareness program about disaster or risk management. From this study it reveals that frequency of trained personalities on disaster and risk management in university libraries of Assam is very few and that frequency of training/ awareness on risk or disaster management is not enough to cope up with the situation like disaster strike.

Suggestions & Recommendation for University Libraries

1. Every university libraries should have a written Disaster Management plan which includes the proper guidelines for preventive measure of disaster strike.
2. A Disaster Management Team is very important for quick action in libraries when disaster strikes. Disaster Management Team should be formed by the library staff, users and other external agencies (SDMA, NGOs) as volunteer of the team. Library security personal may act as team leader.
3. The DM team must be trained up for Disaster and Risk Management. Basic training about the Disaster & Risk management should be given to the Volunteers and that volunteer can train up the users to reduce the damages during disaster strike.
4. Training and awareness camp should be regularly organized in universities by DM Team among the library staff & users. Mock drill on fire, earthquake, and sudden building collapse should be organized regularly as an awareness program among the staff & users. DM team should regularly practice implementing the plan and ensure that there are emergency supplies onsite or close by.
5. Charts, picture and list of disaster equipments available in libraries properly inserted in appropriate position. Guidelines/ Direction of the emergency equipments/call No / exit should be properly given.
6. Regularly monitor the house-keeping equipments by DM Team.
7. Regularly communicate with external agencies like District or State Disaster Management Authority or NGOs (related) by MD Team.
8. Regularly back-up the data-bases and other digital documents.
9. Assam is a flood prone state and affected every year by current and recurrent floods. Storage of reading materials, especially paper made materials in first flood of the building as a preventive measure of the flood & flash water damages.

Conclusion:

The disaster plan of libraries covers the entire disaster management cycle from prevention and Preparedness, response, recovery, to rehabilitation and minimize the damages and loss. All libraries, which are struck by disaster, have to plan for replacement of lost items, recovery of damaged material and restarting of library services. This requires both effort and finances and manpower. Insurance is the financial security and help to replace the damaged properties and help to restore the service again. Regardless of the many forms a disaster may take, the actual damage to collections is usually caused by fire or water. Even when they are not the initial factor, fires and floods almost invariably occur as secondary causes of library disasters. It is a good practice to get a fire audit made by an external agency(BSI Standard) which will help in the risk assessment. The disaster plan has been developed by library Disaster Planning Team in collaboration with respective State Disaster Management Authority is very helpful to assessment of risk. Natural disasters cannot be prevented, but measures can be taken to eliminate or reduce the possibility of trouble.

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E-MARKETING OF LIS PRODUCTS AND SERVICES THROUGH SOCIAL NETWORKING: A SUCCESSFUL FRAMEWORK

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Abstract: Now-a-days, social networking is a new platform for easiest communication from one corner to another in the world through internet. It is very popular to the young generations as well as to our society to share ideas, photos, videos, activities, events, interest, with the group of people in their network. A revolutionary change is revealed in order to change our daily life style. Web based technology (www) have introduced the new platform especially in electronic environment i.e. e-commerce, e-finance, e-banking, e-health, e-governance, e-ticket, e-filing, e-marketing etc. E-marketing of LIS products and services are the great opportunities to the library users if the libraries use social networking tools in their products and services. First of all, this paper discusses the E-marketing system towards its concept, definition, advantages and disadvantages. Secondly, a specific discussion on social networking system is highlighted. Finally, a framework for successful design and how to use the social networking in E-marketing of LIS products and services have also presented here.

Keywords: Marketing; E-marketing; Social Networking; LIS Marketing; Facebook; Twitter; Blogs

1. Introduction:

In traditional way, marketing means the activities related to market by way of creating consumer value in the form of goods, services or ideas that can improve the consumers' life. But now-a-days, marketing means a combined process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives. So that, users satisfaction is the main aspect of the concept of modern marketing system. Due to technological development, basically internet and www, the new concept is online marketing. It is a system where products are buying online, which is convenient, hassle free, easy and time saving process. E-wallet system is the basic parameter of E-marketing.

In the context of marketing of LIS products and services, the activities of exchange of information or services between readers and staff takes place for which demand exists and the best way to satisfy the need of the users. Thus, traditional off-line concept of marketing of LIS products and services have been moved into electronic online marketing system which is on the basis of social networking i.e. Facebook, Youtube, Bolgs, Twitter etc. Social networking is a new platform in the field of E-marketing of LIS products and services to its users. It helps to share ideas, photos, videos, activities, interest, with people in their network. There are several opportunities of social networking in accordance with E-marketing of LIS products and services. These are a) marketing system, b) branding, c) creating uses relationship, d) reference services, e) quick dissemination of news. With the help ICT (Information Communication Technology), users are

benefited to access online information resources at any time anywhere in the world. Thus, all libraries need to market its products and services more and more than as before. In tradition, marketing process is very costly and time consuming. But online marketing is very easy, cheapest and time saving process. So that, every library should accept and apply the online marketing system in its products and services through social networking for getting their users' satisfaction. It is needless to point out that social networking is a framework for successful design of E-marketing of LIS products and services in our digital era.

2. Marketing:

The American Marketing Association (AMA) defined marketing as "**The performance of business activities directed towards, and incident to, the flow of goods and services from producer to customer as user**".

In 1985, AMA changed their opinion and defined marketing as "**The process of planning and executing the conception, pricing, promotion and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives**".

The Chartered Institute of Marketing defined marketing as "**A management process that identifies, anticipates, and satisfies customer's requirements profitability**".

Philip Kolter in 1980 defined "**Marketing is the human activity directed at satisfying human needs and wants through an exchange process**".

In 1991, he changed this definition as "**Marketing is a social and managerial process by which individuals and groups obtain what they want and need through creating offering and exchanging products of value with others**".

Adeyoy in (2005) defined that the concept of marketing revolves on three pillars namely, "**Marketing-Is consumer-cantered,-Is profit-centered and-Is anticipating of changes through time and space.**"

The marketing concept mainly on three aspects

a) All marketing planning and operations should be <u>**customer oriented**</u>.

b) All activities of marketing should be <u>**coordinated**</u>.

c) Customer oriented, coordinated marketing is essential to <u>**achieve the organization's performance objectives**</u>.

Thus, marketing is a total system of business activities designed to plan, price, promote and distribute wants satisfying products to target market customers to achieve overall marketing objectives. The entire system of business activities should be customer oriented and when the marketers are trying to satisfy the customer's wants, they should not stop until the customer wants are satisfied.

2.1 E-marketing:

According to Fialkoff, 2006, "**E-marketing refers to the application of marketing principles and techniques via electronic media and more specifically through internet**".

According to Dave Chaffey, E-marketing can be considered to be equivalent to internet marketing; simply defined as, "**Achieving marketing objectives through applying digital technologies**".

E-marketing is the process of utilizing information technology in the conception, distribution, promotion and pricing of goods and services that satisfy individual and organizational objects (ckbooks. com).

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┌─────────────┐
│ E-marketing │
└──────┬──────┘
       ├─▶ Online Marketing
       ├─▶ Internet Marketing
       ├─▶ Web Marketing
       ├─▶ Net Marketing
       ├─▶ Digital Marketing
       └─▶ Cyber Marketing
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Thus E-marketing is an application of business policies and principles through internet that satisfy customers' objectives as well as organisational goals.

2.2 Advantages:
    a) It is low cost.
    b) Time saving process.
    c) 24 hours marketing system.
    d) It is easy, speedy and effective.
    e) Access in global area.
    f) It is an instant purchase facility.
    g) Instant interaction between seller and buyer.
    h) Facilities in online advertising.
    i) It is a powerful tool in competition market area.

2.3 Disadvantages:
    a) Maintenance cost is very high.
    b) It is fully based on electronic environment.
    c) If the internet connection is very poor, it is barrier to speedy communication.
    d) It may be problems in security when online payment is made.
    e) Physically unavailable.
    f) It may be different in quality, size and colour of the product which is viewed on the website.

3. Social Networking:
3.1 Definition:
According to **Computing Dictionary** (2011), Social networking site is any website designed to allow multiple users to publish content of them. The information may be on any subject and may be for consumption by friends, mates, employers, employees just to mention a few.

Boyd and Ellison (2007) stated that social networking websites allow individuals to: (1) construct a public or semi public profile within a bounded system, (2) articulate a list of other users with whom they

share a connection, and (3) view and traverse their list of connections and those made by others within the system. They also noted that these websites vary in terms of features and membership. Some websites allow photo/video sharing, while others allow blogging and messaging. Participation in blogs has been regarded as social networking because blogs support formation of social connection through blog-roll activities.

Boroughs (2010) stated that social networking websites allow users to share interests and communicate with others.

Barsky and Purdon (2006), on the other hand, pointed out that social networking websites collect data about members and store user profiles that are meant for sharing. These websites are offered for free and allow users to create personal pages filled with content like images, music and videos easily. These social networks also allow members to share web pages with friends and search for new friends who have similar interests.

Taylor-Smith & Lindner (2009) stated that wikis, blogs, chat rooms, instant messengers, message boards and social bookmarking are technology applications that have been used to facilitate members' interaction, and thus, have been referred to as social networking tools.

Seufert et al (1999) define social networking in terms of knowledge networking as signifying a number of people, resources and relationships among them, who are assembled in order to accumulate and use knowledge primarily by means of knowledge creation and transfer processes, for the purpose of creating value. The concept of social networking is one of the tools of Web 2.0, which also forms the basis of library 2.0.

Social Networking System is basically based on web platform. It refers to range of web-based software programs that enable to allow users to interact and work collaborative with other users. It is a system where any user can perform to browse, search, invite to friends to connect and interact, share videos, comments, blog entries, favourites, discussions, events, chatting, ratings, music, classified adds, tag and classified information and more. Thus, it is an online system that makes social relationship among people.

3.2 Features:

There are five features included in social networking site which are mentioned below-

a) **User-based:** anyone can update the content, simultaneously read that content easily by all.

b) **Interactive:** online game is attached here for entertainment to interact and share fun with friends.

c) **Community-based:** it creates community or social groups where members hold common beliefs or hobbies.

d) **Relationship:** an easiest way to create good relationship in online mode among people.

e) **Instant Situation:** natural calamities (i.e. earth quick, flood, desire etc), accident case and other allied situations are linked with social networking site for knowing update news.

3.3 Reasons for SNS:

a) It is an easiest process to connect among the people in the world.

b) It is free in access.

c) It is user friendly.

d) It is a popular way than other.

e) Compulsorily updated information is available.

3.4 Types of SNS:

Generally SNS can be categorised in two types. These are

a) **Internal Social Networking (ISN):** An ISN is a closed / private community that consists of a group of people with in a company, association, society, education provider and organisation or even an "invite

only" group created by user.

b) External Social Networking (ESN): An ESN is open / public and available to all web users to communicate and is designed to attract advertisers. Example- Facebook, MySpace, Twitter etc.

3.5 Latest list of top 15 SNS:

The top 15 Most Popular Social Networking Sites as derived from *eBizMBA Rank, Last Updated* May

Name of SNS	Estimated Unique Monthly Visitors	Rank
Facebook	1,500,000,000	1st
You Tube	1,499,000,000	2nd
Twitter	400,000,000	3rd
Instagram	275,000,000	4th
LinkedIn	250,000,000	5th
Reddit	125,000,000	6th
VK	120,000,000	7th
Tumblr	110,000,000	8th
Pinterest	105,000,000	9th
Google +	100,000,000	10th
Flickr	80,000,000	11th
meetup	42,000,000	12th
Ask.fm	40,000,000	13th
Livejournal	37,000,000	14th
Myspace	10,000,000	15th

3.6 Advantages of SNS:

There are some facilities relating to advantages of SNS, which are stated below-

a) A large range of connection through World Wide Web.

b) Some social groups are acting as commonly interest i.e. same morality, same hobbies, same behaviour etc. These are facilities from SNS.

c) It is not a time waste process.

d) Free advertising facilities are attached here to increase sales promotion in the field of business product and services.

e) It is open to all to join as a member in their respective community or social group.

f) It helps to develop our science community with the help of new idea and knowledge.

g) Most of the SNS allow conferencing, creation, interaction and research on a global scenario that helps to develop our modern society relating to research and development; education; trade and commerce; health; agriculture; science and technology etc.

h) Huge job opportunities are available here for unemployed youth.

3.7 Disadvantages of SNS:

Simultaneously, some drawbacks are here. These are-

a) Cyber Bullying: It may be meaning as cyber harassment i.e. posting negative comment, abusive words, dislike photos and videos.

b) Cyber Crime: There is no restriction field for creating fake profile in SNS that encourage acting

as cyber crime.

c) **Identity Theft:** GPS- enable mobile phones sharing user location can reveal sensitive information like home address, work address, place visited etc. that means as identity theft.

d) **Effect in health:** It has negative effect in both mental and physical health. The main issues are i) social media addition, ii) mentally depression, iii) isolation, decreased physical activities, iv) sleep break-up, v) use of drug and alcohol, vi) morbidity action.

e) Bad effect on children and teenagers: A study was conducted by National Mental Health Survey that shows teenagers and children are more affected due to reason of use of SNS. They are addicted just like as drug and alcohol.

f) **Spread misinformation:** There are huge options for spread out the misinformation in SNS and no controlling measures are attached here. It is a bad impact of SNS.

4. Why E-marketing used in LIS:

Marketing of LIS products and services are more valuable in our present day scenario. The library users are more important factor and the library products and services are developed according to their demands. Marketing is the systematic plan that focuses on development of products, place or mode of delivery, adjustment of price to the market and promotion to specially targeted groups of the library market. But in some cases libraries do not focus on producing new products. They may be producing the old products in repackaged and promoted in different place or for a new segment of consumers. Marketing means a sufficient change in the traditional attitude of library towards acquisition, organization, processing, storage and retrieving information. The library can satisfy their customers by systematic collection procedures, policies, and develop its products and services according to the demands of their customers.

• **Kotler (2000)** pointed out that **"Organizations such as museums, universities, libraries and charities need to market their causes and their products to gain political and social support as well as economic support".**

• **According to Mi and Nesta (2006)**, **"Marketing is the key to the success of the library and listening to customers is the key to marketing".**

• **Vishwa Mohan, Shrinivas and Shashikala** observed that, **"Marketing is essential because those who lack information may not even be aware of this need".**

• **Dr. S. R. Ranganathan**, the father of library science in India, has observed the need of marketing of library services. He tried to focus on the increasing of the usage of library resources. Ranganathan (1957) defined:

a) Users (Customers)

b) The staff (Service providers)

c) The information resources and system (Difference type of material, systems, procedures, etc.) have greater relationship with each other in library and information services.

We are in digital era. All information may be available through internet. Thus traditional libraries should shift into modernised system. E-marketing is a system where LIS professionals and library users easily connect and communicate with their needs. E-marketing provides LIS professionals to help their users for access to information resources through internet in the different electronic forms i.e. E-mail, Website, Blogs, Facebook, Youtube, Chat etc. It is the essential administrative activities for users' satisfaction in the field of LIS products and services. There are several reasons for implementation of E-marketing system in LIS. These are-

a) To inform about the new products and services that will be benefited the users.

b) To know about the library materials available to the users.

c)   To optimise the use of products and services.

d) To increase the collection of libraries' materials.

e) To develop the libraries' services.

f)   To achieved users' satisfactions regarding LIS products and services.

g) To implement the ICT in LIS products and services.

h) To interact instantly with the users.

5. E-marketing of LIS Products and Services through Social Networking:

A good number of social networking sites can be used to promote the LIS products and services. E-marketing of LIS products and services through social networking is an important factor for libraries. It is an opportunity to interact between the library users and LIS professionals. Most widely used social networking platforms are Facebook, Twitter, Blogs, Wikis etc.

a) Facebook:

The most popular social networking site for marketing of LIS products and services is Facebook. It allows registered users to create profile, update photos and videos, send messages and keep in touch with friends, family and colleagues. It has affected our social life and activity of people. It provides users to choose their own privacy settings and choose who can see specific parts of their profile.

Libraries can use Facebook to market the library with a library fan page. Libraries can advertise hours, location and website information. By linking to the library's website, the Facebook page acts as a portal to the library. As students frequently use outside search engines for academic research, even a basic Facebook page can serve as reminder to use the resources available at an academic library. Libraries also create event invitations for programs an additional forum to promote library activities. OPAC search is another facility for LIS marketing through Facebook. So Facebook pages provide a marketing tool for the services available to users at their library.

b) Twitter:

Micro blogging is a newer option made popular by twitter. Twitter allows registered users to post brief messages for other users who follow the account and to comment on the other posts. Unlike traditional blog, sites such as twitter allow librarians to go where the students are already located. Libraries can post hour changes, events, new resources available, search tips, deadline, links to the library websites and responses to student comments. It is used to keep library staff and patrons updated on libraries' daily activities. For making it more distinguished, it is important to give it a personal touch. For instance, add pictures to your Twitter account page's wall paper. Set-up searches for your Twitter account to save and retrieve them quickly, e.g. set up a search on the name of your library, or set up a geo-location search.

c) Blogs:

Blogs is an oldest SNS. It is called as a weblog or web log. It is a web application that contents periodic, reverse chronologically order posts on a common webpage. For marketing of LIS products and services it is most helpful for using information to end-users, in order to create awareness of library products and services in virtual environment. Update information, news, events, collections are online available without assistance of technical staff and knowledge. Instant request feedback, comment, links are helpful to interact with the library staff and patrons. It also helpful for marketing to provide the new collection of the libraries and to develop the services that is available online. With the help of Blogs, LIS professionals can develop

the subject heading, title etc. that are encouraging the use of library services through internet.

d) Wikis:

Wikis is another social media platform for marketing of LIS products and services. It is used for virtual reference, desk management, digital content and databases that offer multiple authors, subjects, titles. Instant update news, services collections are as a collaborative manner for the uses. Librarians can also share the knowledge and information and add more resources via wikis for users' benefits. There are some third party hosted wikis which can be used by librarians for marketing such as:

• **PBWorks**- it is easy to use and is education oriented. It offers enterprise-wise solutions, most of which come at a fee, as well as free personal wikis for non commercial use. (www.pbworks.com)

• **Wikispaces –** it is widely used by school librarians as a home page for their library. It offers free and paid plans for educators depending on the level of storage space, branding, and functionality needed. (www.wikispaces.com). For example the Beaufort Academy Library website is using this facility.

• **Locally Hosted Wikis** - These allow users more control in creation and management. The software is also free of ads and many are free to download as open source software. A good example is Tiki – a open source, free wiki software, is unique because it boasts some of the most frequently built-in features, including social networking components (polls, chat, comments, etc.), e-learning tools(quizzes, webinars, etc.) and personal information management (calendars, address books, time sheets, etc.) (www.info.tiki.org).

e) LIS Links:

LIS Links is the India's first and largest Social Network for Library and Information Science Professionals. LIS link provides a platform for the librarians to offer latest news or information for the users in order to marketing of LIS products and services. It provides information regarding events, announcements, jobs / vacancies, Book reviews, information about new books and Internet Resources, provides discussions with subject experts. It is the best new platforms for library marketing through online system only specific for LIS.

6. Conclusion:

Our present decade is fully based on information technology that provides different types of electronic forms i.e. E-mail, Website, Blogs, Social Networking etc. The new concept is revealed in our society. These are e-commerce, e-governance, e-banking, e-marketing etc. Most of the people are connected and communicated through social networking like Facebook, Twitter, Whataps, Youtube etc. for saving their time. Social networking provides a good number of opportunities in order to communication from one corner to another in the world. With the help of social networking, online marketing exists in business sector for reaching end-users without any barrier. There is cost benefit, time saving process and other allied facilities are available in the process of E-marketing system. Now-a-days, it is necessary for libraries to adopt and accept the social networking platform to market its products and services. Due to information explosion, variety demand of the users, growing population of patrons, libraries should have selected the social networking platform for marketing of products and services for their users. It is an easiest connectivity between LIS professionals and library users. Thus, social networking is a successful framework and design for E-marketing of LIS products and services and it is a soul of E-marketing system that share online information around the world.

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E-LEARNING IN DIGITAL ENVIRONMENT: PERSPECTIVES OF EDUCATIONAL INSTITUTIONS

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Abstract

E-learning or online learning is the newest form use of Information and Communication Technology (ICT) to enhance and facilitate teaching and learning in education era. E-learning provides quick reaction learner and teacher for their understanding and real time access information. E-learning provides 24/7 accessibility from anywhere, any person, anytime and makes scheduling easy and allows a greater number of people to attend classes. E-learning is the importance factor in digital environment which is the delivery of knowledge through digital information over the internal, either to replace or to augment face to face teaching with a computer based virtual learning environment. This paper presents the three dimensions of e-learning control digital environment for achieving higher education and focuses on the encouraging the success of higher education as well as student benefits.

Keywords: E-Learning, Digital Learning, Educational Institutions, Online Learning

Introduction:

The advanced of information technology more than half of the world's population now use the Internet. The growth of information technology has changed the way student's knowledge and changed the way of learning as well. E-learning has exciting implications for businesses, governments, and society in general which that digital connectivity is changing the lives of people all over the world. E-learning is nothing but it is the type of extension classroom learning that is facilitated by technology or by instructional practice that makes effective use of technology. According to Jiddu Krishnamurti *"There is no end to education. It is not that you read a book, pass an examination, and finish with education. The whole of life, from the moment you are born to the moment you die, is a process of learning. So that* e-learning learning promoting across all learning areas and domains which that the emphasis is on making available the study material at the convenience of the user. E-learning helps us to share knowledge and skills of the professionals work in schools, colleges and universities, and to get the right information to the right people, anytime any person whenever they needed. E-learning easy access to materials, flexible space, time and pace of study and immediate feedback are some of the advantages that make language learning a fun thing to go.

Scope of E-Learning

E-learning is a most important subset of education technology which offers an online learning and teaching platform to disperse knowledge with the help of internet technology in the world. E-learning takes place both inside and outside of the classrooms. There is a huge scope of E-learning in the world, especially for the youths. E-learning has opened new avenues to education in India & has changed the dynamics of educational content. E-learning has surpassed challenges of reaching out to a varied audience, overcome

the non-availability of adequately qualified teachers in rural area & making rich content available to an audience that was unreachable earlier. Today, with changing times, basic education is taught with a single computer in rural villages & has helped several children to get exposed to primary levels of education.

Dimensions of E-learning

E-learning has dependent on digital technologies can enable the students to grasp concepts about the main subject more quickly and fully. In the same time more students can join same common classes from any part of countries and they can clarify any confusion, while also improving instructional techniques, leveraging instructor time, and facilitating the widespread sharing of knowledge. Digital technologies bring out student's performance any new and better ways to create possibilities beyond the limits of our current imagination. The three major dimensions are most important for e-learning us such as

i) Digital Devices

A digital device may be any mobile electronic technology such a computer, laptop, tablet, Smartphone, including assistive technologies, which students use to support learning. Devices may be owned by the student or provided by the institutions. Each and every student has access to a digital device to support their learning at a common time. Digital device initiative allows access extends beyond the classroom whereas students can use their device for learning anywhere, anytime.

ii) Internet

Tim Berners-Lee introduced the 'World Wide Web' available to the public since the internet has already become an integral part of everyday life for most of the world's population. The global future is developing through communication, collaboration, and innovation all of which are dependent on technology. The Internet is now a global marketplace, a global workspace, and a global meeting place from any part of countries with connecting multiple computer systems can share people to people information and learn about the world.

iii) Cloud

Cloud computing technology can serve as a reservoir of information which students can access when they are connected through their own mobile devices or PCs. The use of cloud of e-learning allows the learners to access the learning applications and courses without the need of any installation on their own devices. The users no need to worry about maintenance or upgrades as those are handled by the cloud vendors. Cloud-based e-learning is a safe option because the software as well as the data reside on remote servers and are protected against security breaches. Cloud computing provides huge of information available without the hassle of maintaining a large server and data storage farm.

Impact of Digital Technology for Global E-Learning

Digital technology help to students both understand and contribute to the richness and complexity of our wide world. According to Tony Blair, (1998) "Technology has revolutionised the way we work and is now set to transform education. Children cannot be effective in tomorrow's world if they are trained in yesterday's skills. Nor should teachers be denied the tools that other professionals take for granted."

1. Develop information literacy on a global scale. It helps the students identify access, analyze, and evaluate specific information from around the world.

2. Discover personal opinions: E-learning is a technological based through which students and teacher can interpret to each other. They can create individual blog posts, podcasts, and videos as well as dialogue

via comment boards, video-conferences, and any number of collaborative technology tools.

3. Tap into global knowledge networks. E-learning help students realize the power of   collective intelligence through global networks where information is collected and disseminated. Students can learn their own interest in global teams to responsibly build on existing knowledge as well as generate new knowledge.

4. Promoting a global audience through online publishing. The current day's e-learning helpful to students share their research and ideas through technology within a classroom or school beyond they can share their learning worldwide through online publishing tools and websites that reach a global audience.

5. Harness the power of virtual simulation: The use of virtual reality, games, and modeling applications that simulate real-world experiences through technology, students can test out global theories while immersing themselves in the target content.

Promotion for E-Learning in Educational Institutions

E-learning is the demand of the time. We have to prepare our students and bring suitable modification and improvements in the prevailing system of our educational institution to face this challenge. The following steps for promoting e-learning in educational institutions are

1) The first and foremost things that need to be done are to develop a positive attitude towards the processes and products of e-learning. The students should be made to appreciate the fruits of e-learning.

2) Provide the need facilities for training and equipping the students and teachers with the essential technical knowledge and skills related to the operation.

3) Provide proper orientation to the staff and students not only in terms of making them technologically capable for engaging in e-learning but also to have full awareness about all the possible advantages and gains drawn from such ventures.

4) More computer systems connect with full Internet facilities and classroom Websites for giving opportunities to the teachers and students to carry out the teaching-learning tasks using the mechanism of e-learning.

5) E-learning makes adequate provision for the availability of the technical support services to train and provide online support to both the teachers and students in reaping maximum benefits from e-learning programme.

Students Benefits of E-learning

1) E-learning provides individualized instructions suiting to the need, abilities, learning styles and interests of the learners. The learners can access information and educational contents anytime and at any place. E-learning is available even in areas where there is no school or college. It can reach any remote or far off areas of the country or world.

2) E-learning enables even handicapped like deaf and dumb to learn.

3) E-learning has a unique feature of arranging an access to an unlimited number of students the same quality of the content that a full-time student has.

4) Provides different learning styles unlike traditional classroom education, e-learning can cater to different learning styles and promote collaboration among students from different localities, cultures, regions, states, and countries.

5) The flexibility of e-learning in terms of delivery media such as CD, DVD, Laptops and Mobile Phones, these types of courses and access may prove very beneficial for the learners.

6) E-learning leads to self-learning. It can be utilized for improving technical and vocational skills.

7) E-learning provides opportunities for testing and evaluating the learning outcomes of the learners which are available with the reading material online, or through the internet and mobile phone facilities.

Conclusion

Although e-learning is still in its infancy, it clearly has a huge potential to revolutionise and enhance all our futures education as well. E-learning completely depended on technology devices becomes faster, more reliable, more affordable and more interoperable, so will e-learning become more and more entrenched in our daily lives. Many of the universities, schools and colleges are conducting their course online and also certificate will be provided online. For that present and future e-learning has surpassed challenges of reaching out to a varied audience, overcome the non-availability of adequately qualified teachers the rural area & making rich content available to an audience that was unreachable earlier. Today, with changing times, basic education is taught with a single computer in rural villages & has helped several children to get exposed to primary levels of education.

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E-RESOURCE MANAGEMENT IN THE PRIVATE UNIVERSITY LIBRARIES OF BANGLADESH: PERCEPTION OF LIS PROFESSIONALS

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Abstract:

__Purpose__ -The objective is to investigate LIS professional's perception, present status of e-resourcesin the Private University Libraries of Bangladeshand to provide suitable recommendations that can be applied for the betterment of e-resource management.

__Design/methodology/approach__ -An interview method was employed to gather data from 35 Library and Information Science (LIS) professionals in selected private university libraries of Bangladesh. Data was collected by using a set of well-structured questionnaires. Quantitative data was analyzed using the descriptive analysis technique of SPSS and qualitative data was interpreted using thematically.

__Findings__ - Findings revealed that e-resources are now very common and popular in Private Universities. E-resources are used at different level by the users with E-reports, CD ROM, E-content page, E-journal are recording high usage. LIS professionals perceive that e-resource are useful for their libraries as enhances overall learning, reduces working time, fulfill the increasing demand of learners, provides learners with access to knowledge resources etc. Though the study showed positive growth of e-resource, it suggests library to ensure high internet connection; install more computers and backup systems; provides description of resources in the database; increases budget. The study also recommendsemphasizing on controlled vocabulary, advanced search strategies, licensing issues, and training as well ascampaign programs.

__Practical implications__ - For LIS professionals, this quantitative and qualitative analysis of e-resource managementoffer an inclusive picture of using and application of e-resources in university libraries.

__Originality/value__ - The insights and views obtained from the LIS professionals are original. The suggestions and recommendations will help to improve e-resources services of the developing countries.

__Keywords__ - E-resource Management; LIS professional's perception;Private University libraries; Bangladesh.

__Paper type__ - General Review

1. Introduction

Library has been a collection of information materials for ages and print media have been the bulk of the library resources. However the advent of information technology in the early 1990s led to the emergence and continuous exponential growth of digitally or electronically born information resources (Parker, 2007). These electronically born information resources are known as e-resources and the e-resources refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the internet or locally frequently encountered types are E-Journals, E-Books, Full-text databases, Indexing and Abstracting databases, Reference databases, Numerals and Statistical databases, E-Images, and E-Audio/Visual Resources (IFLA,2012). Sharma (2009)

identifies e-resources to include journals, data archives, manuscripts, maps, books, magazines, theses, newspapers, e-mail, research reports, and bibliographic databases. It also includes products that aid in resource access for patrons such as A-Z lists, open URL, servers, Federated search engines and resources that provide full-text content such as publisher's electronic journal content, journal content platform such as Project Muse or Jstor and content aggregator such as EBSCOHOST's Academic Search Premier and proxy servers or other authentication tools (Bothmann and Holmberg; 2010).E-resources are revolutioning in learning environment.In higher education these become part and parcel of the academic process (Mutual andMakando, 2003). Now Researcher cannot think of performing their work without adequate access to E-resources. Multiple accesses speed, richer in content, reuse, timeliness, anywhere access made E-resources popular. For using E-resources, traditional barriers of time and space are overcome. Because the E-resources can be stored, accessed and delivered as and when required, therefore the services of the libraries are not confined within the four walls but are integrated into local, regional, national and international networks for information seeking and retrieval.

In this paper an attempt has been made to investigate LIS Professionals perception and existing situation of e-resources in the Private University Libraries in Bangladesh. Moreover, this paper also provides recommendation to improve the E-resource management.

2.1 E-resource Management in academic Libraries: Global Scenario

There have been many studies on users of e-resources in the professional literature in the last few years (Borrego,et al. 2007). Agaba (2003) carried out a study on e-resources usage at Makerere University. The results of this study indicated low usage of e-resources. Ahmed (2004) surveyed in United Arab Emirates, to look the use and user perception of e-resources in UAE University. Results of use of e-resources were very much low due to language barriers and computer illiteracy. A Case Study was carried out on use and Impact of E-Resources at Guru Gobindo Singh Indraprastha University in India by Sharma (2009). Here, he observed that using e-resources was very common among the teachers and research scholars and many ofthem were relied on e-resources. But use of e-resources is not up-to the mark due to lack of investments, lack of training, lack of proper infrastructure. A case study conducted by AnasandShanthi (2012) on Utilization of e-resources in Pondicherry University library. The study concludes that almost all respondents were conscious about of available e-resources such as e-books, e-journals, e-articles, and e-databases and as well as being utilized for academic purposes. But the majority was strongly opposing the replacement of traditional resources by e-resources. Respondents were looking forward to more support from library professionals. They need thorough orientation and training on this use of e-resources. Das andMaharana (2013) conducted a study in Berhampur University to see the access, awareness and use of electronic information resources by research scholars. The study shows that researchers used e-resources from the given university but that's was not up-to-worth. This study also found out some of those problems and also recommended some suggestions. Arachchige,NiqreshandDweiri (2015) conducted a study named by challenges facing students at Al Balqa Applied University in using digital information sources. Here they found that using e-resources was a challenge for students at Princes Alia University College. This challenge may have many reasons either because of the instructors who never train their students to use such sources, or may be from the unequipped libraries or from students themselves. Daramola (2016) carried out a study to assess the perception of the undergraduate students of the Federal University of Technology, Akure on the use of e-resources in the library. The study reveals that the undergraduate youngand male students that visited the e-resources more than the aged andfemale students. The major reasons for using e-resources were to access emails, do assignment and carry out research. Though the study reveals a positive perception of the students to e-resources in the FUTA library, it also found that the students were not motivated to use

the e-resources and the utilization of e-resources did not provide a better way of relaxation for the students.

2.2 E-resource Management in academic Libraries: Scenario of Bangladesh

Habibaand Chowdhury (2012) regulated a study on use of E-resources and its impact at Dhaka University Library (DUL) where they found that most of the users access to e-resources every day and use e-resources for many purposes such as for learning and for current information. They also found the problem faced by DUL users as slow download speed and bandwidth of internet connection in DU campus.

Mostafa (2013) made a work as a survey study at some selected private universities of Bangladesh about the use and impact of e-resources. The result shows that like all other e-resources the majority of respondents to the e-thesis. Similarly, e-books, e-newspapers and e-journals. It was seen that number of participants uses e-resources according to their need. But the server encountered a major problem with the use of e-resources.

Ahmed (2013) conducted a research on use of e-resources by the faculty members in diverse public universities in Bangladesh. Here he shows that faculty members were usually unsatisfied with the current level of university subscribed e-resources. They identified limited number of titles, limited access to back issues, difficulty in finding information, inability to access from home, limited access to computers and slow download speed as major constraints. These constraints do affect e-resources use in the public universities. However, these constraints occurred due to the poor IT infrastructure and limited access to e-resources, which may also lead to other constraints such as an unwillingness to use the resources regularly and consequently low satisfaction with such resources.

Islam andHabiba (2015) conducted a research on using pattern of Internet and E-resources by the Eastern University students and faculty members. The study tried to find out the constraints faced bythem in accessing the internet and e-resources. Here some recommendations were provided for improving Internet and E-resources services.

From the foregoing comprehensive review of literature reveals those numbers of studies in libraries have reported on using e-resources from multiple perspectives in a particular country or a particular region of the world by multiple users such as Students, Researchers, Faculty member's etc. But there have a scarcity of studies about the perceptions of LIS professionals with regard to Present Status of E-resources aboutits useand application in the university libraries of Bangladesh.

Therefore, the present study has made an attempt to explore the perceptions of LIS professionals, to know the present status of e-resources and to provide recommendations to improve the e-resources and services.

3. Aim and Objectives of the Study

The study has been designed with a view to achieving the following objectives are to:

1. Find out the present status of e-resources in the private university libraries in Bangladesh.

2. Measure the perception of LIS professionals about e-resources in academic libraries.

3. Provide suitable recommendations to improve the e-resource management for the benefit of users in those libraries.

4. Research Questions

This study has posed threeresearch questions (RQs) with a view to achieving the objectives of the study.

RQ 1: What are likely to be the present status of e-resources in the Private University Libraries of Bangladesh?

RQ 2: What is likely to be the perception of LIS professionals about e-resources in their libraries?

RQ 3: What are the probable solutions that can be applied to improve e-resource management for the benefit of users in Private University Libraries of Bangladesh?

5. Research Methodology:

Bangladesh has now 80 private universities that are operational in five out of seven divisions of the country. Another 12 universities has been approved by UGC recently but yet to start operation. So total number of approved private university is now 92 (as of February, 2016); (Wikipedia). The study sampled five private university libraries from 92 universities. The selected libraries i.e. Ayesha Abed Library (AAL), BRAC University, East-West University Library, (EWUL), Independent University, Bangladesh Library (IUBL), North South University Library (NSUL) and Daffodil International University Library (DIUL) are high ranked and pioneer of using e-resources in Bangladesh. The study expects that it can get a clear idea about e-resources management in private universities of Bangladesh by analyzing the results of those selected five libraries. Then the study randomly selected thirty-five library professionals from the above mentioned five universities who were considered as the research sample. A printed version of the questionnaire was distributed in the respective samples. However, the questionnaire for the interview on "Usage e-resources in Private University Libraries in Bangladesh: Perceptions of Library and Information Science (LIS) Professionals" was designed to collect data about e-resources in libraries that included both open and closed-ended questions. . Responses to closed-ended questions in particular on 7-point Likert scales were analyzed using the descriptive analysis techniques of SPSS 16.00, and responses to other closed-ended questions were analyzed using general statistics. Responses to the open-ended questions were coded to identify the themes within the questionnaire data that relates to the research questions of this study.
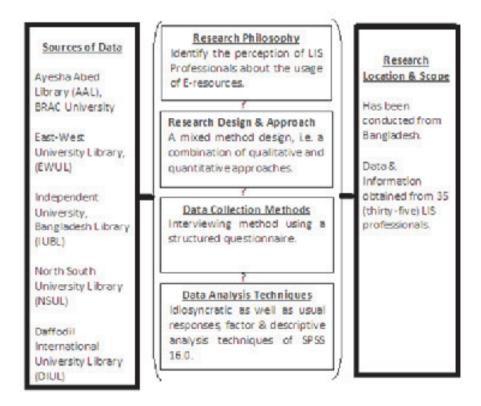
Figure 1: Research methodology used in this research

6. Result and discussion of findings

The interview results indicated that 35 (thirty-five) responses were received from LIS professionals in five private university libraries about e-resources use and application in their libraries. The results show that each library among the five was going ahead on the using of e-resources. Many days had passed they introduced with e-resource section. They used specialized software for providing better service of e-resources. Library professional's statements reveal that they had not faced serious problems during use e-resources in their library but they had some recommendation for enriching the e-resources service.

6.1: Demographic information:

Participated professionals were asked about their gender, working position and working year.

Table 1: Demographic information of the Interviewers

Gender	Frequency (N)	Percentage (%)
Male	21	60
Female	14	40
Total	35	100
Working Position		
Library Head/ Librarian	05	14.29
Deputy Librarian	02	5.71
Senior Assistant Librarian	02	5.71
Assistant Librarian	11	31.43
Library Officer/Junior Assistant Librarian	15	42.86
Total	35	100
Working Year		
0-5	16	45.71
6-10	10	28.57
11-15	06	17.14
16-20	03	8.57
21 and above	00	0
Total	35	100

Result in Table 1 shows that 60% belong to male and 40% belong to female. The percentage of responses respectively come from "Library Officer/Junior Assistant Librarian" (43%), "Assistant Librarian" (31%), "Library Head/ Librarian" (14.29%), and "Deputy Librarian" as well as "Senior Assistant Librarian" (6%). In interviewee's demographic information, participants also asked about their Working Year. On their working year it reveals that 16 interviewees (45.71%) are working during "0-5" years, 10 (28.57) professionals are working about "6-10" years closely followed by 6 (17.14%) interviewees are serving for libraries "11-15" years and the rest 3 interviewees (8.57%) are working about "16-20" years. For this study we don't find

any professionals who have 21 years working experience.

6.2 Concept of e-resources

LIS professionals were asked to explain their understanding about e-resources briefly. All defined e-resources according to their understanding which are enumerated below:

Maximum reported E-resources means electronic format of information material, some of them reported e-resources mean digital material, few said any library resources in electronic format and one asserted e-resource is store house of knowledge in electronic format.

E-resources require an electronic device. Almost all mentioned e-resources are those materials that require an electronic device for accessing.

E-resources require computer access, whether through a personal computer, mainframe, or handheld mobile device.

E-resources may either be accessed remotely via the internet or library website. Few said e-resources are available via online.

They mentioned various format of e-resources. i.e. E-Journals, E-Books, Full-text databases, Indexing and Abstracting databases, Reference databases, Numerals and Statistical databases, E-Images, and E-Audio/Visual Resources. Many identified e-resources to include data archives, manuscripts, and maps.

They asserted e-resources allows, reprint, copy etc. They added that e-resources allows library to download documents, that users can accessed via computer and users are also allowed to collect and preserve those materials.

Thus, now I can conclude respondent's comments as e-resource meansinformation materials that isavailable in electronic format and to access only electronically. Library can preserve documents for their users.

6.3 Introducing e-resources in your library

The participating library professionals were asked when e-resource was introduced in their libraries. The data, received from the interviewees, was summarized about Introducing e-resources in their libraries.

Table 2: Introducing e-resources in your library

Introducing Year of E-resources	Frequency (N)	Percentage (%)
Less than 1 year	0	0
2-5 years	7	20
6-10 years	21	60
11-15 years	07	20
Total	35	100

Table 2 delineates the year of using e-resources in libraries. Among them, 60% of the libraries (n=21) have been using e-resources for 6-10 years, 20% of the libraries (n=07) have been using it for 11-15 years and the rest 20% of the libraries have been using it for 6-10 years.

6.4 Total attendance of per day users in e-resources section

Participated professionals were requested to tell the total amount of per day users in e-resources section.

Table 3: Total attendance of per day users in e-resources section

Total attendance	Frequency (N)	Percentage (%)
200-350	0	0
350-500	12	34.28
Over 500	18	51.43
Others	05	14.29
Total	35	100

Table 3 shows that 51.43% (n=18) said "Over 500", 34.28% said "350-500", while 14.29% (n=05) said "others".

Who said "others", they were further requested to mention their accounts about the total attendance of per day users in e-resources section. But they didn't mention, they explained that they didn't know accurate number.

6.5 Rating on the degree to which LIS professionals agree/disagree that e-resources are preferable for university library services

Participated LIS professionals were told that they prefer e-resources for university libraries, then they were asked to say why they have preferred e-resources in their library. The responses received from them were measured on seven point Likert scales, and responses were calculated according to the following scores: strongly disagree=1.00; disagree=2.00; somewhat=3.00; neutral=4.00; agree=5.00; agree somewhat=6.00; strongly agree=7.00 using the descriptive analysis techniques of SPSS 16.0.

Table 4:Rating on the degree to which interviewees agree/disagree that
E-resources are preferable for university library services

Statements	N	Minimum	Maximum	Mean	Std. Deviation
Equip learners with appropriate classification and cataloguing rules	31	2.00	7.00	5.68	1.30
Overcome location and size constraints	32	3.00	7.00	5.88	1.07
Provide learners with access to knowledge resources very easily	32	3.00	7.00	5.94	.91
Make it easier to keep up development of own field	32	3.00	7.00	5.84	1.16
Extend the range of work that is available	32	3.00	7.00	5.75	1.01

Reduced working time	32	3.00	7.00	6.09	.85
Fulfill the increasing demand of learners	32	3.00	7.00	5.97	.96
Offer appropriate knowledge for handling and operating the latest technologies	32	3.00	7.00	5.91	.85
Enhance overall learning process	32	3.00	7.00	6.19	.965
Valid N (listwise)	31				

Equip learners with appropriate classification and cataloguing rules

The interviewees agreed with the statement (with the mean score of 5.68) that e-resources help learners with appropriate classification and cataloguing rules.

Overcome location and size constraints

E-resources save space and are relatively easy to maintain. The interviewees agreed with the statement (with the mean score of 5.88) that e-resources help libraries overcome the location and size constraints.

Provide learners with access to knowledge resources very easily

Libraries have always served as access points for information, services have evolved from the days of closed stacks through shelf browsing and card catalogues, punch cards and OPACS to the concept of open access and institutional repositories (Cisse,2004). Eisenberg (1990) noticed that access is more important than ownership. By using e-resources users can access a particular article or journal within minutes or even seconds. E-journal allows intelligent full-text retrieval based on past use and interests (i.e.profiling) (Rodgers,1993). The interview participants agreed with the statement (with the mean score of 5.98) that e-resources provide learners with access to knowledge resources very easily.

Make it easier to keep up development of own field

E-resources are the best means of getting current and up-to-date information (Ansari, Nasreen and Zuberi; 2010). Emerald, Ebsco, Scopus are some of the examples of online databases. All updated information is published in these e-resources. So it becomes useful for library professionals to keep up development of their field. The interview participants also agreed with the statement (with the mean score of 5.84) that e-resources made easy to keep up developing their own field.

Extend the range of work that is available

The interviewees agreed with the statement (with the mean score of 5.75) that e-resources extended the range of work that is available.

Reduced working time

E-resources reduce working time for library professionals. Thirty five library professionals were asked the question. They agreed with the statement (with the mean score of 6.08) that e-resources reduce working time.

Fulfill the increasing demand of learners

Brophy (2009) noted that the advantages of electronic resources over print include speed, ease of use,

ability tosearch multiple files at the same time, ability to save, print and repeat searches, more frequent updating, and the ability to access documents from outside the library (a particular advantage for the distance learner). Thus e-resources are necessary for fulfilling the increasing demand of learners. The interviewees agreed with the statement (with the mean score of 5.97) that e-resources are for fulfilling the increasing demand of learners.

Offer appropriate knowledge for handling and operating the latest technologies

Invention of e-resources can be seen as the most recent development in information technology and are the most powerful tools in human history. The interview participants agreed with the statement (with the mean score of 5.91) that e-resources offer appropriate knowledge for handling and operating the latest technologies.

Enhance overall learning process

E-resources have exploded in popularity and use. They can and do enable innovation in teaching, and they increase timeliness in research as well as increase discovery and creation of new fields of inquiry (Shameen; 2005). Ray and Day (1998) stated that e-resources serves as a motivating factor to students as it electronic information sources offer today's students opportunities different from their predecessors. In a word e-resources enhance overall learning process. The maximum interview participants agreed with the statement (with the mean score of 6.19) that it enhances overall learning process.

6.7 Level of using e-resources

Armstrong, et al.(2001) conducted a study on the use of electronic information systems by higher education students to gather information on information seeking behavior and use of electronic information systems of students and faculty in a number of UK universities. The findings suggested increased use of search-engines, email and OPACs by both under- and postgraduates, and lower use of databases and e-journals. Here the participants were requested to say about their level of using different types of e-resources. The responses received from them were measured on seven point Likert scales in Table 3.6, and responses were calculated according to the following scores: never=1.00; rarely=2.00; occasionally=3.00; sometimes=4.00; frequently=5.00; usually=6.00; every time=7.00 using the descriptive analysis techniques of SPSS 16.0.

Table 5: Level of using different categories of e-resources

Categories of e-resources	N	Minimum	Maximum	Mean	Std. Deviation
E-Journals	31	2	7	5.68	1.301
E-newspaper	35	3	7	5.80	1.368
E-reports	35	4	7	6.40	.847
E-Books	35	3	7	5.23	1.395
E-Content Pages	34	4	7	5.88	1.122
Reference books	33	1	7	4.76	1.888
Reference databases	35	1	7	5.37	1.536
Factual databases	34	1	7	5.06	1.774
Dictionaries	32	1	7	4.09	1.957
CD ROM	34	4	7	5.91	1.026
E-mail	35	1	7	4.86	1.683
Valid N (listwise)	26				

E-Journals

E-journal is becoming quite popular because the cost of electronic equipment is falling down considerably, thereby making e-publishing cost effective. The cost of electronic publishing and distribution has also become more economic than paper printing (Jones; 2000). The interviews agreed with the statement (with the mean score of 5.68) that e-journals are used at a large extent.

E-newspaper

The e-newspaper is expected to become a convergence of the printed newspaper and the online newspaper (Ihlstromet al; 2004). It has attracted the interests of newspaper organizations since the potential replacement of the printed edition in the future would dramatically reduce production and distribution costs. The respondents agreed with the statement (with the mean score of 5.80) that e-newspaper are used widely.

E-reports

The interviews agreed with the statement (with the mean score of 5.68) that clients are greatly interested on e-reports.

E-Books

For librarians, e-books are easy to download, can be customized to suit individual needs (especially by those who may be physically handicapped), allow many people to access the same book at the same time, are free from problems of being misplaced, and do not suffer from wear and tear or theft (Rao, 2001; Snowhill, 2001 and Tedd, 2004). The participated professionals agreed with the statement (with the mean score of 5.23) that e-journals are popular and used widely by users.

E-Content Pages

It has found in the study that interviewees also agreed with the statement (with the mean score of 5.88) that e-content pages are used at a greater extent.

Reference books

The LIS academics agreed (with the mean score of 4.76) that reference databases are used by the users.

Factual databases

The library professionals agreed (with the mean score of 5.06) that factual database are accessed by users.

Dictionaries

This study found that a minority of interviewees agreed with dictionaries (with the mean score of 4.09) among all the e-resources.

CD ROM

Obaje and Camble (2008) report that CD-ROMs are mostly used for literature searches during project/ dissertation and thesis writing as well as personal research by staff. The interviewees agreed with the statement (with the mean score of 5.91) that CD-ROM is popular and used.

E-mail

Ugboma and Edewor (2008) found that e-mail is heavily used in provision of the following library and information services for order inquiries, selection of relevant information materials, contacting publishers and vendors. Other services include receiving and answering users' queries as well as receiving and mailing catalogues/bibliographies. The participated professionalsagreed (with the mean score of 4.86) that e-mail was popular and used widely by users.

6.8 Medium of providing e-resources services

The participating library professionals were requested to tell how they provide e-resources service. The data, received from the interviewees, was summarized about medium of providing e-resources services.
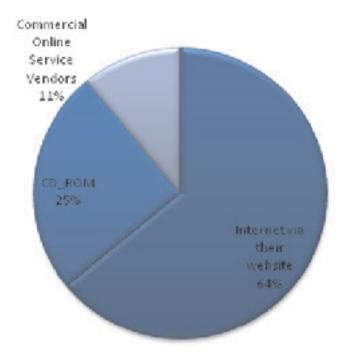
Figure 2:Medium of providing e-resources service

Figure 2 shows the use of medium i.e. Internet via their website, CD_ROM, Commercial Online Service Vendors by different libraries for providing e-resources service. Among the participated professionals 64% mention "Internet via their website", 25% mentioned"CD_ROM" and the rest 11% indicate "Commercial Online Service Vendors".

6.9 That e-resources offered most by the e-resources section

Interviewees were asked which types of e-resources are offered most for the users by the e-resources section of their library.
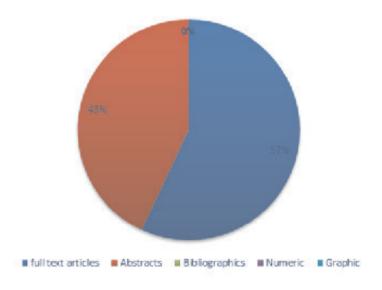
Figure 3: Most offered e-resources by the e-resources section

Figure 3shows that 57% of the libraries (N=20) have been providing "full text articles" most, while 43% of the libraries (N=15) have been providing "abstracts" most.

6.10 Opening hours of e-resources section for the users

Interview participants were asked to tell how many hours e-resources section remained open for their users.

Table 6: Opening hours of e-resources section for the users

How long e-resources section remain open for users	No. of Interviewees (N)	Percentage (%)
Below 8 hours	0	0
8-12hours	05	14.29
12-16 hours	30	85.71
Above 16 hours	00	00
Total	35	100

Table 6 indicates that 85.71% respondents (N=30) reported the e-resources section in their libraries have been remaining open for users about "12-16 hours", while another 14.29% respondents (N=05) indicated that their e-resources section remain open "8-12 hours".

6.11 Studying of students through e-resources

Interview participants were asked how many students were studying in their libraries through e-resources. The data, received from the interviewees, was summarized regarding studying of students using e-resources.

Table 7: Number of student who studies through e-resources

No. of students	No. of Interviewees	Percentage [%]
100-200	0	0
200-350	0	0
350-500	7	20
Over 500	28	80
Total	35	100

Table 7 delineates that the highest percentage (80%) of the library (n=28) said no. of students who study through e-resources are "over 500", while 20% of the library (N=07) said no. of students who study through e-resources are "350-500".

6.12 Hardware Devices those are available in e-resources section

The participating library professionals were requested to tell which hardware Devices those are most used in e-resources section.
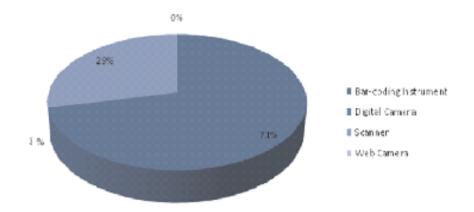
Figure 4: Available Hardware Devices in e-resources section

Figure 4delineates name of the most used hardware devices using in e-resources section. Among them 71% of the libraries (N=25) have been using "Bar-coding instrument", while 29% of the libraries (N=10) have been using "scanner" most.

6.13 Storage Medium used in e-resources section

Here 35 participants were selected and asked about the following storage medium use by the users in e-resource section:

Table 8: Storage Medium used in e-resources section

Use storage medium in e-resources section or not	Yes(N)	Percentage (%)	No(N)	Percentage (%)
CD ROM	20	57	15	43
Pen drive	35	100	00	00
Portable hard disk	20	57	15	43

From table 8, we can see that 57 % (N=20) agreed that "CD ROM" are used by the users in e-resource section while 43 %(N=15) disagreed that "CD ROM" are not used by the users. Then we see that 100 %(N=35) agreed that "pen drive" are used by users. Lastly we see 57 % (N=20) agreed that "Portable hard disk" are used by users while 43 %(N=15) disagreed with the devices.

6.14Software for e-resources management

The participating library professionals were asked whether they used any software for e-resources management or not.

Table 9: Use Software for e-resources management or not

Use software for e-resources management or not	Frequency (N)	Percentage (%)
Yes	35	1oo
No	00	00
Total	35	100

From Table 9 we see that all (100%) of the participated professionals said that they used software for managing e-resources.

Then, they were further requested to mention the name of software for e-resources management. The name of the software used by different libraries in their e-resource section is listed below:

- Koha
- D space
- My Athens
- Customized Drupal
- NSU library management software

6.15Printing facility for the users are available or not

Interview participants were asked whether their library provide the printing facility for the users or not.

Figure 5: Printing facility for the users is available or not
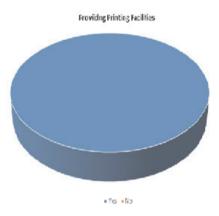
Figure 5 shows that hundred percent (100%) of the interviewees indicated that the printing facility for the users are available in e-resources section.

6.16 Charging cost to use the e-resources for users

The participating library professionals were asked whether they charged any cost to use the e-resources for users or not.

Figure 6: Charging cost to use the e-resources for users

Figure 6shows that hundred percent (100%) of the interviewees indicated that they didn't charge any cost to the use of e-resources for users.

6.17 Campaign programs for promoting e-resource

Interview participants were asked whether they had any campaign programs for promoting e-resources or not.
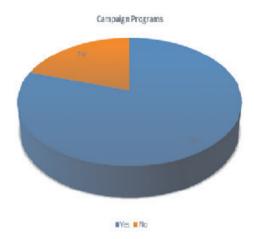
Figure 7: Campaign programs for promoting e-resources

Figure 7 delineates that 80 % of the libraries had been conducting campaign programs for promoting e-resources, while 20 % had no such programs.

6.18Academic IT facilities for using e-resources

Interviewees were asked whether they think academic IT facilities of their library were enough for using e-resources or not.
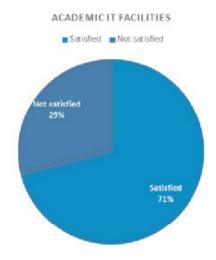
Figure 8: Academic IT facilities for using e-resources

Figure 8shows that 71% respondents were satisfied about their IT facilities while 29 % were unsatisfied.

6.19 Creating additional workload issues through e-resources or not

Interview participants were asked whether e-resources could generate the high workload, the limited quality of interactions as well as uncertainty about the ownership and assessment issues or not.

Table 10: Creating additional workload issues through e-resources or not

Response	No. of Interviews (N)	Percentage (%)
Yes	6	17.14
No	29	82.86
Total	35	100

Table 10 shows that 83% (N=29) participated library professionals said that e-resources never create additional workload while 17% (N=06) said that e-resources create additional workload.

6.20 Suggestions

Interview participants were asked to fill in their suggestions how the problems can be solved that libraries face in managing e-resources section which are enumerated below under some specific and related headings:

Use software for e-resources section

For better management of e-resource section, it is necessary to implement prominent, updated and customized software and the software should be operated by skilled personnel.

New techniques should apply

New techniques like controlled vocabulary and advanced search strategies which can make electronic search process much faster and easier should be bought to notice among the e-resources users.

Regular training

Most of the studies reported acceptance of using e-resources and services by the users' community and have emphasized on training programs to make the e-users aware about ever changing tools and techniques of ICT and e-resources (Maharana, Sethiand Behera; 2010) . The library should organize training program for the library professionals so that they are able to assist users and they can work with comfort in the technical environment (Das; 2013).

Arranging sufficient fund for subscription of e- resources

The library must adopt new policies so that they can arrange sufficient funds for subscription of e-resources. Without adequate budget library cannot cover all subjects' content to users demand.

Wi-Fi and high speed internet facility

Almost all participants agreed, perceived and acknowledged and the importance and use of internet in today's ICT environments and more particularly in their research activities. The library should facilitate with high bandwidth WI-FI, LAN and WAN to exploit the internet facilities by the research scholars.

Campaign Programs

Interviewees perceive that library must carry out an extensive awareness campaign using every available opportunity such as user education, use of library class, congregational meeting, orientation, seminar, workshop, libraries social media page among others to sensitize users about e-resources in the library.

Acquisition and management of licensed e-resources

The license of e-resources should be reviewed to inform and support the evaluation process, and to ensure that it reflects the selector's expectations prior to purchase in line with information gathered and accessed to date. Thus libraries should be aware about licensing issues on e-resources during acquisition and management of e-resources.

Linking service

The resources provider should inform the library if the content in the resources is available via a link server or link resolver. Information should also be provided on how the standard Open URL issupported. This applies to both linking to the content in the resource via the open URL and Linking from the resources content to a link server (Johnson;2012).

Providing description of resources at the database

It is necessary to provide description next to all resources in database. That will be helpful for both users and professionals.

Networking between libraries

Network between libraries can facilitate to commutate, share problem, resources etc. Interlibrary loan service on using e-resources should exit among the libraries.

Links from the Online Catalogue

 The online catalog provides one means for accessing electronic resources. Through title searching and subject headings, users can find any electronic journal the library subscribes to and go to that journal through the link provided. The main limitation of this approach is that it works only to find the journal itself, not the individual articles.

Data security and archiving

Consideration should be given to how frequently system data is backed up and what will happen to the resource and library patrons' ability to access it if the provider declares bankruptcy. If backup data is offered in CD-ROM or DVD format consideration needs to be given to the library capacity to manage archiving and access in this format. It is important to stable power supply, UPS, IPS, backup system for archiving and better management of e-resource section.

Renewal

Participated professionals thought if the renewal is as part of a consortium subscription, the vendor should seek confirmation from the individual library prior to renewal. Thus the library should agree with vendor that they will notify the library at least two months in advance prior to the subscription renewal date.

Increase library computer and its study space

Library computer and its study space should be increased so that user can use this accurately.

Mail with vendors

Dealing with vendors is big constraints. Libraries all together come forward and tell the publishers about their problems. Vendors are free to add or remove titles during the term of the agreement, often without notifying the subscribing institution. Libraries all together come forward and tell the vendors about their problems.

6.21 Future thinking

Interviewees were requested to say their future thinking about regarding the use and application of

e-resources in university libraries. Their answers are enumerated under headings:

E-resources will be more popular

All are agreed on this point that e-resources have glorious future. All cherish a positive concept about it. They believe e-resources have much potentiality. Among various resources for learning, staff and students throughout much of the world can retrieve seemingly endless volumes of information from all over the globe in a short span of time. It appears that the rate of production of electronic materials has exceeded that of print-based publications (Dalgeishand Hall, 2000). Interviewees also seem that in future printed materials will diminish and use of e-resources will be increased radically due to its time saving, cost reducing, space saving qualities.

Networking between libraries

In future libraries will make collaborative efforts to get funding for increased bandwidth for learning and research.

Improve searching methods

In future searching methods will be improved through different search engines, and then e-resources can be more conveniently more accessed by all kinds of users.

Reliable and useful as well as Dependable

Supporting research and learning activities becomes a major mission for academic libraries. In recent years, academic libraries face pressures like diminished budgets, increased patron demands, and rising costs for book purchases and periodical subscriptions (KeandChang; 1999). In future for solving such problems, e-resources can be more interested, reliable, and useful to all academic libraries and users will depend more on e-resources It will be main source of study and research.

Remote access

Interviewees think that in future users will not come physically in libraries. Authorized users will be allowed to view, print and download electronic copies of single articles from the e-resources remotely for private use, in line with 'fair use provision in the applicable governing copyright law.

Cost effectiveness

Although the cost of procuring and installing e-books and its facilities might be very high at the initial stage but at the long run, the cost is relatively low comparing to the traditional library collections in which large amount of money is needed to acquire more new and current educational materials to the library collection from time to time.

Faces all challenges

That problems i.e. Internet problem, managing problem, access problem are now belong with e-resources, that will be decreased.

Important criteria for library evaluation

E-resources will be 1st criteria to evaluate a library.

7. Answers to Research Questions

RQ 1: What are likely to be the present status of e-resources in the Private University Libraries of Bangladesh?

It is found that the libraries have already being used to with its use. More than half (60%) of the participated libraries launched e-resources during 6-10 years, 20% of the libraries have been using it for

2-5 years and the 20% of the libraries have been using it for 11-15 years (Table 2). It also found that academic librarians have a positive view about the use of e-resources in private university libraries of Bangladesh. According to findings most used e-resource is e-reports followed by CD ROM , e-content Pages, e-newspaper, e-Journals,reference databases, E-Books, Factual databases, E-mail, Reference books (Table 5). Number of users in e-resource section are also enough and many students are now studying through e-resources.(Table 3 and Table 7).The study reveals the name of Internet via their website followed by CD_ROM, Commercial Online Service Vendors as mostly used medium (Figure 2). Among all 71% of the interviewees use Bar-coding instrument, while 29% of the interviewees mentioned the name of scanner as most used hardware devices (Figure 4). The result indicates that almost all libraries use software for e-resources management (Table 9) and the name of that software are Koha, D space, My Athens, Customized Drupal, NSU library management software. It is also found that libraries are now trying to facilities the maximum use of e-resources. They are remaining open their section for users about 12-16 hours, while another 14.29% respondents (N=05) said 8-12 hours (Table 6). The 57% of the libraries have been providing full text articles most, while 43% of the libraries have been providing abstracts for users (Figure 3). They allow the users to collect and preserve search output from e-resources by using different types of storage medium i.e. CD ROM, Portable hard disk, pen drive(Table 8). The libraries also offering printing facility without charging cost for the users were available in e-resources section (Figure 5 and Figure 6).From the findings, we see that 80 % of the libraries had been conducting campaign programs for promoting e-resources (Figure 7). But the study shows that about the question of IT facilities 71% respondents are satisfied while 29 % are unsatisfied (Figure 8).

RQ 2: What is likely to be the perception of LIS professionals about e-resources in their libraries?

Findings explore the concept of e-resources to know LIS Professionals perception about e-resources. The summary that this study concludes from their opinions is that e-resources are those information resources and services that are in electronic format and users can access only electronically via a computing network from inside the library or remote to the library. From the study, we get the example of various format of e-resources i.e. e-book, e-journal, e-newspaper, Full-text databases, indexing and abstracting databases, reference databases, e-Images, e-Audio/Visual resources, OPACs, CD-ROMs, e-mail etc. Result in (Table 4)reveals that the interviewees strongly perceive the e-resource in their libraries to be preferable because it enhances overall learning process (mean score 6.19), reduces working time (mean score 6.09), fulfill the increasing demand of learners (mean score 5.97), provides learners with access to knowledge resources very easily (mean score 5.94), offer appropriate knowledge for handling and operating the latest technologies (mean score 5.91), overcome the location and size constraints (mean score 5.88), easy to keep up developing their own field (mean score 5.84), extends the range of work (mean score 5.75), helps learners with appropriate classification and cataloguing rules (mean score 5.68). Result in (Table 10)shows that 83% (N=29) participated library professionals perceive the e-resource in their working place never creates additional workload while 17% (N=06) are of a contrary view. About glorious future of e-resources in university libraries, all cherish a very positive perception. They said in future people will depend more on e-resource. But due to improve of e-resources, users will not come physically in library, they will access in library materials remotely; interviewees added in future it will be first criteria for evaluating a library.

RQ 3: What are the probable solutions that can be applied to improve e-resource management for the benefit of users in Private University Libraries of Bangladesh?

With the growing popularity of e-resources, thefollowing recommendations are made on the basis

of interview data and authors own point of view for improvement in the use of e-resources in University libraries of Bangladesh:

·   **New techniques** i.e. controlled vocabulary and advanced search strategies should be applied.

·   **Training of all level of LIS Professionals** (Library Officer/Junior Assistant Librarian, Assistant Librarian, Library Head/ Librarian, and Deputy Librarian as well as Senior Assistant Librarian) must be taken seriously to ensure that they make adequate use of the resources.

·   **More awareness on campaign** using all facilities that e-resource section provides should be carried out. Interviewees believe that it will create awareness of the available information resources in the library.

·   **Budget** should be increased for subscribing more e-resources.

·   **High bandwidth WI-FI, LAN and WAN**must be improved in academic libraries for effective use of e-resources.

·   **Licensing issues on e-resources** during acquisition and management should be monitored.

·   **Description of resources** must be provided at the database to enable users to easily identify and access relevant e-resources tailored to their information need.

·   **Links from the Online Catalogue**should be created.

·   Backup system i.e. power supply, UPS, IPS for data security and archiving should be kept.

·   **More computers in the library's e-resource section**should be installed for the benefit of the library members.

8. Conclusion

The emergence of e-resources has changed the information treatment and management in academic environments and in University libraries. It is evident in this study that e-resources have already earned popularity in the private university libraries. As observed by this study numerous creative and useful services of e-resources have evolved within academic libraries in the present time: enhancing overall learning process, reducing working time, fulfilling the increased demand of learners, providing learners with access to knowledge resources as well as offering appropriate knowledge for handling the latest technologies. E-resources also overcome the location and size constraints as well as provide updated knowledge. E-resources extend the range of work also. It also showed that various categories' of e-resources are used at different level by users to get desired, relevant, and current information. Considering its huge appreciations and demands, libraries also tried their best by installing standardized software, providing day long services, offering printing facilities, allowing users to collect search output and access to abstract as well as full text article. But IT facilities should be much improved in e-resource section. The results also indicated that the libraries are taking various steps to make e-resource management more comfort but LIS professionals not think that it increases their workload rather than they welcome this new emerge warmly and perceive it has glorious future. Besides showing very positive growth of e-resources, the study makes a bunch of recommendation, which will inspire private university libraries elsewhere, both within and without Bangladesh to make much more improvement in e-resource management.

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ENDORSING LIBRARIES AS TOURIST SPOTS: AN UNCONVENTIONAL AND INNOVATIVE IDEA TO MAXIMIZE THE CONVENTIONAL USE OF LIBRARIES

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ABSTRACT
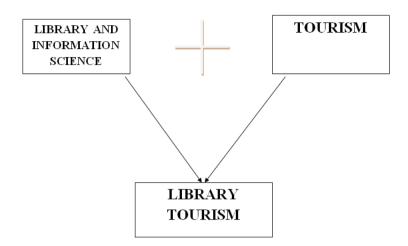
The paper presents the libraries as tourist spots and it also discusses the aspects of lessening the physical use of libraries in the era of ICT where information is available at the doorsteps and fingertips of the users. Users are not required to visit the library regularly to get the required information. The main concern is about the deceased library users and to bring them back and the other concern is to attract new users to join the library and use it as much as possible. This is an unconventional concept keeping in mind the conventional use of the library which is to use it physically. The paper is a multidisciplinary approach colliding with the subject of tourism in library and information science. The concept of tourism is meshed up with the concept of library and information science. Libraries can be promoted as tourist places without any difficulty because there is a section named "Art and Culture" under the Ministry of Tourism where it can be easily adjoined together for the better development of the country, tourism and simultaneously libraries will also be benefited. To make the libraries as tourist spots and to promote library tourism some nascent modifications must take place and the paper presents the process how to convert the conventional library to an unconventional library for tourist visit which can attract the tourists from local, national and international level. It also includes different feature of tourism and their applications in libraries for endorsing libraries as tourist spots.

Keywords: Library Tourism, Tourist Spot, Users, Libraries, Promotion, Endorsing, Library Use, Transformation.

1. INTRODUCTION

Library tourism is not entirely a new concept in the field of library and information science. Library professionals have always experienced the term "library tourism" in some or other way as like library visit, excursion, study tour etc. Taking the concept of tourism into consideration the concept of library tourism has been developed. It has become an interdisciplinary study for the survival of the libraries in dynamic world which is changing with time and to go unconventional to keep intact the conventional library use. The advent of Information Communication Technology has brought libraries to the homes of the library patrons and to their fingertips as well. This practice has resulted in deceased users and declining in the number of new users. So, it is the high time for the libraries to think something out of the box, the thing

which brings back the deceased users and attract the new users to visit the library physically. The concept should literally allure them or pull them towards the library.

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│   LIBRARY AND    │         │                  │
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Tourism is a process where people visit in their leisure time leaving behind their work, stress and anxiety. It is especially during their holiday or vacation time. According to Wikipedia, tourism is travel for pleasure or business. It is also the theory and practice of touring, the business of attracting, accommodating, and entertaining tourists, and the business of operating tours. Tourism may be international, or within the traveller's country. The World Tourism Organization defines tourism more generally, in terms which go "beyond the common perception of tourism as being limited to holiday activity only", as people "travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" (https://en.wikipedia.org/wiki/Tourism).

Tourism can be domestic or international. International tourism has both incoming and outgoing implications on a country's balance of payments. Today, tourism is a major source of income for many countries, and affects the economy of both the source and host countries. Libraries can implement tourism as their attribute to attract the tourists which may be from local area, national level, neighbouring countries and overseas. Tourism in library will make the different kind of users from different age groups, various professions and diverse geographical areas as well. Further we will discuss the different areas of attractions of tourists visit which will attract the users to take pleasure in touring the library by enjoying as well as reading the documents a library has.

For example, if a library is using amusement park for the attraction of the tourists which will mainly attract the kids so those particular libraries should be rich in the collection for kids. It is very much important to have a quality collection for the category of children users because at this stage of life they would be developing the reading habits which they will pursue for their lifetime.

2. OBJECTIVES

The main purpose behind this paper is for the betterment of library professionals and make to the libraries efficient and effective in the vibrant world of today and also to create opportunities in this very field. Following are the specific objectives of this paper:

• To give an insight in multidisciplinary approach subsequent to the inclusion of tourism as an aspect;

- It is to eradicate and eliminate the boring issue from the library environment by making it more pleasurable and enjoyable visit to a library;

- For the better use of libraries by including tourism in its attribute of various other feature traits a library has;

- To reverse the deceased users in the direction of using libraries once again but this time with certain change by modifying the libraries as a tourist spot;

- In support of attracting new users to join and visit the library physically to enjoy the benefit of library and visiting the attractions as well;

- To create employment and job opportunities in the field of library science through it;

- To make the libraries an income oriented organisation through the earnings from the tourist who comes to visit and use those money to develop the library more.

3. METHODOLOGY

The data for this paper are mainly collected from the secondary sources. Websites, blogs, research papers and other relevant sources available related to the topic were critically examined and evaluated. Data which are collected from the secondary sources for this paper are mainly of qualitative nature and quantitative data are also used here and there in some places of the paper which includes the past records.

4. LITERATURE REVIEW

Some of the literatures found related to the topic are reviewed and discussed below:

Ade and Kapde (2013) in their study entitled "Extension Services in public library" proposed the adoption of library extension services to increase the number of users which will increase the use of available resources a library has. It would also maximize user satisfaction.

Cohen (1998) discussed in his research paper on "Authenticity and Commoditization in Tourism" about commoditization of the cultural products and concludes that it doesn't destroy the tourist oriented products instead of that it gives local a self-identity and a launch vehicle for the exposure of culture in front of the external public.

Csapo (2012) concluded his paper on "The Role and Importance of Cultural Tourism in Modern Tourism Industry" by saying that the demand of the cultural tourism is rapidly growing and it is the job of the local communities to maintain their local culture and stop it from degrading.

Joicy and Sornam (2017) mainly coined the point through their seminar paper on the topic "Library Tourism in India: The Changing Perspective" that library creates a link between culture and tourism and also how the libraries help to promote tourism by providing the appropriate substance in relevance to their interest of visit.

Judith and Awe (1999) evaluated the travel and tour websites in their topic on "Wired Travellers: Travel and Tourism Web sites" and founded out that purchase and reservation on of travel on web sites are largest and fastest not only in USA but in Europe as well.

Kreag (2001) studied in the topic on "The Impact of Tourism" where according to tourism has impacted on Economic, Environmental, Social and cultural, Crowding and congestion, Services, Taxes, Community attitude etc. He also studied all those aspects one by one and at last concluded it by saying that tourism will help in the sustainable development but to make tourism effective it needs work.

Laloo and Sumnyan (2017) studied "Collection Development in Tawang Monastery Libraries" and they revealed that the Tawang Monastery libraries in Arunachal Pradesh are having good collection in terms of format, variety and value but they are lacking in preservation, staff and space. This needed to be sorted out as earliest for the better development of library tourism in that area.

Latha and Padma (2017) discussed two aspects of tourism in their conference paper on "Promoting Library Tourism in India" that one aspect is that library is tourist destination and other aspect is to showcase tourist destinations and experiences. Further in the paper they discussed to make the public library a tourist destination by exhibiting cultural heritage and showcasing the creations of local authors.

Reddy (2017) well-versed in his paper "Promotion of Local Culture Among the General Public for Recreational Activities Through Library tourism" that library tourism can be promoted by the public libraries through local cultural objects like literature on culture, history, art and craft, folk music etc.

Tribe (2002) in his conference paper on "Research Trends and Imperatives in Tourism Education" evaluated the research trends in tourism and its importance. Later concluded by saying that curriculum studies have received special attention but there is a lacking in empirical research and the main concern is the quality in all aspect of tourism education and lack of prescriptive literature in this area.

It has been observed from the reviewed literature that there has been no literature on the present topic that has been undertaken to discuss here. Endorsing libraries as a tourist spot is not covered in any of the literatures. Following discussions will bring the concept into light for the library professionals for transformation of conventional libraries to non-conventional libraries.

5. DEFINITION OF KEY TERMS

Tourism is to visit a place far from the native place for sightseeing or visiting different attractions around the globe. Tourism might be for official visit for the professionals, excursion for the students or different persons might have different perspective of tourism but commonly tourism means holidaying and finding pleasure in a place away from home. The activity is mainly for spending the leisure time.

International tourist arrivals surpassed the milestone of 1 billion tourists globally for the first time in 2012, emerging markets such as China, Russia and Brazil had significantly increased their spending over the previous decade. The ITB Berlin is the world's leading tourism trade fair. (https://en.wikipedia.org/wiki/Tourism)

"However, evidence suggests that tourism as a global phenomenon shows no signs of substantially abating in the long term. It has been suggested that travel is necessary in order to maintain relationships, as social life is increasingly networked and conducted at a distance. For many people vacations and travel are increasingly being viewed as a necessity rather than a luxury, and this is reflected in tourist numbers recovering some 6.6% globally over 2009, with growth up to 8% in emerging economies." (https://en.wikipedia.org/wiki/ Tourism#Latest_trends)

In this paper we are linking the tourism to the libraries where people will come to the library to spend their time, have fun, pleasure and simultaneously use the library by reading whatever a library has in its collection. According to a Hindi proverb which means "killing two birds in one shot". Ultimately libraries will be benefited.

Image 1: Public Library of Birmingham

Source: (http://i3.mirror.co.uk/incoming/article2247895.ece/ALTERNATES/s615/Visitors-at-the-Library-of-Birmingham.jpg)

Library as a tourist spot would be like promoting libraries as a spot of interest for the tourist to see, for the user to read while have a pleasurable time and for people to spend quality time in leisure. Endorsing libraries as a tourist spot would be like promoting tourism in the library, for the library by the library.

Image 2: Beach Library
Source: http://www.thetravelwrapcompany.com/Blog/beach-libraries/Libraries-2.jpg

Libraries can whether be built in the place where tourist likes to visit (Image 2: Beach Library) or to change the infrastructure of the library like the (Image 1: library of Birmingham). "Philip Pullman an English writer said "The new Library of Birmingham sounds as if it will be lovely and should attract even more users than the present one with its impressive visitor total of 5,000 a day." It is just because of the architect and infrastructure. If only architecture and infrastructure can attract so many tourists then we can just imagine how tourists it will attract if various attractions are included in a library. It will be of that much numbers per year a library has seen in a ten years time.

Image 3: Conventional Library use

Source: (http://pushingtheflywheel.com/wp-content/uploads/2015/04/H_Library.jpg)

Conventional library use is the traditional use of libraries (Image 3: Conventional Library use) by visiting it and physically reading the books from library but nowadays this practice is diminishing because people have become more tech-savvy and they prefer to get their required information easily. Invention of ICT and its inclusion in the libraries has made it possible by bringing the information outside the libraries to the fingertips to the doorsteps. On one hand it is fulfilling the fourth law of library science "Save the time of the reader" by providing them their information in real time without any loss but in the same time the fifth law says that "Library is a growing organism" where it is time to fulfil the fifth law by growing the library in many aspects and it is necessary to keep the library alive. So, the survival of library is in a high point for the sake of the native profession. It is better to evolve within the library rather than outside the premise.

6. TOURISM SCENARIO IN WORLD, INDIA AND ASSAM

"Tourism is an important, even vital, source of income for many regions and countries. Its importance was recognized in the Manila Declaration on World Tourism of 1980 as "an activity essential to the life of nations because of its direct effects on the social, cultural, educational, and economic sectors of national societies and on their international relations." (https://en.wikipedia.org/wiki/Tourism)

Obviously tourism provides a source of income for the development in social and economic life of that particular region but in context of libraries, the concept of tourism will be primarily concerned with the use of a library. If the library is converted into a tourist spot, then there will be many visitors to visit the attractions and while visiting those things they will also become a member of that particular library and use the collection it has. Earning will be an added bonus which they can use for the development. Tourism concept came into light a long time back and defined by many organisations as below:

World Tourism is an industry which is flourishing all over the world. The scenario of the World tourism industry is always in a state of flux, ever changing and changing positively. There are the highlights of world tourism given below:

It is reckoned that end of 2007 will see the World tourism industry generating as many as 234 million job opportunities for the people. It is also assumed that the contribution towards the GDP by the World tourism industry will be approximately 10.3%. (http://www.economywatch.com/world-industries/tourism/world.html)

In 1994, the United Nations identified three forms of tourism in its Recommendations on Tourism Statistics: (https://en.wikipedia.org/wiki/Tourism)

i. Domestic tourism, involving residents of the given country travelling only within this country

ii. Inbound tourism, involving non-residents travelling in the given country

iii. Outbound tourism, involving residents travelling in another country

In 1936, the League of Nations defined a foreign tourist as "someone travelling abroad for at least twenty-four hours". Its successor, the United Nations, amended this definition in 1945, by including a maximum stay of six month. In 1941, Hunziker and Kraft defined tourism as "the sum of the phenomena and relationships arising from the travel and stay of non-residents, insofar as they do not lead to permanent residence and are not connected with any earning activity." In 1976, the Tourism Society of England's definition was: "Tourism is the temporary, short-term movement of people to destinations outside the places where they normally live and work and their activities during the stay at each destination. It includes movements for all purposes." 1981, the International Association of Scientific Experts in Tourism defined tourism in terms of particular activities chosen and undertaken outside the home. (https://en.wikipedia.org/wiki/Tourism)

Tourism is in each and every country. India is a developing country and the tourism industry is developing day by day. Many tourists are visiting every year and it has been already proved that India is among the one of most liked tourist destinations. Highlights of the tourism scenario in India are as follows:

· The Ministry of Tourism is the nodal agency for the tourism development in the country taking care of all the aspects of tourism for domestic and international tourists as well.

· The World Travel & Tourism Council calculated that tourism generated Rs. 14.02 lakh crore (US$220 billion) or 9.6% of the nation's GDP in 2016 and supported 40.343 million jobs, 9.3% of its total employment. The sector is predicted to grow at an annual rate of 6.8% to Rs. 28.49 lakh crore (US$440 billion) by 2027 (10% of GDP).

· About 88.90 lakh (8.89 million) foreign tourists arrived in India in 2016 compared to 80.27 lakh (8.027 million) in 2015, recording a growth of 10.7%.

· In 2014, Tamil Nadu, Maharashtra and Uttar Pradesh were the most popular states for tourists. Delhi, Mumbai, Chennai, Agra and Jaipur have been the five most visited cities of India by foreign tourists during the year 2015.

· The Travel & Tourism Competitiveness Report 2017 ranks India 4th out of 136 countries overall. The report ranks the price competitiveness of India's tourism sector 10th out of 136 countries.

· The country also scores high on natural and cultural resources (ranked 9th).

· India has recently implemented an online method for citizens of 40 countries to apply and receive an e-Tourist Visa. It is also known as visa on arrival.

Table 1: Foreign tourist arrivals in India

Year	Number (millions)	% change
2007	5.08	14.3
2008	5.28	4.0
2009	5.17	-2.2
2010	5.78	11.8
2011	6.31	9.2
2012	6.58	4.3
2013	6.97	5.9
2014	7.68	10.2
2015	8.03	4.5
2016	8.89	10.7

The above table above shows that the numbers of foreign tourists visiting India are increasing every year.

Table: 2 Source countries for foreign tourist arrivals in India in 2015

Rank	Country	Number	Share in %
1	United States	1,213,624	15.12
2	Bangladesh	1,133,879	14.13
3	United Kingdom	867,601	10.81
4	Sri Lanka	299,513	3.73
5	Canada	281,306	3.50
6	Malaysia	272,941	3.40
7	Australia	263,101	3.28
8	Germany	248,314	3.09
9	France	230,854	2.88
10	Japan	207,415	2.58
	Total of top 10	5,018,548	62.52
	Other countries	3,008,585	37.48
	Grand total	8,027,133	100

Above table shows the data of 2015 tourist from different countries visiting India and among the entire countries tourist from United States of America are in highest numbers.

Image 4: Screenshot of the website of Ministry of Tourism

Source: (http://tourism.gov.in/#)

Tourism.gov.in is the official website of ministry of tourism (Image: 4) in India. In that website, tourists around the globe can find out all the details regarding the visit to India.

Hence, it has been proved from the given scenario of tourism in India that there is still lot of scope in India to grow. Tourists from different countries are visiting the country every year and providing good share in the GDP of India. Including Libraries as a tourist spot will attract not only the tourists but the intellectual tourists as well.

Assam tourism is promoted with the tag line "Awesome Assam" and the state is promoted by international celebrity Priyanka Chopra. Bird like shape map of Assam which lies on the bank of Brahmaputra River and it is surrounded by greenery and has many attractions. "Tourists are mainly attracted to the wildlife reserves like the Kaziranga National Park, Manas National Park, Pobitora Wildlife Sanctuary, Nameri National Park, Dibru-Saikhowa National Park etc. It has a rich cultural heritage going back to the Ahom Dynasty which governed the region for many centuries before the British occupation." (https://en.wikipedia.org/wiki/Tourism_in_Assam)

Other notable tourist destinations in Assam are Guwahati, Majuli, Kaziranga National Park, Jatinga, Sonitpur, jorhat, Sivasagar, Hajo, Haflong, Tinsukia, Dibrugarh etc. It covers almost every part of the state and it is proved that Assam is a blazing hot spot for the tourist attraction. By seeing the data, facts and figures it clearly denotes that tourism is a sector which is blooming and it will only do good to the libraries to improve more by bringing the users inside the library.

7. APPLICATION OF TOURIST ATTRACTIONS IN LIBRARY

A tourist attraction is a place of interest where tourists visit, typically for its inherent or exhibited natural or cultural value, historical significance, natural or built beauty, offering leisure, adventure and amusement. (https://en.wikipedia.org/wiki/Tourist_attraction). There are various attractions out there in world which tourists likes to visit but few of them are taken into consideration relevant to libraries. Following are the attractions which can be meshed up with libraries:

a) PARK

Image: 5 : Source: (http://www.planetware.com/photos-large
/USMD/maryland-chesapeake-and-ohio-canal.jpg)

When somebody mentions about a park, we feel it immediately the surroundings, greenery around and cool atmosphere, silent where we can have time sitting there silently. "In other meaning a park is an area of natural, semi-natural or planted space set aside for human enjoyment and recreation or for the protection of wildlife or natural habitats. It may consist of grassy areas, rocks, soil and trees, but may also contain buildings and other artifacts such as monuments, fountains or playground structures. Parks can be categorised as national park as well which is a reserve of land, usually, but not always declared and owned by a national government, protected from most human development and pollution. Although this may be so, it is not likely that the government of a specific area owns it, rather the community itself. National parks are a protected area of International Union for Conservation of Nature Category II. This implies that they are wilderness areas, but unlike pure nature reserves, they are established with the expectation of a certain degree of human visitation and supporting infrastructure. (https://en.wikipedia.org/wiki/Park)

Parks are most pleasant place where it is surrounded by greenery and sets the mood to read. Earlier people use to practice this method of reading where they sit under tree to read. It has its own advantage in outdoor reading, there no air conditioning is required and neither any light are required because those things are naturally available. This method also saves power.

Image 6: Santiniketan outdoor class
Source: (http://www.hindustantimes.com/rf/image)

"The outdoor classroom still exists at Santiniketan and most alumni responded favourably to this learning environment. Nigel, currently a professor in the United States, responds that he found this atmosphere very relaxing and hopes to introduce this outdoor environment into his own teaching when "the appropriate class appears." (http://gusgalleries.com/tagoresantiniketan.htm). Taking clue from the way Santiniketan method of reading, libraries can also apply it for making the library more interesting and appealing.

· Libraries can be built nearby the parks or the parks can be made nearby the libraries. The suitable place can be decided by librarian or in library standing committee meeting.

· Parks can be used as reading place for the users; it will be optional with reading room where there might be still some users who might like to read inside closed rooms.

· For considering it as a tourist place the park should be fighting fit to attract tourists. So, it should be designed and maintained well.

· There must be furniture for sitting like wooden chairs or tables. Some innovative sitting arrangements can be also made i.e., sitting place made out of root of a tree.

Image 7: Museum fur Naturkunde

Source: https://media-cdn.tripadvisor.com/media/photo-s/02/f6/42/8c/museum-fur-naturkunde.jpg

"A museum is an institution that cares for (conserves) a collection of artifacts and other objects of artistic, cultural, historical, or scientific importance. Many public museums make these items available for public viewing through exhibits that may be permanent or temporary." (https://en.wikipedia.org/wiki/Museum)

Museum attracts many tourists because everybody is interested in knowing the history and also to know the culture. Especially children and elderly persons like to visit museums. Students comes to visit museums on their study tour, excursion etc.

Museums are like libraries only which peoples comes to visit but museums are not concerned with

books or issuing and returning. People pays to visit museums, peoples are more attracted to museums than the libraries because museums are more attractive and it has nothing to do with studying.

It will be the easiest way for the application of museum in the libraries. If each and every library maintains a museum then it will attract more users in the library.

· Provision of museum corner in each and every library.

· It will be not a hard job to collect objects for the museum because they can use the cultural and historical objects of the locality where the library is located and it's obvious that each and every part of the country is rich historically and culturally.

c) Amusement park

Image 8: Amusement Park

Source: http://assets.aspyr.com.s3.amazonaws.com/uploads/screenshot/image/506/amusementscreenshot

An amusement park is a park that features various attractions, such as rides and games, as well as other events for entertainment purposes. A theme park is also a type of amusement park that bases its structures and attractions around a central theme, often featuring multiple areas with different themes. Unlike temporary and mobile funfairs and carnivals, amusement parks are stationary and built for long-lasting operation. They are more elaborate than city parks and playgrounds, usually providing attractions that cater to a variety of age groups. While amusement parks often contain themed areas, theme parks place a heavier focus with more intricately-designed themes that revolve around a particular subject or group of subjects.(https://en.wikipedia.org/wiki/Amusement_park)

Concept of amusement park will be more successful in the libraries which are related to the children which are also known as a children's library because kids are the more niche users of amusements parks. So if a library is considering the application of amusement park should identify who are their users and they are between what age group.

In this case also libraries should think whether to shift the library nearby the amusement park or else they should create one in the library depending on their funds. There must be the collection of books depending on the category of users coming to the library which are having amusement park as their attraction of tourist visit. The book case or almirah must be kept beside every wheels, rollercoaster and sitting areas so that they can enjoy reading while riding.

8. OTHER APPLICATIONS OF TOURIST'S ATTRACTION IN THE LIBRARY

Those were some of the tourist's attractions which we can use in the library to attract users to the library. Given below are some more attraction and ways by which we can make the library a tourist spot:

a) Libraries can have a branded Restaurant of good quality inside the library where users can read and eat as well. But to keep the library premises clean the eating area should be separated but they must allow taking the books inside the restaurant so they can read while eating.

b) Libraries can be built near of inside the Historical Monuments consist of the collection about the history of that particular monument or other collection relating or same like.

c) It has been seen that some small book stores are found nearby the beaches and those limited book stores having limited collection are in very high demand because many visitors likes to read books while taking sunbath and laying down on beach lounge chair. So a Beach-Library will be very effective nearby the beaches.

d) Libraries can be also endorsed as a tourist spot when it has a well built infrastructure and architecture. These things will ultimately attract the tourists to visit libraries. Library of Congress, Biblioteca Marciana, Radcliffe Camera etc, are some of the libraries which always in top of tourists list to visit. To develop an infrastructure like them will cost a lot.

Those were the few of the tourist attractions which can be applied in the libraries to make it as a tourist spot. But there might be many more ways through which a library can be developed more to make it attractive and more usable. It is the need of time to study more in this aspect because somebody said that "survival of the fittest" so libraries must be updated in many ways to make it fittest for the survival because world out there is very dynamic and libraries must be ready for everything comes its way.

9. SUGGESTIONS

Few suggestions based on the observation are given below:

1. Libraries are needed to be developed and updated including the subject of tourism to make it better, to make it more usable. The main focus should be on promoting the tourism in the library and the tourists should be the main focal point. The tourists might be of local, national and international level.

2. Each and every library should at least have one tourist attraction in the library; it should be applied as a provision in for the library. The easiest attraction to be used is museum containing local historical and cultural objects.

3. Environment, infrastructure and architecture in the library should be altered accordingly to make it friendlier and attractive. The development of infrastructure and architecture is depended upon the budget a library has but environment is depended upon the library management only.

4. Minimum amount of charge should apply for visiting the tourist attraction in the library and they should get back what they are paying for otherwise it will just become as a onetime visit for them. The money which will be collected should be only used in developing the library and creating job opportunities,

5. Behavioural aspect of human resource should be maintained wisely because while travelling or touring peoples expects good behaviour in return from the person they are dealing them. This might lead them to visit again and again.

6. Library extension services like; book fair, book exhibition, counselling, publicity/propaganda, book reading, lectures and talks should be implemented strictly and it should be a regular thing for the library.

7. Libraries should actively celebrate festivals, events and arrange cultural programmes because it will give different insight to the tourist and they can enjoy different aspect of library other then enjoying the attractions and reading books.

8. Advertising of the library would be required in different media to make the users know what different that library has in offering.

9. Ministry of Culture and Ministry of Tourism should adjoin together and work for the development of the libraries. Government should also invest little more than earlier to get back more earnings.

10. CONCLUSION

Tourism all over the world is flourishing and a phenomenon every person wants to experience. The purpose of tourism around the globe is to spend their holiday and find pleasure away from their home. Purpose of some people is different who tour for some educational and professional purpose so those are two different aspect of tourism. Renovating or converting libraries as a tourist spot can satisfy both the purpose of a person which is both personal and professional as well. Personal is that they can holiday and find pleasure with family and professionally they can learn something new by reading or by seeing the cultural activity a library brings to them under library extension service. Hence by converting the libraries into a tourist spot and endorsing them will attract the tourist to come and visit the library which will increase the use of the library by making them exploit the library resources to the fullest. Earnings from the tourists will inversely create job opportunities and help in the developing libraries and it will also indirectly help the government to earn from the taxes in development of socio-economic life of the citizens.

Implementing the concept of tourism in libraries will be a little tricky because libraries are provided with a budget which is not up to the mark for fulfilling the basic needs of a library. It will be a job for the government and effort of the library professionals to make it work because once implemented it will give fruitful result in long run.

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EMPOWERING USERS WITH MEDIA AND INFORMATION LITERACY SKILLS: AN OPPORTUNITY FOR LIBRARY AND INFORMATION PROFESSIONALS

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Abstract

In the last two decades, media and information literacy has emerged as an empowering tool as well as an innovative way, by which LIS professionals and users can navigate through the vast universe of information and media content available across diverse media and formats. Developed separately as media literacy and information literacy, UNESCO has been furthering the two as a composite concept of media and information literacy (MIL) that is applicable across frontiers. Increasing international recognition to MIL is evident from various declarations: Fez Declaration on MIL – 2011, and Moscow Declaration on MIL – 2012, Paris Declaration on MIL, and IFLA MIL Recommendations - 2014, besides the formation of Global Alliance for Partnerships on Media and Information Literacy in 2013.

Inspired by the Five Laws of Library Science given by Ranganathan, the Five Laws of Media and Information Literacy have also been developed by Alton Grizzle and Jagtar Singh in 2016, and adopted by UNESCO.But unlike their inspiration, these are not short statements. For librarians and information professionals, MIL skills are of utmost importance as they are the ones who are to inform their users of innovative ways and means of navigating the evolving and dynamic digital information universe. Therefore, if we want our users to be media and information literate, library and information professionals have to become media and information literate first, and then to develop services and to innovate mechanisms to deal with various issues in the information society such as information overload, fake news, and privacy of information. It also highlights a few important MIL initiatives at global and national level.

Introduction

We are in a transition towards information society, where most of our activities are increasingly becoming dependent on information. Every individual needs access to information to make decisions and solve day-to-day problems. But in the Internet era, one of the major challenges before all, and particularly before library and information professionals is digital divide and information divide. On the one hand there are a large number of people who neither have access to technology nor the information they need for their survival, and on the other hand there are many people who possess latest information and communication technology (ICT) tools and can easily access information from vast number of resources available on the Internet. In such a situation the libraries need to address this divide by providing quality and reliable information to those people who do not have access to ICTs. Besides, libraries and librarians also need to empower people with skills and competencies to access, retrieve and evaluate information for its quality, relevance, accuracy, comprehensiveness, and updation. This can be done by librarians and information

professionals only if they empower themselves with media and information literacy skills.

According to UNESCO, media and information literacy is defined as "a set of competencies that empowers citizens to access, retrieve, understand, evaluate and use, create, as well as share information and media content in all formats, using various tools, in a critical, ethical and effective way, in order to participate and engage in personal, professional and societal activities."

UNESCO is promoting the concept of MIL as enabler to learning, as well as for problem-solving in the new information environment – information and knowledge society – that is based on:

- Freedom of expression,
- Universal access to knowledge and information,
- Diversity and plurality, and
- Quality education for all.

The International Federation of Library Associations and Institutions (IFLA) states that media and information literacy "consists of the knowledge, the attitudes, and the sum of the skills needed to know when and what information is needed; where and how to obtain that information; how to evaluate it critically and organise it once it is found; and how to use it in an ethical way. The concept extends beyond communication and information technologies to encompass learning, critical thinking, and interpretative skills across and beyond professional and educational boundaries. Media and Information Literacy includes all types of information resources: oral, print, and digital."

UNESCO further believes that media and information literate people should be able to: understand why media and other information providers are important to development and democratic societies~ know what media and other information providers should do to support development and democracy~ recognise a need for information~ locate and access information needed~ carefully evaluate or judge information and the content of media and other information providers~ organise information~ use and share information based on moral principles or accepted standards of social behaviour~ use information and communication technology skills to access, produce and share information and media content~ interact with media and other information providers to freely express themselves, share their culture and learn about other cultures, and participate in democratic and development activities.

Media and Information Literacy is the best tool and even the lifeline of lifelong learning (Jagtar Singh, 2015). Teachers, researchers, journalists and mass media professionals, library and information professionals, universities, NGOs, associations and governments all can play an important role in promoting MIL, but in this paper, the role of libraries and LIS professionals has been highlighted.

Challenges before Libraries in the Internet Era

The academic libraries are heart of academic institutions like school, colleges and universities; and the public libraries are local centres/ gateways to information and knowledge for all. In the present Internet era, academic libraries in India are facing a number of challenges, significant among these are information overload; diversity of forms and formats; privacy and security of information; copyright issues; lack of skills for information consolidation; decreasing footfall in libraries; aware, and informed but impatient users looking for instant information. Public libraries are facing additional challenges of inadequate budget and staff.

Role of Library and Information Professionals

In the Internet era, libraries need to change and revamp their services. The libraries need to advocate their services. The present Internet using generation is not ready to come to libraries for their information requirements. In such a situation when users are not visiting the libraries, libraries can reach out to their

users. As stated by McCarty (2010), "with the proliferation of the web and social networking, bringing the library to the people is more important than ever". Libraries have been providing outreach services to their users since a long time. Earlier these services were confined to people who could not come to libraries but now we will have to provide these services to those who can come but do not want to come to library. Library outreach can be used to bring more and new users to library in the Internet era. It can also help in making users realize that in the world of Web, libraries are still better than search engines like Google for providing information (Ford, 2009).

With the advent of ICTs, though academic and public libraries in India have changed themselves to some extent, but still a lot more needs to be done. The majority of libraries have made their presence on the Web. The libraries have developed their websites and are providing web-based library services to their users like WebOPAC, multimedia links in WebOPACs, online/virtual reference service/ask-a-librarian service, access to e-resources, bulletin boards, blogs, etc.

The libraries are providing these services but many of the users are not aware of these services. In such a situation, librarians and information professionals have an important role to play, i.e. to inform their users about these services, and how these can be used for quality information. Library and information professionals first need to empower themselves with media and information literacy (MIL) skills; and then also make their users aware of (MIL) skills, so that the users can retrieve reliable and quality information and media content from diverse sources.

MIL Initiatives at Global Level
Initiatives of UNESCO
　　Under the aegis of UNESCO, media literacy and information literacy are treated as a composite subject of MIL. To promote MIL, UNESCO has prepared a model Media and Information Literacy Curriculum for Teachers (http://unesdoc.unesco.org/images/0019/001929/192971e.pdf); and has also developed Guidelines for Preparing National MIL Policies and Strategies (http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/developing-mil-policy-and-strategy/), articulated a Global Framework on MIL Indicators (http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/unesco-global-mil-assessment-framework/); developed Guidelines for Broadcasters on Promoting User-Generated Content and MIL (http://unesdoc.unesco.org/images/0018/001871/187160e.pdf), and has been facilitating international cooperation which resulted in establishment of an International Clearinghouse on MIL in cooperation with the United Nations Alliance of Civilizations (UNAOC) (http://milunesco.unaoc.org/). Besides, it has also facilitated the establishment of Global Alliance for Partnerships on Media and Information Literacy (GAPMIL, http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/global-alliance-for-partnerships-on-media-and-information-literacy/) in 2013, which is an alliance of more than 400 organizations working in the areas of IL, ML, and MIL across the globe. UNESCO is also promoting activities such as Global MIL Week. Global MIL Week for 2016 (https://en.unesco.org/global-mil-week-2016) was celebrated in Sao Paulo, Brazil, and the MIL Week for 2017 would be celebrated from 25 October – 1 November on the theme 'Media and Information Literacy in Critical Times: Re-imagining Ways of Learning and Information Environments' in Jamaica (http://en.unesco.org/global-mil-week-2017). The Global MIL Week 2017 highlights include its feature conference, namely the Seventh Media and Information Literacy and Intercultural Dialogue (MILID) Conference. In collaboration with UNAOC, it has also developed a UNITWIN Programme on Media and Information Literacy and Intercultural Dialogue (MILID, http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/global-alliance-for-partnerships-on-media-and-information-literacy/milid-network/) in

which there are 17 partner universities from across the globe. Punjabi University, Patiala is one of the partner universities from India in this network. UNESCO has also published MILID Yearbooks for the years 2013, 2014, 2015, and 2016 on various themes of MIL. On the UNESCO website, one can even find Five Laws of Media and Information Literacy which are shown in the graphical image below:

Source:http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/mil_five_laws_english.png

Initiatives of IFLA

International Federation of Library Associations and Institutions (IFLA) believes that MIL "is a new emerging field of human rights in an increasingly digital, interdependent, and global world, and promotes greater social inclusion. It can bridge the gap between the information rich and the information poor". IFLA has developed Media and Information Literacy Recommendations, according to which the governments and organisations need to do the following:

· Commission research on the state of media and information literacy and produce reports, using the media and information literacy indicators as a base, so that experts, educators, and practitioners are able to design effective initiatives;

· Support professional development for education, library, information, archive, and health and human services personnel in the principles and practices of media and information literacy and lifelong learning;

· Embed media and information literacy education in all lifelong learning curricula;

· Recognise media and information literacy and lifelong learning as key elements for the development of generic capabilities which must be demonstrated for accreditation of all education and training

programs;

· Include media and information literacy in the core and continuing education of information professionals, educators, economic and government policymakers and administrators, as well as in the practice of advisors to the business, industry and agriculture sectors;

· Implement media and information literacy programs to increase the employability and entrepreneurial capacities of women and disadvantaged groups, including migrants, the underemployed and the unemployed; and,

· Support thematic meetings which will facilitate the acquisition of media and information and lifelong learning strategies within specific regions, sectors, and population groups.

Initiatives at National Level

Media and Information Literacy University Network of India (MILUNI) was formed in 2014 under the UNESCO-facilitated Global Alliance for Partnerships on Media and Information Literacy (GAPMIL) Action Plan and is led by Punjabi University, Patiala. The members of MILUNI are:

· Punjabi University, Patiala
· Uttarakhand Open University, Haldwani
· University of Calcutta, Kolkata
· Pondicherry University, Puducherry
· Makhanlal Chaturvedi National University of Journalism and Communication, Bhopal
· Foundation for Responsible Media (FORMedia)

The network is actively working to promote MIL in India especially by developing capacities of Youth and Youth-led Organizations. Punjabi University, Patiala organized UNESCO-Supported Capacity Building Workshop on Media and Information Literacy for Youth and Youth-led Organizations in India in October 2016.

Conclusion

Media and Information Literacy skills are essential for everyone – especially for library and information professionals – in the 21st century. So library and information professionals need to play a vital role in empowering their users with MIL skills. The users of academic libraries can have better access to MIL skills as they can get these also through their teachers and peers, in addition to getting these from the library and information professionals; but the users of a public library may not have access to these from teachers, and peers, hence the role and responsibilities of public librarians are even greater than academic librarians in empowering their users with MIL skills. As emphasized by Jagtar Singh (2015), "we will have to reach out the info-poor and marginalized sections of society to empower them with the MIL skills". We, the library and information professionals can better navigate the large, diverse, and growing information universe if we ourselves develop MIL skills first. Then we can also help our users in developing these skills, so that they can also use and generate quality information and media content.

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FEED YOURSELF: REVENUE GENERATION OPPORTUNITIES BY UNIVERSITY LIBRARY A PROPOSAL FOR RABINDRA LIBRARY, ASSAM UNIVERSITY

Apurba J Majumder & Sharmila B Majumder

ABSTRACT

Purpose: The main purpose of this paper is to identify, analyse and evaluate various aspects resource mobilisation and revenue generation by an university library It aims to consider the various factors of fund generation to curb the recession in libraries The research also tried to suggest a framework for maximum access and use of library resources and subsequent revenue earning.

Design/Methodology/Approach: the study was initiated with literature search on various topics of revenue generation, fund and resource mobilisation by a university library. The researcher also discussed the matter with senior library professionals and experienced librarians to propose a model for this.

Research Objective: This study is an effort to raise the issue and motivate the fellow library professions as how they can re-use strategically the available resources to earn some additional revenue for the library. Of course, the emerging new technologies and methods of management need to be taken care of.

Findings: Many libraries are already offering same kind of services and manage to run many of their requirements by their own fund. This also helps the top management in developing the library.

Practical Implications: The study was an attempt to propose a revenue generation avenues for university libraries in Assam. This proposal work can serve as a basic guideline to the Library & Information Professionals offer same facilities in their libraries also for fund generation.

Originality/value – it is hoped that the paper will provide a useful platform for further research as well as usability among all type of libraries be improved.

Keywords: Revenue generation, library resource mobilisation, library fund generation, Library recession, Re-engineering

Type: Proposal, Feasibility Study.

The economic recession has hit all sector of our life and education is not out of this. The education and research budget is shrinking and consequently the library budget is diminishing day by day. Librarians are finding it tough to cope up with the requirement of the growing users with limited budget. Even, the funding bodies are also suggesting to generate own resources by academic bodies.

The university library is one of the major academic part and a good amount is spent for running the library and purchasing books and subscribing journal. But, since last several years, the fund flow towards library has slowed down and the library administration has to face several difficulties in accommodating the services within that fund. Remember, its not advisable to stop users services for the want of fund. So, the only option left is to mobilise existing library resources.

The university library derives funds through the university whose sources of financial support are government grants, private contributions and gifts, endowments, student fees, investments, and consultancy.

Direct collection of funds by the library may come from sources such as photocopying proceeds, fines for overdue books, sale of duplicates and publications, and charges for loan of special items. The main source of funds is government grants, which account for about 90% of the total revenue of each university

Assam University, though a very new university (1994), but the library has grown a lot in terms of collection and services. But, since last 3-4 years , funds for journal subscription has dried up. Even the book purchase fun has also reduced. The day to day acivities and services need regular funding support from the controlling authority. Though, we are trying to manage within what we have and trying to offer the best out of it, but its not always possible. So, some planning has been formulated to curb the monetary crisis to some extent. Even UGC, NAAC and NIRF also suggest generating own resources to run the university.

The revenue generation options are:

1. **Overdue fines**: This is always a regular source of fund. Though imposing fine on users sometime objectionable, but this is also mandatory to maintain the regular book in-out and book circulation and access to maximum users. Assam University charges only Rs. 1 per book per day as overdue. Last year we earned more than 2 lakhs from this.

2. **Advanced Academic Service**: The University library may offer some information service, abstracting service, referencing service, notes for the examination on payment basis for its students, faculty members or off campus academicians. The research scholars and faculty members are regular in need of such services and the library may out of the course of regular service planning to start such services for our user and even extended to affiliated colleges and nearby academic institutes.

3. **Academic Program in distance learning mode**: Library may offer some of the very popular professional courses like PGDLAN, PGDLIM under Directorate of Distance Education, with practical exposure to Library Automation Practice. No University in NE Region currently offering this. In India University of Hyderabad, Punjab University, IGNOU, TISS, Mumbai offer these type of courses. The courses are one year duration (two semesters). In most of the universities, the courses are run by Central Library where Dept of LIS does not exist (UOH). Library may also offer Certificate, Diploma in Library Science. Assam University library is planning to start such courses. Currently, few affiliated college libraries are offering such courses [Diploma in LIS]

4. **Short term Training Courses**: Library may organise short term training courses of (1 week / 2 week duration) on Library Management, Open Source Library Software like Koha, Dspace, Drupal, Moodle, Joomla, OJS etc. The central library may plan a year-long schedule. For this purpose, the hostel facility may be offered during vacations. This type of courses are very popular and is a good source of revenue.

5. **Library Consultancy**: The central Library may start paid consultancy for other libraries regarding library building planning, starting new service, library automation, designing and establishing digital library, on-spot training for library staff etc. In India NISCAIR, DELNET etc are offering such services and earning a handsome amount through this process. Even UGC and NIRF also focuses on consltancy which can be great source of earning.

6. **Digital archive for affiliated colleges**: The digital library of affiliated colleges, private academic institutes can be hosted at University Library IDR Server (Dspace) with annual payment basis. Most of the colleges do not have sufficient fund and staff to establish and maintain their own repository. The space can be offered on lease [cloud services] which can be a major source of fund. The annual maintenance fee will also be an additional funding source. Even the Web-OPAC of colleges can also be hosted by Central Library.

7. **Motivational Training**: The university library can also arrange regular motivational training courses for local librarians and other library staffs in collaboration with CDC on payment basis. The library officers / senior professionals may also be deputed for conducting training at various academic institutes,

affiliated colleges etc to train their library staff.

8. **Special Library Membership**: Central Library has already started offering membership for off campus academicians against payment of membership fee. A good number of visitors including faculty members and research scholars from other universities visit your library regular basis to access our resources. The paid access of E-resources can also be offered on hourly basis along with printing facility.

9. **Inter Library Loan**: The central library may offer its collection on loan to other libraries in Barak valley under inter library loan. Even the affiliated colleges may be offered supply of photocopy of journal articles on request. Even, the library staff may be sent on LOAN during vacations.

10. **Selling Book Data**: The library book database [available in online format] for local language books can be sold, as database for Bengali/Assamese/Bodo/Manipuri etc books are not readily available. The central library can even think of establishing an Z39.5 server for union catalogue of Libraries.

11. **Selling old items**: These is a good numbers of books available in our library, which is no longer used by students. They have been categorised as Passive Collection [not issued since last 10 years]. The library is planning to sell them reduces cost to general public and other libraries. IIT s are practising such procedure.

Our prime duty is to provide services to the users. No doubt, regular budget flow is a major force for libraries to be run, but librarians also has to find ways to help the organisation also to manage the lowered rate of fund flow. The above points are just a guideline. The points to be analysed properly and feasibility study to be done before implementation. Long term planning is required and proper promotion/Advertisement is required for successful and quality output.

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FEASIBILITY OF SHARING RESOURCES UNDER N-LIST PROGRAMME: A CASE STUDY

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Abstract

Transfrmational changes have been brought in the field of libraries with the application of Information and Communication Technology (ICT). With the use of this technology, many resources published world-wide, can be shared among libraries. This has great influence on higher studies and other research related activities as well. And at college level, N-LIST programme under E-Shodh Sindhu of INFLIBNET is providing e-resources to registered member libraries by assigning unique IDs and Passwords for each and every individual members of the institution. The present paper is an attempt in this regard taking into consideration the 35 registered colleges of Manipur, as a case study, which throws us lights on many aspects on the issue regarding the feasibility of sharing resources under the above said programme and also presents the functionality and operationability of the system with particular reference to Manipur.

Keywords: ICT, N-LIST, E-Shodh Sindhu, E-resources, Feasibility, Colleges, Manipur.

1. Introduction

Resource sharing denotes "a mode of operation whereby the functions are shared in common by a number of libraries". The term "Resource" is used to designate any or all of the materials, functions, services and the expertise of the professional and non-professional staff. Kent & Galwin (1977) defines a resource as a thing/ person/ action to which one turns for and in time of need. "Sharing" on the other hand implies apportioning, allotting or contributing something that is owned to benefit others. In short, resource sharing in the context of library is sharing of all kinds of information among member libraries who agreed upon to achieve common goal.In this ICT based knowledge society, libraries will no longer be confined to four walls of a building as its resources can be accessed from anywhere on the globe if there is networking and sharing of resources. In higher studies the need of information is limitless and no library can afford to purchase all the resources published worldwide which led to adoption of consortia among libraries. N-LIST Programme of INFLIBNET centre under the E-Shodh Sindhu consortium is providing

e-resources to colleges of the country for the development of higher studies and other research activities. For providing such services in a better way, there requires the feasibility of sound infrastructures, proper knowledge of computer, internet browsing, power back-up facility, etc., to library professionals so that they can develop the feasibility of sharing resources smoothly and efficiently. In this regard the present study attempts to analyze the current situation taking into consideration the colleges of Manipur as a case study.

2. Past studies on N-LIST Programme

A sizeable number of studies are found to be conducted on N-LIST Programme, though the same has been launched recently by INFLIBNET, by different researchers across the country. In a recent survey conducted by Priyogopal Singh and Ibohal Singh(2016), a total of 16 studies were found to be conducted in India. A few such studies conducted since 2014 onwards are being reproduced here.Towards enhancing quality of teaching-learning process in higher education through sustainable information and role of N-LIST programme have been studied by Priyogopal Singh and Ibohal Singh(2017). Accessibility to the N-LIST resources have also been conducted by Priyopgopal Singh and Ibohal Singh (2016) which have shown that for effective use of e-resources under the programme users should be well informed and should have readiness mind set to access such resources.Khan and Tripathi (2015) identified users attitude towards the awareness of N-LIST services, adequacy of library resources and their views on library services and the problems encountered by users while using N-LIST services in the college library as a whole. Chikkamanju and Adithya Kumari (2014) in a study examined the purpose of use, types of services, level of satisfaction, problem faced while accessing, training/orientation program and preferred external storage medium for storing information resources downloaded via N-LIST services.Further Chikkamanju and Kumar (2014) examined the factors affecting the optimum utilization of N-LIST Services, place of access, purpose of use, types of services, level of satisfaction, problem faced while accessing, training/ orientation program and preferred external storage medium for storing information resources downloaded via N-LIST Services. While Punwatkar and Salunke (2014) considered N-LIST Programme as a revolutionary step towards providing scholarly resources,the great impact of modern gadgets on the availability of e-resources in academic community as considered by Priyogopal Singh (2014) are of great concern.

3. Objectives of the study

The objectives of the present study are:
i)   To survey the colleges having N-LIST Programme in Manipur.
ii) To understand the sustainability and accessibility of the N-LIST e-resources
iii) To assess the feasibility of accessing to the e-resources.
iv) To analyse the obstacles and challenges before the institutions.
v) To draw suggestions to improve upon the system.

4. Scope and Methodology

The scope of the present study has been limited to the following aspects:
i)   Adoption of N-LIST e-resources programme for sharing resources to users.
ii) Geographical area of the study being confined to some selected colleges of Manipur.
iii) All the colleges registered under the N-LIST Programme in the state.

As regards methodology, in this case study, all the libraries have been surveyed and personal interview with the librarian (Librarian in-charge) has been conducted using a schedule.

5. About N-LIST

National Library and Information Services Infrastructure for Scholarly Content (N-LIST) was started

in the year 2010 as a joint effort of the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi. It provides for i) cross-subscription to e-resources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE resources for universities and UGC- INFONET resources for technical institutions; and ii) access to selected e-resources to colleges. It also provides access to e-resources to students, researchers and teachers from colleges and other beneficiary institutions through server(s) installed at the INFLIBNET Centre. The authorized users from colleges can access e-resources and download articles required by them directly from the publisher's website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre. Since 2014, N-LIST Programme is subsumed under UGC-INFONET Digital Library Consortium as college Component. The colleges (except Agriculture, Engineering, Management, Medical, Pharmacy, Dentistry and Nursing) in India are eligible to get access e-resources under NLIST Programme. As on **8th June, 2017**, a total number of **2942** colleges have registered themselves with the N-LIST programme including Govt. / Govt.-aided colleges covered under the section 12B of UGC Act as well as Non-Aided colleges. (http://nlist.inflibnet.ac.in). Most of the e-resources published across the world are covered under this programme. It provides the full-text e-resources in two categories, namely-Category I: Full-text E-Journals and Category II: E-Books.

6. Sustainability and Accessibility to N-LIST Resources

In Manipur, there are about **86** colleges and out of which **29** are Government Colleges, **16** are Government-Aided Colleges and the rest are Permanently Affiliated Private Colleges, Private Affiliated Colleges and Temporarily Affiliated Government Colleges. At present, there are only **35** colleges in Manipur which are registered under the N-LIST Programme as listed under **table 1** below. These colleges are supposed to avail the facility of accessing to vast e-resources under the programme. So far the programme enable to access to **6000+ e-journals** and **31, 35,000 e-books** which is considered to be sustainable for a college library if the users can access the resources successfully. There is, as such, sustainability of scholarly information in the form of e-journals and e-books and however, accessibility to the same needs to be examined properly.

Table 1: N-LIST programme registered Colleges of Manipur

Sl. No	Name of college	Status	Access enable	Date of Registration (recent to oldest)
1	South East Manipur College, Komlathabi	2F/12B	Yes	04.08.2015
2	Liberal College, Luwangsangbam	2F/12B	Yes	24.12.2014
3	Don Bosco College, Maram	2F/12B	Yes	27.11.2014
4	Gharapriya Women's College, Imphal	2F/12B	Yes	08.08.2014
5	Nambol L. Sanoi College	2F/12B	Yes	28.07.2014
6	Royal Academy of Law	2F/12B	Yes	08.08.2011
7	Pravabati College	2F/12B	Yes	08.08.2011
8	R.K. Sanatombi Devi College of Education	2F/12B	Yes	08.08.2011
9	Regional College	2F/12B	Yes	12.04.2011
10	N.G College	2F/12B	Yes	12.04.2011
11	Manipur College	2F/12B	Yes	07.04.2011
12	Jiri College, Jiribam	2F/12B	Yes	07.04.2011
13	Hill College, Tadubi	2F/12B	Yes	07.04.2011

14	Naorem Birahari College	2F/12B	Yes	07.04.2011
15	Pettigrew College, Ukhrul	2F/12B	Yes	07.04.2011
16	The United College, Chandel	2F/12B	Yes	07.04.2011
17	C.I College, Bishnupur	2F/12B	Yes	04.04.2011
18	D.M College of Teacher Education	2F/12B	Yes	04.04.2011
19	D.M College of Arts, Thangmeiband	2F/12B	Yes	04.04.2011
20	D.M College of Commerce	2F/12B	Yes	04.04.2011
21	D.M College of Science	2F/12B	Yes	04.04.2011
22	Govt. Hindi Teacher's Training College	2F/12B	Yes	04.04.2011
23	Imphal Art College	2F/12B	Yes	04.04.2011
24	Kakching Khunou College	2F/12B	Yes	04.04.2011
25	L.M.S Law College	2F/12B	Yes	04.04.2011
26	Lamka College, Churachandpur	2F/12B	Yes	04.04.2011
27	Lilong Haoreibi College	2F/12B	Yes	04.04.2011
28	Maharaja Bodhachandra College	2F/12B	Yes	04.04.2011
29	Modern College	2F/12B	Yes	04.04.2011
30	Mount Everest College, Senapati	2F/12B	Yes	04.04.2011
31	Oriental College	2F/12B	Yes	04.04.2011
32	S.Kula Women's College, Nambol	2F/12B	Yes	04.04.2011
33	Standard College	2F/12B	Yes	04.04.2011
34	Thoubal College, Thoubal	2F/12B	Yes	04.04.2011
35	Waikhom Mani Girl's College, Thoubal Okram	2F/12B	Yes	04.04.2011

The above mentioned colleges have been assigned with unique IDs and Passwords by the INFLIBNET Centre, Gandhinagar and with these the member users are allowed to access e-resources provided in the N-LIST programme from their computer, laptops, etc., from any part and corner of the world.

6.1 Feasibility of the Infrastructure

1) Manpower: Out of the 35 colleges, 21 have the LIS professional manpower to look after the N-LIST e-resource in their libraries while the rest were looked after by librarian in-charge who are not LIS Professionals.

2) Machine: Considering the availability of machines like computer, UPS, internet, smart board, etc for accessing N-LIST e-resources, almost 35 colleges have at least 1 number of computer system, 18 colleges have UPS back-up facility, and 30 colleges have all year round internet connectivity. Only 1 college library has installed the smart-board in the library for displaying N-LIST demonstration by the librarian from time to time.

3) Space: Regarding the space matter, 17 colleges have the space for up gradation of libraries while the rest have to re-structure their libraries to suit the present library structures.

4) Training: 28 colleges librarian/ librarian (in-charge) out of 35 have participated in various training programs from time to time to gain knowledge on computer skills, N-LIST e-resources accessing skills, etc.

5) LAN: Among the 35 colleges only 15 colleges have the facility of LAN in their libraries and in the campus of its institution to get access the e-resources while the rest are at the initial stage and yet to start.

6) User Awareness Program: Majority of the colleges i.e., 25 have conducted user awareness program to enhance access to the e-resources.

6.2 Obstacles/ Challenges

Various obstacles are found to be faced by the librarian / librarian (in-charge) while providing access to the e-resources in their libraries. Some of them include :

1) Digital-divide on both LIS Professionals and Users;
2) Shortage of computer system;
3) Poor internet speed;
4) Power back-up problems;
5) No LAN connectivity
6) Limited budget for library infrastructure development, etc.

6.3 Suggestions to improve upon the System

There is need to strengthen the Library Committee for development of library. Resource sharing and other consortia like N-LIST programme should be fully implemented so that resources come under the programme can be benefitted by users. There should be sound library budget to start up such programmes by improving its infrastructure. Internet connectivity should be made compulsory and there should be no fluctuation in getting this service inside the campus of the institution as well as libraries.

7. Conclusion

Sharing of resources is the need of the hour as we are living in knowledge-based society and users are almost accustomed to pin-pointed authentic information only. Libraries, being information centres, should be well developed to get the knowledge and other related resources in this fast competitive age. Higher learning institutions like college too require the adoption of sharing resources and N-LIST under E-Shodh Sindhu.Library professionals and authority of colleges should go hand in hand together to develop and create the feasibility of sharing e-resources to needy users under N-LIST programme.

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HEALTH INFORMATION SOURCES AND SEEKING BEHAVIOR OF WOMEN: A CASE STUDY OF KANGPOKPI TOWNSHIP IN MANIPUR

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Abstract

To identify the health information sources and seeking behavior of the rural women of Kangpokpi town in Manipur, a north eastern state of India, 42 married women of child bearing age are randomly selected for the study. Descriptive Statistics is used to analyse the data. The health information sources used most frequently by the women are found to be Community Health Centre (CHC), the Pharmacy, Private Doctors, and Specialist Doctors in order of preferences. The women also chose family, friends, priest among the highly trusted health information sources. The study also attempts to find the barriers faced by women while accessing health information needs.

Keywords: Health Information Sources, Rural Women Health Information Sources, Women Health Information Seeking, Barriers of Health Information Seeking, Women Health Decision Making.

Introduction

Health is defined as the state of being free from illness or injury (Waite, 2014). Webster (1913) defined health as the state of being hale, sound, or whole, in body, mind, or soul; especially, the state of being free from physical disease or pain (*http://www.webster-dictionary.org/definition/health*). Information can be defined as any fact, or set of facts, knowledge, news, or advice, whether communicated by others or obtained by personal study and investigation; any datum that reduces the uncertainty about the state of any part of the world; intelligence; knowledge derived from reading, observation, or instruction (Webster, 1913). In simple words, Health information can be defined as meaningful data, knowledge, facts concerning the physical, mental, social, spiritual well-functioning of a person, gathered through study and research and which are communicable through various communication channels. Many studies on health information are consulted but there is no convincing or conclusive definition of health information (Few examples of such studies are Connell, & Crawford, 1988; Duhl, 2000; Fallis & Frické, 2002; Harris & Wathen, 2007; Hsieh & and Lin, 1997; Nancy, Apter, Kuchta, & Greenhouse 2010;Wiltshire, Cronin, Sarto, & Brown, 2006). Therefore, the definition of health information is derived from dictionaries and encyclopedias.

"Medical professionals are not the only ones providing health and medical information. Specific information regarding the importance of preventative care and regular health monitoring as well as the symptoms and treatment of chronic diseases can be delivered through alternate sources. Print and broadcast media, churches, community groups, family and friends, and the Internet are all sources of health and

medical information"(Livingston,Minushkin, & Cohn, 2008).Health related information can be found through different kinds of media such as Printed media: Newspapers, Magazines, Books, etc. Electronic media: Internet, Television, Mobile Phones, etc. Health institutions like Hospitals, Private Health Clinics are also another form of Health Information Sources. Health Information Sources can also be persons like the Doctors, Nurses, Health Workers, or interpersonal sources including Friends and Family, Community Organizations, and Healthcare Provider (Redmond, Baer, Clark, Lipsitz& Hicks, 2010). Some of the mentioned health information sources also act as health information communication channels by acting as medium in communicating the health information to people. Therefore, the different types of media which contain various kinds of health related information are also known as health information sources.

Information seeking may be understood as the purposeful activities of looking for information to meet a need, solve a problem, or increase understanding (David,2007). In the words of Wilson (2000), Information Seeking Behavior is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web).Information seeking behavior is a person's behavior involving all the aspects of his works in searching, communicating and generating the relevant information in-order to satisfy his information needs. Likewise, health information seeking behavior can be defined as the processes involved in seeking information on health from the relevant sources and channels.

Literature Review

In identifying the popular and commonly used information providers, rural villagers were asked to identify the sources they turned to, whenever they needed information to solve a problem or make a decision. In the absence of formal information sources, the rural villagers turn to non-traditional and informal sources of information such as tribal authorities, personal sources (friends, acquaintances, and relatives), etc. The author went on to say that these information sources can also be channels of information (Maepa, 2000). The study clearly shows the inadequacy of formal health information sources such as health institutions, health professionals. In a study conducted by Wiltshire, Cronin, Sarto & Brown, (2006), women obtained the majority of their health information from books/magazine/other source and the least amount of health information from health care professionals/health care organizations. The reason could be because of the in-adequate services of the health care professionals and health care organisations. In another study conducted by Olaleye & Bankole (1994), it is seen that women who have heard or seen advert on contraceptive brands, and women who favor broadcast of family planning messages in the media, are significantly more likely to adopt birth control behavior than women who had not heard or seen, and women who do not favor broadcast of such media messages, respectively. The different choices of women health information sources are related to adoption of health schemes. One cannot rule out that women with no perceived choice of health information sources are being influenced by the availability, accessibility, and popularity of the health information sources.

Johnston, Ved, Lyall, & Agarwal, (2003) made the finding that women who experienced abortion complications generally first sought care from un-trained or inadequately trained providers in their village. But when their medical condition worsened, some of the women sought the services of providers who were more qualified but less affordable or less conveniently located. The study highlights how medical cost and distance effect the nature of seeking women's health care/ information needs. The study emphasize the need to strengthen links between rural, village-based providers and the formal health care system, to help women avoid unsafe abortion by using contraceptives and accessing safe abortion care and receive appropriate and timely treatment for complications. Rani and Bonu (2003), Nayab (2005) are of the opinion that the proportion of seeking care varied significantly according to location and by socioeconomic and demographic group. Even though major part of women health problems are related to the reproductive

system, very few women sought medical treatment for gynecological symptoms, and these small number of women prefer private and non-governmental medical practitioners including un-licentiate traditional healers. This indicates the necessity to convince them to access the state run medical systems.

Gate-Keeping is viewed as a barrier on rural women's prompt seeking of modern health treatment for themselves and their children in some villages of Upper East Region of Ghana, where a total of 2,856 women were interviewed. Only 14.5% said they do not require authorisation from any man in their compound before attending a hospital, while 38.2% and 38.3% need authorisation from their husbands and compound heads respectively. Compound gate-keeping systems thus characterize the nature of these constraints (Ngom, Debpuur, Akweongo, Adongo, & Binka, 2003). Similarly, Barua, & Kurtz, (2001) found that women have almost no role in deciding whether they could seek treatment for gynaecological symptoms. It was their husband who made the decision. In another study conducted by Kyomuhendo, (2003), the author indicated that many mothers in the study area did not utilise available maternity services. Most of them sought advice or treatment when the symptoms became clearly manifest, persistent or severe. The author says that part of the reason for the poor quality of care for delivery and complications may be linked to the comparative lack of resources of rural health districts as well as to women's lower status in Ugandan society, especially rural women. In the words of Chen, Liu, & Xie, (2010), the prevalence in a rural community of return migrant women in China, especially those who had been living in a large city has positive effects on rural women's desire for a one-child family without son preference and on knowledge of self-controllable contraceptive methods. Moursund & Kravdal (2003) also found that a woman's probability of using contraception is found to be influenced not only by her own education, but also by that of other women in the community such as close neighbours, other women in the village, or women in other parts of the country, and they may be women of the same or a different age. The literatures point out that the presence of trusted source can overcome the barriers of health information seeking mentioned in the literatures such as gate-keeping, poor quality of care, lack of resources, barrier created by the women's low status in the society.

Statement of the problem

Living in rural areas poses special challenges (and opportunities) for the significant health information intermediary role that women enact (Wathen & Harris, 2007). The health information seeking behavior of the rural women are affected by many factors like education, social status, etc. The services provided through a network of government hospitals, dispensaries, and primary health centers do not reach or remain underutilized by women. Due to these problems, the core sources of health information in rural areas are the informal sources such as family members, relatives, friends, and sources from within the community such as village elders, traditional healers, etc. In many cases, the rural women had almost no role in deciding whether they could seek treatment for their sicknesses, and need authorisation from their husbands in seeking health information. The husbands seek health information on their behalf. Therefore, their health information needs and other health related needs are seldom met. The study area being rural, similar problems mentioned are faced by the women. The women are mostly house-wives with limited or no income of their own and are also barely educated. Most of the women do not know how or where to access their health information needs. Due to such status of women in the society, in many cases the women have no rights to take their own health decisions and the men/husbands are the ones taking decision for them even in matters relating to their health. There are several health schemes and services provided rural areas by the Central and State Government through the existing Community Health Centre and the neighboring primary health centers and also through a number of Health Workers. However, these services seem to be underutilized by the rural women. Due to these problems, it is important to identify the other informal sources of health information such as family members, relatives, friends, and sources from within the community such as

village elders, traditional healers, etc. which contribute to providing better services in dissemination of women health information.

The present study attempts to examine health information sources and seeking behavior of women in rural Kangpokpi, Manipur. The study also attempts to find the women's choice of health information communication channels and also the factors acting as barriers in accessing health information/health care by the rural women. Quantitative method is employed to study the case.

Methodology

The selected site, Kangpokpi town, also known as Kanggui town, is the principal town of Sadar Hills under Sadar Hills Autonomous District in Manipur state and is located about 46 kilometers from the state capital, Imphal. It is a hill area inhabited by various communities like Nepalese, Biharis, Punjabis, Nagas, Meiteis, where the Kukis are in majority. The Asian highway 1 passes through the town. The Kangpokpi Census Town has over 1,437 houses, population of 7,476 of which 3,720 are males while 3,756 are females as per report released by census India 2011. Female Sex Ratio is of 1010 against state average of 985 (Census 2011, n.d.). The site is selected on the basis of the researcher's familiarity with the people, the place, knowledge of the mother tongue, and accessibility

Among the total adult (above 18 years) female population of 1735 (Electoral roll, 2015), there are 422 married child bearing women in the study area (calculated from name list of Electoral Roll, 2015). Among these, a sample of 42 married women of child bearing age are randomly selected for the study.

The variables used in the study are health information seeking, health decision making, health information sources, barriers of health information seeking. Based on these variables the questionnaires are constructed using a point 5 scale ranking system, where 1 is the least (never) and 5 the most (most frequently). The questionnaires are distributed randomly among the women for response.

Analysis and Interpretation

Diseases	Mean Ranking	No Response	Never...Quite Frequently				
			Never	Rarely	Sometimes	Frequently	Quite Frequently
BODYACHE	4.14	—	--	4.8	11.9	47.6	35.7
HEADACHE	4.00	—	—	—	16.67	66.67	16.67
COUGH/COLD	3.74	0	7.14	2.38	19.05	52.38	19.05
PREGNANCY	3.33	2.4	14.3	4.8	16.7	50.0	11.9
IMMUNIZATION	3.29	2.38	14.29	7.14	19.05	42.86	14.29
TUBERCULOSIS	3.00	2.38	11.9	11.9	35.71	33.33	4.76
HYPERTENSION	3.00	2.4	16.7	11.9	21.4	42.9	4.8
FAMILY PLANNING	2.86	2.4	14.3	16.7	33.3	28.6	4.8
INFERTILITY	2.43	2.38	28.57	23.81	19.05	21.43	4.76
MALNUTRITION	2.38	2.4	21.4	21.4	45.2	9.5	—
MALARIA	2.29	4.76	21.43	23.81	42.86	4.76	2.38
DIABETES	2.21	2.38	33.33	19.05	33.33	9.52	2.38
HIV/AIDS	2.17	2.38	38.1	23.81	16.67	14.29	4.76
SKIN DISEASE	2.12	2.4	33.3	26.2	28.6	7.1	2.4
STD	1.88	2.38	42.86	30.95	14.29	7.14	2.38
TYPHOID	1.88	2.38	38.1	35.71	16.67	7.14	0
CHOLERA	1.45	2.38	59.52	28.57	9.52	—	—
CHICKEN POX	1.31	2.38	69.05	23.81	4.76	—	—

Table 1: FREQUENCY OF INFORMATION SEEKING ON VARIOUS DISEASES IN DESCENDING ORDER

The table shows the frequency of information seeking on various diseases by the women. It is seen that the women seek information mostly on body ache, immunization, cold/ cough, headache, family planning, pregnancy. The main reason behind this can be that the mentioned diseases or illnesses are very common almost everywhere. Even though these diseases are not deadly, they are common and cause a great concern to many people. The table also shows that 38.10 percent of women never sought information on HIV/ AIDS and 23.81 percent rarely do. More than 70 percent of the women never or rarely seek information on STDs. The Stigma associated with HIV/AIDS/STD may be the reason that prevents many people from seeking information on these diseases. It is important to provide basic HIV/AIDS education to the women in order to promote awareness and tackle stigma and discrimination. Most women rarely or never seek information on diseases like cholera, chicken pox, skin diseases. Cholera and chicken pox, being already eradicated, may be the reason why the women do not feel the need to seek information on these diseases.

The average percentages of each of the responses, namely, 'no response', 'never', 'rarely', 'occasionally', 'frequently', 'quite frequently' are calculated and the average is worked out and shown in the histogram below.
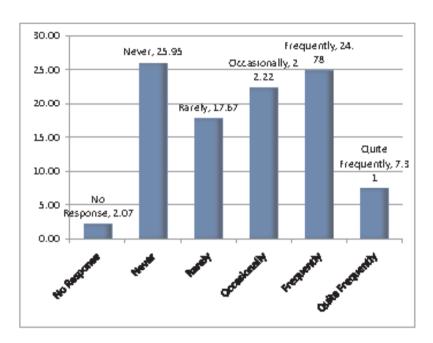
Fig.1: HISTOGRAM SHOWING THE AVERAGE FREQUENCY OF SEEKING INFORMATION OF VARIOUS DISEASES.

The average percentages of each response made by the women on information seeking of various diseases is calculated and displayed in the above histogram. It is clearly seen that majority of the women, i.e. 66.74 percent of them seek information on the various mentioned diseases. The frequency of the health information seeking varies from rarely to most frequently but at least the women seek information

FREQUENCY OF USE OF INFORMATION SOURCES FOR HEALTH INFORMATION NEEDS (n=42)

Sources	Mean Ranking	No Response	Never	Barely	Sometimes	Frequently	Quite Frequently
CHC	3.88	4.8		9.5	9.5	40.5	35.7
PHARMACY	3.55	4.8	9.5	2.4	14.3	47.6	21.4
SPECIALIST DOCTORS	3.38	4.8	14.3	2.4	14.3	45.2	19
FAMILY	3.29	4.8	11.9	31	38.1	14.3	-
PRIVATE DOCTORS	3.19	4.8	14.3	4.8	21.4	42.9	11.9
NURSES	3.19	4.8	2.4	9.5	35.7	47.6	-
NEWSPAPER MAGAZINE	3	2.4	7.1	21.4	28.6	38.1	2.4
TELEVISION	2.95	2.4	4.8	23.8	33.3	35.7	-
PRIESTS	2.67	4.8	21.4	11.9	28.6	31	2.4
FRIENDS	2.45	4.8	11.9	31	38.1	14.3	-
PRIVATE CLINICS	2.43	4.8	23.8	23.8	21.4	23.8	2.4
HEALTH WORKERS	2.26	2.4	28.6	23.8	31	14.3	-
ELDERS	2.21	4.8	31	21.4	23.8	19	-
FAITH HEALERS	2.12	4.8	26.2	31	31	4.8	2.4
TRADITIONAL MIDWIVES	2.1	4.8	31	19	40.5	4.8	-
ALTERNATIVE MEDICINE SELLERS	1.98	4.8	40.5	11.9	38.1	4.8	-
POSTERS	1.98	4.8	33.3	28.6	26.2	7.1	-
DOOR TO DOOR MEDICINE SELLERS	1.86	2.4	38.1	31	28.6	-	-
AN EDUCATED PERSON	1.74	2.4	42.9	33.3	21.4	-	-
HERBAL PRACTITIONERS	1.67	4.8	45.2	31	16.7	2.4	-
MASSEURS	1.67	4.8	42.9	33.3	19	-	-
PHC	1.55	4.8	57.1	26.2	2.4	9.5	-
ANGANWADI WORKERS	1.45	4.8	59.5	26.2	4.8	4.8	-
TRADITIONAL HEALERS	1.45	4.8	59.5	21.4	14.3	-	-
RADIO	1.38	4.8	59.5	28.6	7.1	-	-
RURAL HEALTH CENTRE	1.31	9.5	57.1	26.2	7.1	-	-
QUACKS	1.24	4.8	73.8	14.3	7.1	-	-
CHIEF	1.05	4.8	80.7	9.5	-	-	-

Table 2: FREQUENCY OF USE OF INFORMATION SOURCES FOR HEALTH INFORMATION NEEDS IN DESCENDING ORDER

The frequency of use of various health information sources by the rural women of the study area is shown in the table above. The health information sources used most frequently by the women are Community Health Centre (CHC), the Pharmacy, Private Doctors, and Specialist Doctors. The main reason the high usage of CHC by the women may be because the CHC is a government hospital which means cheap or free check-ups and consultations. The second reason can be since the CHC is situated in the study area, they do not need to travel far and spend time and money going there. Hence, it is convenient for the women. The women also chose pharmacy as one of the most highly used health information sources. Even though the CHC is chosen as one of the most frequently used health information source, it is found that the women also frequently visited the private doctors and the specialist doctors for their health information needs. This suggests that the government-run CHC is not fully efficient for treating all kinds of illnesses faced by the women or their family. Apart from the professionally trained personnels, and scientifically approved institutions, the women also chose family, friends, priest among the highly trusted health information sources. This shows the trusted bond the women share with their family, relatives, and friends, and their choice of Priest as a trusted health information source can be because the study area being a Christian dominated place, the people in general and the women in particular have high regards and trust for the Priests and Church elders. The women also occasionally use television, traditional midwives, friends, and family members as health information sources. The health information sources least consulted by the women are Primary Health Centre (PHC), Rural Health Centre (RHC), radio, Chief.

The average percentages of each of the responses, namely, 'no response', 'never', 'rarely', 'occasionally', 'frequently', 'quite frequently' are calculated and the average is worked out and shown in the histogram below.
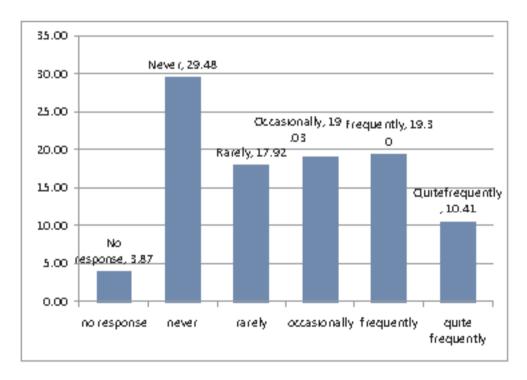
Fig 2: HISTOGRAM SHOWING THE FREQUENCY OF USE OF INFORMATION SOURCES FOR HEALTH INFORMATION NEEDS.

From the above pie diagram it is seen that more than 65% of the women uses at least one of the health information sources listen in the table above. However, it is also seen that about 30% or more have never used the listed information sources for accessing their health information needs.

FREQUENCY OF FACTORS PREVENTING ACCESSING OF HEALTH AND HEALTH INFORMATION (n=42)

Factors	Mean Ranking	No Response	Never.............................Quite Frequently				
			Never	Rarely	Sometimes	Frequently	Quite Frequently
POOR SERVICE	2.69	11.9	4.8	11.9	45.2	26.2	–
EXPENSIVE	2.64	7.1	9.5	16.7	45.2	21.4	–
NO TIME	2.57	11.9	9.5	14.3	38.1	26.2	–
BEYOND INCOME	2.52	7.1	11.9	23.8	38.1	16.7	2.4
NO KNOWLEDGE	2.48	11.9	11.9	11.9	47.6	14.3	2.4
NOT REQUIRED	2.29	14.3	9.5	23.8	38.1	14.3	–
DISTANCE	2.14	11.9	9.5	35.7	38.1	4.8	–
LACK OF TRANSPORT	1.88	11.9	11.9	52.4	23.8	–	–
FAMILY DISSENT	1.86	11.9	23.8	38.1	21.4	2.4	2.4
RELIGIOUS RESTRICTIONS	1.71	11.9	35.7	31	11.9	9.5	–
FEAR OF PUBLIC DISSENT	1.62	11.9	40.5	23.8	21.4	2.4	–
DIFFIDENCE	1.57	11.9	35.7	31	11.9	9.5	–

0 – No Response, 1 – Never, 2 – Rarely, 3 – Occasionally, 4 – Frequently, 5 – Quite Frequently Table 3: FREQUENCY OF FACTORS PREVENTING ACCESSING OF HEALTH AND HEALTH INFORMATION IN DESCENDING ORDER

The table 3 shows the frequency of the factors that prevented the women from accessing health information. The most common factors preventing the women from accessing health information needs or health care needs are found to be poor service, medicinal/treatment costs, lack of time, ignorance. Even though transport can be the factor sometimes most of the time it is not an issue. The reason behind this can be that, since the women live in the town itself and the health centres are at walk-able distances, they do not face so many problems in transportation. Other factors like Family Dissent, Religious Restrictions, Fear of Public Dissent, and Diffidence rarely prevented women from accessing their health information needs. It is seen that social and religious factors like "Diffidence", "Fear of Public Dissent", "Family Dissent", "Religious Restrictions" are found to play lesser role in preventing women from accessing health and health information needs than the economic factors such as "Expensive", "Beyond Income", etc. it also shows the factors preventing women from accessing health and health information by taking the mean value of the responses in descending order. The factor with the highest ranking is "Poor Service", and the least being "Diffidence". Therefore, in order to help the rural women overcome the barriers it is

important for the Government to improve the services of the state-run medical institutions by employing adequate number of qualified staffs and improving the infrastructure and providing adequate medicinal stocks. Taking such step is likely to improve the services of the health care institutions and minimize the treatment costs to a great extent.

The average percentages of each of the responses, namely, 'no response', 'never', 'rarely', 'occasionally',
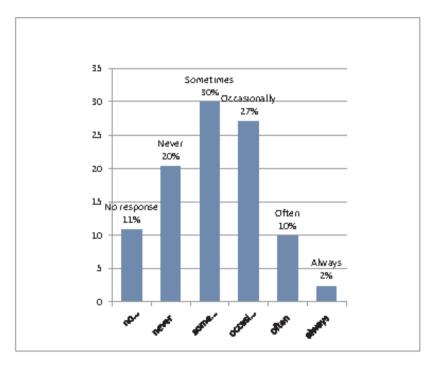
Fig 3: HISTOGRAM SHOWING THE FREQUENCY OF BARRIERS FOR WOMEN IN ACCESSING HEALTH INFORMATION.

The pie diagram shows that more than 65% of the women faced at least one of the barriers listed in table 3 as a preventing factor in accessing health information needs which acts as hurdles in further accessing their health care needs. More than 26% responded to have faced such problems occasionally, almost 10% responded to have faced often, and more than 2% responded to have faced such problems always. About 20% responded to have never faced any of the mentioned barriers in accessing their health information needs.

FREQUENCY OF HEALTH DECISION MAKING (n=42)

Decision maker	Mean Ranking	0	1	2	3	4	5
SELF	3.76	4.8			16.7	66.7	11.9
DOCTOR	3.64	4.8	4.8	7.1	4.8	61.9	16.7
HUSBAND	3.24	7.1	4.8	7.1	28.6	42.9	9.5
MOTHER-IN-LAW	2.62	4.8	23.8	21.4	19	16.7	14.3
FATHER-IN-LAW	1.98	9.5	40.5	19	11.9	11.9	7.1

0 – No Response, 1 – Never, 2 – Rarely, 3 – Occasionally, 4 – Frequently, 5 – Quite Frequently Table 4: FREQUENCY OF HEALTH DECISION MAKING IN DESCENDING ORDER

The above table 4 displays the percentage of the women's level of independence in taking health decision. The table has shown that most of the women, i.e. more than 70 percent of them frequently take their own health decisions. The women are also found to rely on their doctors in making health related decisions. This shows that the women are quite aware of their rights on their health matters and have a sense of responsibility on their own health related issues and are educated enough to sought the help and decision of the doctors instead of other family members like Father-in–law, Mother-in-law, etc. However, more than 50 percent of the women chose their husbands as the one who often takes the final decision on their behalf on their health matters.

Findings and Suggestions
Findings

It is found that the women seek information mostly on general illnesses or health problems like cold/cough, headache, body ache, family planning, pregnancy, immunization, etc then other more serious illnesses like Diabetes, HIV/AIDS, STDs, etc. The Stigma associated with HIV/AIDS/STD may be the reason that prevents many people from seeking information on these diseases. The health information sources used most frequently by the women are found to be Community Health Centre (CHC), the Pharmacy, Private Doctors, and Specialist Doctors. When it comes to reliability, the women find the Community Health Centre (CHC), Private Doctors, and Specialist Doctors to be most reliable health information sources. The choices made by the them shows that the women have at least some basic education and knowledge which made them prefer scientifically trained medical professionals to scientifically untrained practitioners like Quacks, Door to Door medicine sellers, Alternative medicine sellers, elders, Chief, an educated person, etc. On the other hand, Apart from the professionally trained personnel, and scientifically approved institutions, the women also chose family, friends, priest among the highly trusted health information sources. This shows the trusted bond the women share with their family, relatives, and friends, and their choice of Priest as a trusted health information source can be because the study area being a Christian dominated place, the people in general and the women in particular have high regards and trust for the Priests and Church elders. When it comes to the level of independence in taking health decision, despite the fact that most women in rural areas have no rights in taking their own health decisions as found in the literatures, in case of the present study it is found that more than 70 percent of them frequently take their own health decisions. The women are also found to rely on their doctors in making health related decisions. This shows that most of the women have a say on their health matters and have a sense of responsibility on their own health related issues and are educated enough to sought the help and decision of the doctors instead of other family members like Father-in –law, Mother-in-law, etc. However, more than 50 percent of the women chose their husbands as the one who often takes the final decision on their behalf on their health matters.

Suggestions

Based on the analysis of the study and the problems encountered in the study, some suggestions are made which are considered to be useful in helping the women meet their health information needs.
1. Proper awareness on immunization should be provided to all married women.
2. Awareness and proper education on HIV/AIDS, STDs should be provided to the people in general and the women in particular to reduce the stigma associated with these diseases.
3. In rural areas the health care institutions are generally understaffed. More health staffs, especially, more Doctors and Nurses should be appointed to meet the health care needs of the rural people.
4. The rural health care institutions are also known to have poor and limited facilities (Bhandari, L. &

Dutta, S.n.d.). It may be suggested that the health care facilities should be improved by the State so that the rural people who are generally poor to go to bigger health institutions, can get their health care needs and treatments done.

5. More Female health workers should be employed to provide awareness and health care to the rural women. They should be given proper salary so that they may be more functional and more efficient in carrying out their duties and responsibilities.

6. The health workers should pay visits to each of the women's house to communicate health information, and should organize health camps once in a while.

Conclusion

The result of the study shows that the health information sources used most frequently by the women are found to be Community Health Centre (CHC), the Pharmacy, Private Doctors, and Specialist Doctors. This shows that the women have at least some basic education and knowledge which made them prefer scientifically trained medical professionals to scientifically untrained practitioners. Apart from the scientifically trained personnel, and scientifically approved institutions, the women also chose family, friends, priest as highly trusted health information sources. This shows the trusted bond the women share with their family, relatives, and friends and their choice of Priest as a trusted health information source can be because the study area being Christianity dominated place, the women in particular have high regards and trust for the Priests and Church elders. On health information seeking, the women seek information mostly on general illnesses like body ache, immunization, cold/ cough, headache, family planning, pregnancy other than more deadly diseases like HIV/AIDS, STDs. Awareness programmes on HIV/AIDS, STDs need to be conducted to the people in general and the women in particular to reduce the stigma associated with these diseases. Even though a large percentage of the women seek information on immunization, it is also seen that significant percentage of women i.e. about 25 percent of the women never or hardly seek information on immunization. This shows the need for spreading awareness on immunization and giving the women who are mostly mothers a basic education on the need and importance of immunization. The women are also seen to have faced a number of obstacles while seeking health information needs, with the most common one being poor services.

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INFORMATION MANAGEMENT AND USE OF ICT IN THE GOVERNMENT ENGINEERING COLLEGE LIBRARIES OF WEST BENGAL: AN ANALYTICAL STUDY

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Abstract

Engineering college libraries impart information services on academic information pertinent to the course curricula of different engineering disciplines as well as meeting the information requirements of the stakeholders. The present study is an attempt to assess the status of highlighting the information management and application of ICT to enhance the same in the government engineering college libraries in West Bengal through a survey. Findings obtained from the study are discussed and conclusions & suggestions are drawn accordingly for improvement of such services.

Keywords: Information Management, Engineering College Libraries, Library Automation, Electronic Resources

1. Introduction

According to T D Wilson Information Mangement implies "the application of management principles to the acquisition, organization, control, dissemination and use of information relevant to the effective operation of organizations of all kinds". 'Information' here refers to all types of information of value, whether having their origin inside or outside the organization, including data resources, such as production data; records and files related, for example, to the personnel function; market research data; and competitive intelligence from a wide range of sources. Information management deals with the value, quality, ownership, use and security of information in the context of organizational performance.

Thus Information Management (IM) concerns a cycle of organisational activity that signifies the acquisition of information from one or more sources, the custodianship and the distribution of that information to those who need it, and its ultimate disposition through archiving or deletion.The role of professional librarian or information manager is to ensure that information is acquired , organised and is accessible to those who need it.Most important roles in a library in modern society involve working with information in all its forms, increasingly with digital resources such as databases and e-publications as the job becomes more IT centric. All aspects of information management must be grounded in a consideration

of the information requirements (or information needs) of customers or clients of the information systems and services.

2 Objective

The present study tries to assess the present status of information management and use of ICT in the Government Engineering College libraries in West Bengal. The attempt has been made

1. To identify the present infrastructure of the library
2. To explore the collection coverage of the library
3. To identify the effectiveness of the library services
4. To identify the present status of library automation
5. To explore the application of ICT in library management for improvement

3 Scope & Coverage

This study is only confined to 5 Goverment Engineering College libraries approved by the All Indian Council of Technical Education(AICTE) , affiliated to Maulana Abul Kalam Azad University of Technology(MAKAUT)formerly West Bengal University of Technology (WBUT).These are: Govt. College of Engineering & Textile Technology , Hooghly , Govt. College of Engineering &b Leather Technology, Kolkata,Govt. College of Engineering & Ceramic Technology , Kolkata , Jalpaiguri Govt. Engineering College , Jalpaiguri & Kalyani Govt. College of Engineering , Nadia.This study is focussed on colleges' infrastructure, features of library, library staffing and funding, library collection development including digital resources etc.Application of ICT in library organisation and management is also concerned in this regard.

4 Methodology

In order to achieve the objective of the study , survey method was adopted to collect necessary data.Only government engineering colleges are considered in this regard offering both undergraduate and post graduate study in the engineering and its allied disciplines.Data were collected from the sample so selected using a combination of structured questionnaire and interview . Although a few questionnaire were received through e-mail.

5 Data analysis and findings
5.1 Courses offered

Name of the College	Year of establishment	Courses
Govt. College of Engineering & Textile Technology , Hooghly	1908	03(UG), 02 (PG)
Govt. College of Engineering &b Leather Technology, Kolkata	1919	03(UG), 01(PG)
Govt. College of Engineering & Ceramic Technology , Kolkata	1941	03 (UG), 02 (PG)
Jalpaiguri Govt. Engineering College , Jalpaiguri	1961	06(UG) , 02(PG)
Kalyani Govt. College of Engineering , Nadia	1995	05(UG),05(PG)

The above table try to indicate the present status of courses that are offered by these libraries. Among them, Jalpaiguri Goverment Engineering college offers the maximum number (6) of undergraduate courses engineering disciplines followed by Kalyani Goverment Enginnering College in 5 discipline of enginnering and its allied areas. The rest of the colleges offers undergraduate courses in 3 displines respectively. Among the post graduate . The above table also shows that Kalyani Goverment Enginnering College offers 5 post graduate courses in engineering which is highest among the colleges covered under this study.

5.2 Library Collection

Table 2: Library Collection

Name of the College	Books	Journals (printed)	Subscribed Online Databases	CD/DVDs
Govt. College of Engineering & Textile Technology , Hooghly	12000	10	IEEE, EBSCO, SAGE	NIL
Govt. College of Engineering &cb Leather Technology, Kolkata	28000	12	IEEE& Science Direct-Elsevier,	As accompanying material
Govt. College of Engineering & Ceramic Technology , Kolkata	18622	48	IEEE, SPRINGER McGrawHill – E-Books,NLIST, Khimbus	400 (approx)
Jalpaiguri Govt. Engineering College , Jalpaiguri	52,000	22	IEEE), ASCE, ASME, Springer link , DELNET	3000(approx)
Kalyani Govt. College of Engineering , Nadia	30,000	75	IEEE , ASME, Science Direct, Springer link ,DELNET	350
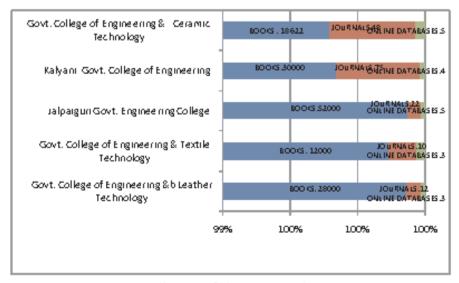
Figure 1: Institute wise collection of library material

Table 2 and figure 1 show that the Jalpaiguri Govt. Engineering College has the maximum text books (52000) follow'd by Kalyani Govt. College of Engineering (30000) and Govt. College of Engineering &b Leather Technology, Kolkata (28000) . Govt. College of Engineering &   Ceramic Technology , Kolkata and Govt. College of Engineering & Textile Technology , Hooghly have 18622 and 12000 text books respectively. Kalyani Govt. College of Engineering and Govt. College of Engineering &   Ceramic Technology , Kolkata have good collection of printed journals 75 & 48 respectively other than 3 colleges. Where   Jalpaiguri Govt. Engineering College , Jalpaiguri has only 22 journals and Govt. College of Engineering &b Leather Technology, Kolkata & Govt. College of Engineering & Textile Technology , Hooghly have 12 & 10 respectively. Govt. College of Engineering & Ceramic Technology, Jalpaiguri Govt. Engineering College , Kalyani Govt. College of Engineering have good collection of online databases & CD/DVDs other than 2 colleges.

5.3 Library Services

Table 3 : Library and Information Service

Name of the College	Circulation	CAS	SDI	Reference	OPAC	Photocopy	Internet
Govt. College of Engineering & Textile Technology , Hooghly	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Govt. College of Engineering &b Leather Technology, Kolkata	Yes	Yes	NA	Yes	Yes	Yes	Yes
Govt. College of Engineering & Ceramic Technology , Kolkata	Yes	NA	NA	Yes	Yes	Yes	Yes
Jalpaiguri Govt Engineering College , Jalpaiguri	Yes	NA	yes	yes	yes	Yes	yes
Kalyani Govt College of Engineering , Nadia	Yes	Yes	NA	yes	yes	Yes	yes

Table3 shows that out of these 5 colleges only Govt. College of Engineering & Textile Technology provides CAS , SDI , Reference, OPAC, Photocopy , Circulation & internet services. SDI service is not available in Govt. College of Engineering &b Leather Technology,Govt. College of Engineering &   Ceramic Technology & Kalyani Govt. College of Engineering library. Where as Jalpaiguri Govt. Engineering College & Kalyani Govt. College of Engineering do not provide CAS for the users.

5.4 Staff Pattern

Table 4: Staff Patterns

Name of the College	Staff Pattern	
	Professional	Non Professional
Govt. College of Engineering & Textile Technology , Hooghly	01	01
Govt. College of Engineering &b Leather Technology, Kolkata	01	NA
	01	01
Jalpaiguri Govt. Engineering College , Jalpaiguri	01	04
Kalyani Govt. College of Engineering , Nadia	02	NA

Table 4 shows that out of these 5 Goverment Colleges , Only Kalyani Govt. College of Engineering , Nadia has 2 professional staff , the rest of them have only 1 professional staff. The Jalpaiguri Govt. Engineering College has the highest number(4) of non-professional staff , the Govt. College of Engineering & Textile Technology , Hooghly & Govt. College of Engineering &   Ceramic Technology , Kolkata have 1 non-professional, where Govt. College of Engineering &b Leather Technology, Kolkata & Kalyani Govt. College of Engineering , Nadia do not have any non-professionals

5.5 Library Budget

Table: 5 Budget Allocations

Name of the College	Library Budget (Rs.)
• Govt. College of Engineering & Textile Technology , Hooghly	• 15lakhs
• Govt. College of Engineering &b Leather Technology, Kolkata	• 6-8 lakhs
• Govt. College of Engineering & Ceramic Technology , Kolkata	• 25 lakhs
• Jalpaiguri Govt. Engineering College , Jalpaiguri	• 15 lakhs
• Kalyani Govt. College of Engineering , Nadia	• 15 lakhs
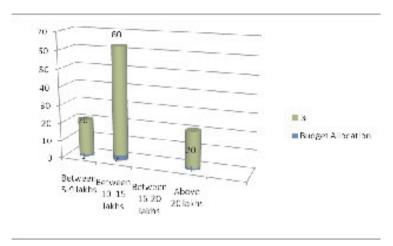
Figure 2: Allocation of library budget.

Table 5 & figure 2 show that out of these 5 colleges only one college i.e Govt. College of Engineering & Ceramic Technology , Kolkata has a budget more than 20 lakhs , Govt. College of Engineering & Textile Technology , Hooghly Jalpaiguri Govt. Engineering College , Jalpaiguri & Kalyani Govt. College of Engineering , Nadia have a budget of 15 lakhs (approx) respectively. Govt. College of Engineering & Leather Technology has a budget of 6-8 lakhs only.

5.7 Use of Library Automation Software

Table 6: Use of Library Automation Software

Name of the College	Free Software	Commercial Software
Govt. College of Engineering & Textile Technology , Hooghly		LibSys - 7
Govt. College of Engineering &b Leather Technology, Kolkata	KOHA	
Govt. College of Engineering & Ceramic Technology , Kolkata		LibSys
Jalpaiguri Govt. Engineering College , Jalpaiguri		LibSys
Kalyani Govt College of Engineering , Nadia		LibSys
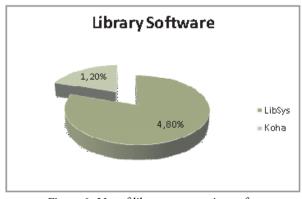
Figure 3: Use of library automation software

The above table & figure reveal that out of 5 engineering colleges 4 (80%) of them i.e. Govt. College of Engineering & Ceramic Technology , Kolkata , Jalpaiguri Govt. Engineering College , Govt. College of Engineering & Textile Technology , & Kalyani Govt. College of Engineering use Libsys software for library automation purpose , only 1 (20%) College i.e. Govt. College of Engineering &b Leather Technology, Kolkata have very recent switch over from Libsys to Koha , open source software for library automation purposes.

5.8 Digital Resource Searching Centre

Table 7: Infrastructure of Digital Resource Searching Centre

Name of the College	Availability of Separate Area	Number of Terminals	Staff Strength	Printing Facility	Scanning Facility
Govt. College of Engineering & Textile Technology , Hooghly	NA	NA	NA	Yes, from Library	NA
Govt. College of Engineering &cb Leather Technology, Kolkata	Yes	03	01	Yes	NA
Govt. College of Engineering & Ceramic Technology , Kolkata	Yes	07	01	Yes	NA
Jalpaiguri Govt Engineering College , Jalpaiguri	Yes	15	01	Yes	Yes
Kalyani Govt. College of Engineering , Nadia	Yes	Yes	01	Yes	Yes
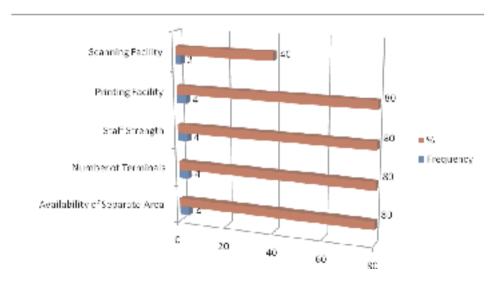
Figure 4: Infrastructure   of Digital Resource Searching Centre

Table 7 and figure 4 show that most of the libraries have separate section for searching digital resources except Govt. College of Engineering & Textile Technology which lacks in this regard.Out of these 5 colleges , Jalpaiguri Govt. Engineering College has maximum of 15 computers followed by Govt. College of Engineering &   Ceramic Technology & Govt. College of Engineering & Leather Technology with 7 and 3 computers in its digital section respectively.Only Govt. College of Engineering & Textile Technology provides this services from library as there is no separate section. Most of the libraries are equipped with single staff for its digital section except Govt. College of Engineering & Textile Technology .Scanning facility is available in only Jalpaiguri Govt. Engineering College & Kalyani Govt. College of Engineering library .Printing facility is available in all 5 libraries .

5.9 Status of E-Resources

Table 8: Availability of E-Resources

Name of the College	IEEE (ASPP)	J-gate	Springer Mechanical OR ASME OR Willey Blackwell	ASCE Civil Engineering OR Willey Blackwell Civil Engineering	ASTM Digital Library	Willey Blackwell Computer Science OR SPRINGER Electrical Computer Science Engineering	Mc GrawHill General Engineering and Reference	Science Direct-Elsevier	Others
Govt. College of Engineering & Textile Technology	IEEE (ASPP								EBSCO SAGE - Online
Govt. College of Engineering &b Leather Technology	IEEE (ASPP							Science Direct	
Govt. College of Engineering & Ceramic Technology	IEEE (ASPP						McGrawHill General Engineering	Science Direct	NLIST, Khimbus
Jalpaiguri Govt. Engineering College	IEEE (ASPP)		ASME	ASCE		Springer			DELNET
Kalyani Govt. College of Engineering.	IEEE (ASPP)		ASME	ASCE		Springer		Science Direct	
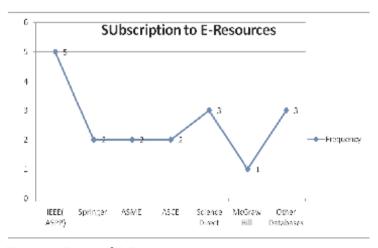
Figure 5: Status of E-Resources

Table 8 and figure 4 reveals that all the 5 engineering colleges show their interest in IEEE subscription followed by availability of Science direct in 3 colleges namely Govt. College of Engineering & Leather Technology, Govt. College of Engineering & Ceramic Technology and Kalyani Govt. College of Engineering. ASME –mechanical engineering, ASCE – civil engineering & Springer- electrical enginnering are available in 2 colleges : Jalpaiguri Govt. Engineering College & Kalyani Govt. College of Engineering. Mc GrawHill General Engineering and Reference collection is available in only Govt. College of Engineering & Ceramic Technology.Apart from AICTE prescribed online databases , libraries also show their interest to other useful online resources namely DELNET, EBSCO, SAGE-Online , NLIST etc.

Conclusions

Engineering college libraries contribute primarily to the teaching and learning process by providing various kinds of information and learning resources to the users for their successful persuasion of course programme offered by institution. This study was conducted to investigate the present status of government engineering college libraries of West Bengal and use of ICT in library & information services . Findings reveal that there is a notable disparity in terms of both print & non-print collection, Library budget, staff pattern, subscription to online resources. Application of ICT is limited in many cases. Cooperation from highest authority is a key to success that is strongly needed in this case. It should be realized that engineering college library is a potential service oriented institution, accountable for every aspect of its performances. The fundamental role of the library is to support the education to which it is attached.It should not be operated as a mere storehouse of books but as a dynamic instrument of education.

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INFORMATION SEEKING BEHAVIOUR AND APPROACHES OF SOCIAL SCIENCE USERS OF NORTH GAUHATI COLLEGE & DHUBRI GIRLS' COLLEGE: A COMPARATIVE STUDY

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Abstract:

Importance of Social Science disciplines are increasing day-by-day. The Indian Council of Social Science Research (ICSSR), all universities, IIT's, NIT's has introduced Social sciences in India. Besides these, the Tata Institute of Social Science (TISS) has taken up an important role for the development of the Social science. Now colleges are also going to take an important part to familiarize the Social sciences. Social science subjects are also getting popularized and new branches of knowledge have been evolved from the existing branches for example sociology etc.

A survey has been conducted among the users of North Gauhati College (NGC) library and Dhubri Girls' College (DGC) Library regarding their information seeking behaviour and approaches. Survey population consists of the students and faculties of Social science branches of the both colleges.

A comparative study has been done in this paper between the social science users of the two colleges to identify behaviours and approaches of the users they types of information resources use by the users in seeking information in the library. It will determine the different approaches and methods used by the users for retrieving information and reference from print and non-print media.

Keywords: Information seeking behaviour, Social Science, North Gauhati College (NGC), Dhubri Girls' College (DGC)

1. Introduction:

From the primitive days of human civilization to the present day information has always been a vital component of growth & development in living standards. In modern societies, information is closely interlinked with the growth and development in economic, political, social, occupational, cultural and other sectors of the society. With the advancement of society throughout the world, demand for information increases day by day. This demand is not confined to the scientific, technological, research, industrial or other spheres but also the need for information is spread widely to the grass root level of our life.

Seeking information refers to the process of collecting and receiving information by published materials, communicating with colleagues and others. Behaviour is concerned with mode of action process of selection of information factors that affect user's approach. Information seeking is a basic activity indulges in by all people and manifested through a particular behaviour or approach. Information approach means the way users seek information, the way they go about finding it and the way they use it. Information seeking approach results from the recognition of some need, perceived by the user who as a consequence makes demands on the formal system such as libraries, information centres, online service or some other persons

in order to satisfy the perceived need.

The highest objective of information seeking approach or behaviour is information satisfaction. It is indeed the highest ideal of user education. It helps to improve the performance of an information system through user involvement. The highest level of information satisfaction is to be achieved by actively involving the user in the information retrieval system which through a process of conceptualization results in the user redefining his/her query as reformulating their needs.

2. Objectives of the study:

The main objectives of the present study is to find out the different information seeking behaviours of faculties and students of both North Gauhati College (NGC) Library and Dhubri Girls' College (DGC) Library and to see the differences in adopting the approaches between the same. The other objectives are as follows:

a) To identify the types of information resources used by the social science users of both colleges in seeking informations in the library.

b) To identify the different methods used by the users for seeking their relevant information.

c) To find out the mostly used sources by the users of both college libraries

3. Materials and Methods of the Survey:

A survey has been done among the users of North Gauhati College (NGC) Library and Dhubri Girl's College (DGC) Library for the present study; a questionnaire method is used to collect the data and information.

The research populations are the users (both students and teachers from social science disciplines) of the North Gauhati College (NGC) & Dhubri Girls' College (DGC). For distribution of questionnaire random sampling techniques has been used. A total number of 130 questionnaires have been distributed among the social science users of North Gauhati College (NGC) Library and Dhubri Girls' College (DGC) Library. Besides this, interview and observation methods are also applied as and when required for the authentic and detailed information.

4. Data Analysis & its interpretation:

The survey, which was taken among the users of North Gauhati College (NGC) Library and Dhubri Girls' College (DGC) Library including faculty and students, shows the following results:

Table 1(a) Source priority of Faculties

Information Source Priority	NGC Library		DGC Library	
	Number of Faculties	Percentage (%) (Among 15 Faculties)	Number of Faculties	Percentage (%) (Among 15 Faculties)
1. Text Books	14	93.3	15	100
2. Journals	10	66.67	8	53.33
3.Reference Books	12	80	6	40
4. Conference proceedings	6	40	1	6.67
5. Newsletter	2	13.3	4	26.67
6. E-resources/ Internet	11	73.33	7	46.67
7. Others	7	46.67	5	33.33

*Multiple ticks (") are allowed.

From above table it can be seen that the highest 14 (93.3%) faculties of NGC Library prefers text book as a source of information. This is followed by 12 (80%) faculties prefers reference book, 11 (73.33%) prefers e-resources/internet, 10 (66.67%) prefers journals, 7 (46.67%) preferring other sources, 6 (40%) preferring conference proceeding, 2 (13.3%) preferring newsletters.

From above table it can also be seen that the highest 15 (100%) faculties of DGC Library prefers text book as a source of information. This is followed by 8 (53.33%) faculties preferring journals, 7 (46.67%) E-resources/Internet, 6 (40%) preferring reference book, 5 (33.33%) preferring other sources, 4 (26.67%) preferring newsletters, 1 (6.67%) preferring Conference proceedings.

Table 1(b): Source priority of users: Students

Information Source Priority	NGC Library		DGC Library	
	Number of Students	Percentage (%) (Among 50 Students)	Number of Students	Percentage (%) (Among 50 Students)
1. Text Books	49	98	50	100
2. Journals	37	74	42	84
3. Reference Books	42	84	46	92
4. E-resources/ Internet	38	76	41	82
5. Others	20	40	18	36

*Multiple ticks (") are allowed.

From the above table it is seen that 49 (98%) students of NGC Library prefers textbook as a source of priority followed by 42 (84%) prefers reference books, 38 (76%) prefers E-resources/internet, 37 (74%) prefers journals and 20 (40%) prefers other sources of information.

On the other hand, it is also seen from the above table the highest 50 (100%) students of DGC Library prefers text book as a source of information. This is followed by 46 (92%) students prefers reference book, 42 (84%) prefers journal, 41 (82%) prefers e-resources/ internet, 18 (36%) prefers other sources of informations.

Table 2 (a) Purpose of Library visit of faculties

Purpose of library visit	NGC Library		DGC Library	
	Number of Faculties	Percentage (%) (Among 15 Faculties)	Number of Faculties	Percentage (%) (Among 15 Faculties)
1. Subject related to current affairs/ general informations	10	66.67	12	80
3. To prepare for class	8	53.33	14	93.33
4. To prepare seminar/workshop papers/articles	7	46.67	10	66.67
5. For higher studies (M.Phil/PhD)	7	46.67	12	80
6. Recreational activities	4	26.67	5	33.33
8. Others	6	40	7	46.67

*Multiple ticks (") are allowed.

It can be seen that maximum 10 (66.67%) faculties of NGC Library visits library to read subjects related to current affairs which is followed by 8 (53.33%) faculties visit library to prepare for class, 7 (46.67%) faculties visit library to prepare for seminar/workshop papers and for the purpose of higher studies (M.Phil/PhD), 6 (40%) faculties visits library for other purposes and 4 (26.67%) faculties visit library for recreational needs.

While in DGC Library, 14 (93.33%) faculties visit the library to prepare for the class, followed by 12 (80%) visits the library to read subjects related to current affairs and for their higher educational studies (M.Phil/PhD), 10 (66.67%) and to prepare for seminar/workshop papers, 7 (46.67%) faculties visits library for other purposes and 5 (33.33%) faculties visit library for recreational needs.

Table 2(b) Purpose of Library visit of students

Purpose of library visit	NGC Library		DGC Library	
	Number of Students	Percentage (%) (Among 50 Students)	Number of Students	Percentage (%) (Among 50 Students)
1. Subject related to current affairs/ general informations	38	76	40	80
2. To prepare Teachers' Assignment	34	68	49	98
3. Recreational activities	20	40	32	64
4. Others	16	32	8	16

*Multiple ticks (") are allowed.

From the above table, it can be seen that maximum 38 (76%) students of NGC Library visits library to read subjects related to current affairs which is followed by 34 (68%) students visit library to prepare for teachers' assignment, 20 (40%) students visit library for recreational needs and 16 (32%) students visit library for other purposes.

Whereas in DGC Library, 49 (98%) students visit the library to prepare for teachers' assignment, followed by 40 (80%) visits to read subjects related to current affairs, 32 (64%) visits the library for recreational needs and 8 (16%) students visit the library for other purposes.

Table 3 (a) Preferences of resources by faculties

Preferences of resources	NGC Library		DGC Library	
	Number of Faculties	Percentage (%) (Among 15 Faculties)	Number of Faculties	Percentage (%) (Among 15 Faculties)
1. Print	5	33.33	7	46.67
2. Online resources	3	20	5	33.33
3. Both	7	46.67	8	53.33

From table 3(a) it can be seen that highest 7 (46.7%) faculties of NGC Library prefer both print and online resources, 5 (33.3%) prefers print resources and 3 (20%) prefers online resources.

Whereas in DGC Library, it can be seen that highest 8 (53.33%) faculties refer both print and online resources, 7 (46.67%) prefers print resources and 5 (33.33%) prefers online resources.

Table 3 (b) Preferences of resources by Students

Preferences of resources	NGC Library		DGC Library	
	Number of Students	Percentage (%) (Among 50 Students)	Number of Students	Percentage (%) (Among 50 Students)
1. Print	20	40	27	54
2. Online sources	14	28	10	20
3. Both	16	32	13	26

From table 3(b) it can be seen that the highest 20 (40%) students of NGC Library prefers print resources, 16 (32%) both print and online resources, 14 (28%) prefers online resources.

Whereas in DGC Library, it can be seen that the highest 27 (54%) students prefer print resources, 13 (26%) prefers both print and online resources, 10 (20%) prefers online resources.

Table 4(a) ways of searching information of faculties

Means of ways of searching information when it is not available in library	NGC Library		DGC Library	
	Number of Faculties	Percentage (%) (Among 15 Faculties)	Number of Faculties	Percentage (%) (Among 15 Faculties)
1. Ask your librarian	7	46.7	14	93.33
2. Discuss with your friends/colleagues	10	66.7	9	60
3. Self procurement of information resources	2	13.3	5	33.33
4. Meeting/ seminars/ conferences	6	40	4	26.67
5. Internet	8	53.3	7	46.67

*Multiple ticks (") are allowed.

From above table 4(a) it is seen that highest 10 (66.7%) faculties of NGC Library means of ways of searching information is discussion with friends and colleagues. This is followed by 8 (53.3%) teachers preferring internet as a means of ways of searching information, 7 (46.7%) teachers ask librarian when information is not available in library, 6 (40%) prefers meeting, seminars, conferences as means of searching information, 2 (13.3%) prefers self procurement of information.

On the other hand, it is seen that highest 14 (93.33%) faculties of DGC Library means of ways is to ask librarian when information is not available in library. This is followed by 9 (60%) teachers prefers to discuss with friends and colleagues for informations, 7 (46.67%) teachers opt internet as a means of ways of searching information, 5 (33.33%) prefers self procurement of information,4 (26.67%) meeting, seminars, conferences as means of searching information.

Table 4(b) ways of searching information of Students

Means of ways of searching information when it is not available in library	NGC Library		DGC Library	
	Number of Students	Percentage (%) (Among 50 Students)	Number of Students	Percentage (%) (Among 50 Students)
1. Ask your librarian	38	68	34	68
2.Discuss with your friends	34	66.7	31	62
3. Self procurement of information resources	15	30	12	24
4. Internet	31	62	20	40

*Multiple ticks (") are allowed.

From above table 4(b) it is seen that the highest 38 (68%) students of NGC Library's means of way is to ask librarian when information is not available in library. This is followed by 34 (66.7%) students prefers to discuss with their friends, 31 (62%) students prefers internet as a means of ways of searching information, 15 (30%) prefers self procurement of informations.

On the other hand, it is seen that highest 34 (68%) students of DGC Library means of ways is to ask librarian when information is not available in library. This is followed by 31 (62%) students prefers to discuss with their friends for informations, 20 (40%) students opt internet as a means of ways of searching information, 12 (24%) prefers self procurement of informations.

Table 5(a) Satisfaction of faculties

Satisfaction of library resources	NGC Library		DGC Library	
	Number of Faculties	Percentage (%) (Among 15 Faculties)	Number of Teachers	Percentage (%) (Among 15 Faculties)
1.Fully	5	33.33	4	26.67
2.Partially	10	66.67	11	73.73
3.Not at all	0	0	0	0

From table 5(a) it is observed that the highest 10 (66.7%) faculties of NGC are partially satisfied with library resources, which is followed by 5 (33.3%) who are fully satisfied with the library resources.

On the other hand, it is also observed in DGC Library that the highest 11 (73.73%) faculties are partially satisfied with library resources, which is followed by 4 (26.67%) who are fully satisfied.

Table 5(b) Satisfaction of Students

Satisfaction of library resources	NGC Library		DGC Library	
	Number of Students	Percentage (%) (Among 50 Students)	Number of Students	Percentage (%) (Among 50 Students)
1.Fully	15	30	12	24
2.Partially	28	56	38	76
3.Not at all	7	14	0	0

From table 5(b) it is observed that the highest 28 (56%) students of NGC Library are partially satisfied with library resources, which is followed by 15 (30%) students fully satisfied and 7 (14%) are not at all satisfied with the library resources.

From the above table, it is also observed that the highest 38 (76%) students are partially satisfied with library resources, which is followed by 12 (24%) students fully satisfied.

5. Findings:

The major findings of the study are as follows:

1. The social science users of both NGC & DGC Library including faculties and students prefer textbooks as the highest source of priority. NGC Library's faculty user prefers e-resources than DGC Library's faculty user. In case of DGC Library's student users prefer e-resources than NGC's Student users.

2. The highest number of faculties of NGC Library visits library to read subjects related to current affairs while the highest number of user faculties of DGC Library visit the library to prepare for the class.

3. The highest number of student users of NGC Library visits library to read subjects related to current affairs, while DGC Library's student users visit the library to prepare for teachers' assignment.

4. Both faculty users of NGC & DGC Library prefer both print and online resources. NGC Library's faculties shown more preferences for online resources than DGC Library's faculty users. Student users of both NGC& DGC Library's both prefers print resources than online resources.

5. The highest number of faculties of NGC Library means of ways of searching information is discussion with friends and colleagues where in DGC Library the means of ways is to ask librarian when information is not available in library. On the other hand, the student user of NGC & DGC Library's means of way is to ask librarian when information is not available in library.

6. The faculty users of both NGC & DGC Library are partially satisfied with library resources. The student users of both NGC & DGC Library are partially satisfied with library resources. In NGC Library's student users (14%) are not at all satisfied with the library resources.

6. Conclusion:

Importance of social science disciple is increasing day by day. So, inter-disciplinary subjects of social science are also a great importance in the field of academic organization. Further, the social increases

development of the society as well as nation. The present study throws the light on the information seeking behaviour and approaches adopted by the users including faculties and students of social sciences in North Gauhati College (NGC) Library and Dhubri Girls' College (DGC) Library.

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ISSUES AND CHALLENGES OF COLLEGE LIBRARY SERVICES IN GOLAGHAT DISTRICT OF ASSAM

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Abstract

Highlights the various services rendered by the college libraries both in Golaghat District as well as users satisfaction from existing services, status of library automation and problems faced by the college libraries. It brings uniformity in the work culture, services and forwarded some important suggestions.

Keywords: College Library, Services, Automation

1. Introduction:

College library is considered to be the heart of an educational institution. In 21st century the information are spreading at an extraordinary rate in the Varity of formats through the technological developments. A library is vital to proper exploitation of our intellectual resources, and the library is essential in maintenance of free access to idea and the functioning of ultra minded mind. Libraries have a common objective to provide its users the information they want. The effectiveness of this function is directly related to collection development and organization information services. The quality of education is greatly linked with libraries. The information and collected and disseminated by libraries decides the quality of teaching learning process in an academic institution. Describing the function of a college library, Fishenden writes:"An efficient system might be defined as one that ensures that all information likely to influence the programmed of a research worker or research team is made available to them at the right time and in the most convenient form."

2. Scope of the study:

Golaghat District has been imparting significant role in higher education. There are all together ten colleges in the Golaghat District and present study covers services rendered,users satisfaction in eight colleges of the district.

3. Methodology:

The study is based on primary and secondary data. The primary data has been collected through interview with library staff and selected users of Golaghat District colleges. The secondary data has been collected from books, journals etc.College libraries of Golaghat District:

4. College Libraries of Golaghat District and Golaghat District at a Glance :

Golaghat District is situated in upper Assam. The total population of Golaghat District are 10,66,888

with a literacy rate of 78.31%. The male literacy rate is 84.20% and female literacy rate is 72.18 % (Economic & Statistical 2011 Census Report). Golaghat. The eight college libraries of Golaghat District

Table 1: Colleges in Golaghat District

Sl.no.	Name of Colleges	Year of Establishments	NAAC Grade
1.	Debraj Roy College	1949	A
2.	Dergaon Kamal Dowerah College	1963	B
3.	Golaghat Commerce College	1972	B
4.	Furkating College	1981	B++
5.	Hem prova Borbora Girls' College		B
6.	Joya Gogoi College		B
7.	Kamarbandha College	1992	-
8.	Melamora College	1987	-

From table 1 we have seen that Debraj Roy College is the oldest college and NAAC accredited " A" Grade college. Recently provincialised Colleges namely Kamarbandha College and Melamora College is still not accredited by NAAC.
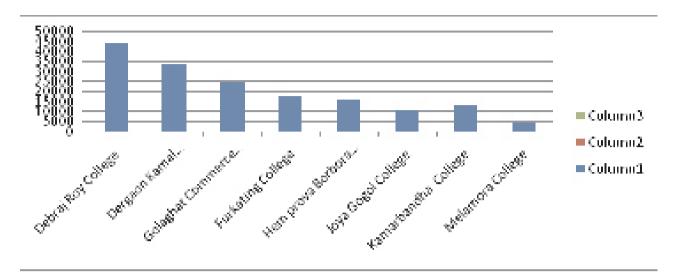
5. Library Collection:

Table 2.It shows detail about the collection of the various college libraries of Golaghat district under study.

Table 2: Collection of the College under study.

Name of the college	Books	Text Books	Reference	Journals	Newspaper	Magazines	E-Books	E-journals/ CDS/DVD
Debraj Roy College	44444	36444	8000	25	10	10	1,00000	-
Dergaon Kamal Dowerah College	33820	30,820	3000	35	14	20	N-list	41
Golaghat Commerce College	25,000	13,000	12,000	15	10	14	14	350
Furkating College	18208	7544	10659	5	7	16	N-list+1553	-
Hem prova Borbora Girls' College	16000	4800	11,200	5	4	3	190+N-list	06
Joya Gogoi College	11201	7840	3361	7	6	13	N-list	66
Kamarbandha College	13256	12,792	464	3	3	4	-	-
Melamora College	4245	2550	1659	2	4	1	-	-

Library collection

6. Library Staff:

This table gives an idea about the staff strength of the different college libraries.

Table 4: Staff strength of the libraries under study

College	Number of Staff					Total number of users	Number of users per staff (approx)
	Librarian	Professional	Non-Prof.	Total	Staff With Computer Knowledge		
Debraj Roy College	MLISc,PGDCA,JRF	2	3	5	2	2500	80
Dergaon Kamal Dowerah College	MLISc,Ph.D.	3	5	8	4	2380	76
Golaghat Commerce College	MLISc,M.Phil	2	2	4	2	2400	61
Furkating College	MLISc,M.phil	2	1	3	2	1400	38
Hem prova Borbora Girls' College	MLISc,NET	2	1	3	2	1200	37
Joya Gogoi College	MLISc,MPhil	1	2	3	1	1122	23
Kamarbandha College	MLISc	2	1	3	2	832	30
Mekmora College	M.A,MLISc	1	2	3	2	500	35

7. Services:

Table 4 describes the services of the college libraries under study

Table 3: Services of the libraries under study

Services	DRC	DKDC	GCC	FKGC	HPBC	JGC	KBC	MC
Open Access	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reading room	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Periodical reading room	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Circulation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ref.Service	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Orientation	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Reprographic service	Yes	Yes	Yes	Yes	Yes	No	No	No
Book bank	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Bibliographic Service	Yes	Yes	No	No	No	Yes	No	No
Inter Library Loan	Yes	Yes	No	No	No	No	No	No
Extension Service	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Internet Facility	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Opening Hour	9.30-4.30	9.00-4.00	9.30-5.00	9.00-4.00	9.00-5.00	9.00-4.00	10.00-4.00	9.00-4.00

8. Library Automation:

Table 5 this table gives an idea about the Library Automation status of the college libraries under study.

Name of college	Fully Automated	Partially Automated	Area of Automation	Not Automated	Software used	Year of starting
Debraj Roy College	Yes	-	All	-	SOUL 2.0	2008
Dergaon Kamal Dowerah College	Yes	-	All	-	SOUL 1.0	2005
Golaghat Commerce College	-	Yes	Cat, Cir, Se	-	SOUL 2.0	2010
Furkating College	-	Yes	Cat, Cir, Se	-	SOUL 1.0	2008
Hem prova Borbora Girls' College	-	Yes	Cat, Cir, Se	-	SOUL 2.0	2008
Joya Gogoi College	-	Yes	Cat, Cir, Se	-	SOUL 2.0	2009
Kamarbandha College	-	No	-	-	-	-
Melamora College	-	-	-	-	-	-

Users' satisfaction: Based on survey
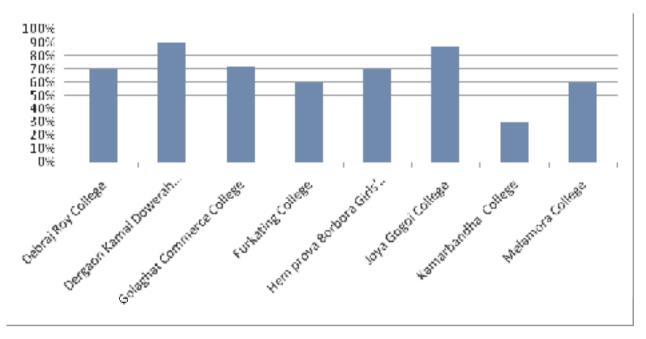
Table6: Users Survey and Responses Received

College	Category of users	Population Size	Sample Size
Debraj Roy College	Student Teacher	2500	45 (2.5)
Dergaon Kamal Dowerah College	Student Teacher	2380	37 (2.21)
Golaghat Commerce College	Student Teacher	2400	27
Furkating College	Student Teacher	1400	18
Hem prova Borbora Girls' College	Student Teacher	1200	38
Joya Gogoi College	Student Teacher	1122	17
Kamarbandha College	Student Teacher	832	10
Melamora College	Student Teacher	500	10

9. Users views on library services:

Table 7: User view on library services

College	Satisfied	Non-Satisfied	Total user surveyed	Satisfied Percentage	Not Satisfied Percentage
Debraj Roy College	28	12	40	70%	
Dergaon Kamal Dowerah College	29	3	32	90.6%	9.37%
Golaghat Commerce College	18	7	25	72%	28%
Furkating College	9	6	15	60%	40%
Hem prova Borbora Girls' College	7	3	10	70%	30%
Joya Gogoi College	13	2	15	86.6%	13.3%
Kamarbandha College	3	7	10	30%	70%
Melamora College	6	4	10	60%	40%

User view on library services

10. Findings

Through the survey it is found that most of the college libraries of Golaghat District are rendering services in traditional way. Out of the eight college libraries surveyed, two college libraries are fully automated and four college libraries are partially automated and rest two college libraries are not still using any software.

From the survey, it is clear that most of the college libraries of Golaghat District are providing facilities like open access, circulation, reading room, periodical reading room, reference service, book bank to its users. On the other hand, orientation programme, reprographic service and internet facility are not provided in their college library.

Most of the college libraries have very few numbers of staff and they are not related with ICT application. Most of the libraries are used bar-coding system in their activities,

Some colleges are not getting sufficient fund for running the library properly. Through the users' survey it is found that some users are not satisfied with their library services. The users of two colleges are most dissatisfied group in Golaghat District. From the survey it is clear that users are most satisfied with open –access system.

11. Suggestions

Some of the suggestions for improving college library services in Golaghat District are given below:-
➢   Training of library staff should be made compulsory for better services to the users.
➢   Authority should give more facility for in service training for staff development.
➢   The library must have feedback system in its user's expectations and problems regularly.

12. Conclusion

It is concluded that the new environment is really challenging one for the librarians. It requires a new technical set of competencies for librarians which were not previously required. Librarians must accommodate with rapidly changing and evolving nature of the environment. The library and information science professionals are to be trained with new technology.

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INCLUSION OF INTERNSHIP IN LIBRARY AND INFORMATION SCIENCE CURRICULUM : A MODEL PROPOSAL

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Abstract:

Library and information science being a professional course like medicine, engineering etc., its curriculum needs to be evenly infused with theory and practical aspects. As in other professional courses, here too, internship, (paid or unpaid job training) is a vital practical aspect in preparing students for their future professional roles. Internship whether curricular or extracurricular is still not a compulsory aspect of Library Science Education universally and especially in India. This paper reports results of a study on the internship programme in the Department of Library and Information Science (DLIS), North Eastern Hill University (NEHU), Shillong and also proposes a model for including internship in the library and information science curriculum.

Keywords : library and information science education; library and information science curriculum*;* internship; proposal; model

Introduction

There are a number of papers being taught in Departments through the Master's degree course. A wholesome Library Science curriculum needs to give due emphasis to all papers. Having said that however, it can also not be denied that the part of the curriculum that will come to most use to the future library professional is the one that covers the practical, everyday working of a library involving the activities of the various sections and personnel of the library.The paper covering practical aspects can either be part of the curriculum or be extra curricular. Coming under different names such as '*field experience*', '*field work*', '*internship*', '*library housekeeping activities*', '*internship*' or simply '*job diary*', this is the 'corest' of the core papers in any Library Science curriculum. (Tariang, 2012) Whatever name it comes under, "supervised, on-the-job experience has been considered important," says Stieg (1992). For it is pointless to learn various Classification and Cataloguing schemes, Library Softwares and Indexing Techniques, if one is not taught how to apply them in the actual library scenario. It is this part of the curriculum that will fully equip the freshman for his future role as Library Professional. Thus the teaching of this paper needs careful planning and implementation. This is being done differently by different Departments in different parts of the world. For example, in some Departments, practical aspects involving library housekeeping activities are taught as part of the curriculum, can be titled any of the names mentioned above and lead to tests and examinations. In other Departments, practical aspects are extra curricular with students opting for them voluntarily (especially where no stipend is paid).

Advantages and Disadvantages of including internship in the curriculum:

Coleman (1989) has listed the following as advantages and disadvantages of including practicum or 'internship':

Advantages

1. It allows the future librarian the opportunity to practice skills learned in class
2. It heightens the novice's sense of confidence
3. It is an opportunity to make contacts and secure references for future job applications
4. It provides the library school with the opportunity to evaluate the appropriateness of its curriculum relative to the current practice of librarianship
5. It allows the school to maintain its visibility to practitioners

Disadvantages

1. The curriculum may already be too crowded
2. Administrative difficulties such as locating and monitoring appropriate internship sites, might arise
3. Developing and maintaining a successful internship programme can be a considerable drain on an already tight library school budget, especially when site visits and faculty release time are considered

Site or sites for internship

As mentioned earlier, the practical paper is taught differently by different Library Schools. One of the most common practices is where the Library School works closely with the library or libraries (the central library or departmental libraries) within the parent institution or university. The other practice is where the Library School seeks cooperation from all categories (academic, public, special) of libraries outside of the parent institution.

Faculty involvement

In Coleman's (1989) study of fifty nine ALA accredited library schools, out of many methods for coordinating internship, twenty two schools reported that all internship was coordinated by one faculty member, while twenty schools reported that internship was coordinated based upon the specialization of the faculty member. The advantages of having a single faculty member coordinating internship according to Coleman are:

- Assurance of some degree of continuity with the field site supervisors
- Expectation of a fairly consistent level of achievement from the students

The drawback of the above option is that no one faculty member can possess the technical expertise necessary to monitor internship in all types of libraries. Coleman felt that the option of having the internship supervised by faculty based upon their expertise alleviates this problem, but this is achieved at the risk of not maintaining continuity with field site supervisors.

The scenario in Indian Universities –Only a handful of Library and Information Science Departments in India are conducting Internship programmes thus far. These include Osmania University, Andhra University, Pondicherry University and North Eastern Hill University (NEHU), Shillong. Except in NEHU, internship in the rest of the universities is curricular.

Example of the Department of Library and Information Science (DLIS), North Eastern Hill University (NEHU), Shillong : Internship in the DLIS, NEHU has been extracurricular up to now. On completion of their MLISc course in July, students voluntarily opt for the three month (August-October) programme (2 months in the NEHU Central Library, 1 month in a city college). Here they are given a

variety of tasks to perform

Objectives of the study: A series of studies were conducted by the researcher, who is teacher in charge of internship in DLIS, NEHU with the main objective of finding out the usefulness and shortcomings of the internship programme in order to further improve it. A few specific objectives were further framed, however for the purpose of this study, the relevant objectives are as follows "

1. To find out whether Internship should be included in the syllabus of DLIS, NEHU

2. To explore how Internship can be incorporated into the syllabus of DLIS, NEHU

Methodology: Over the years since the Internship programme was started in DLIS, NEHU, the researcher, who is teacher in charge of internship in DLIS, NEHU has solicited feedback from the stakeholders i.e. the interns and the library staff hosting the internship. The data was collected using print questionnaires; questions posed on social media; and assignments given to the interns. For the purpose of this study, responses to a questionnaire and responses to questions posed on whatsapp and Facebook have been used as data.

Questionnaire Responses: The following are the results garnered from the questionnaire

Number of questionnaires given – 15
Number of responses - 12

Yes	12 (100%)	
No		

Table 2: How should internship be incorporated into the syllabus?

As part of the Library Housekeeping Operations Paper	6 (50 %)	
As a separate paper	4 (33.# %)	
Other suggestions	2 (17 %)	

Table 3: Should internship be a curricular activity for library science students?

Yes	7 (58.3 %)
No	4 (33.3 %)
Others	1 (8.3 %)
TOTAL	12

Table 4: Can internship replace the library housekeeping paper?

Yes	7 (58.3 %)
No	4 (33.3%)
TOTAL	11 (92 %)

Social Media (Whatsapp and Facebook) and Short Messaging Service (SMS) Responses

Two Queries were placed on Facebook and Whatsapp groups chosen mainly on the basis of their wide membership, including especially ex interns from DLIS, NEHU as well as library professionals who conducted internship.

Facebook group - *North East Library and Information Science Forum* (NELISF).

Whatsapp groups - *North East Library Cooperation* (NELC -a forum for Library professionals of North East India), and *Interns* (a forum for past and present interns of the DLIS, NEHU, Shillong)

SMSs were sent to those library professionals in whose institutions internship had been conducted for students of DLIS, NEHU

Number of responses :
NELISF – 3
NELC – 1
INTERNS – 4
SMS – Number of SMSs sent – 11
Number of responses – 8 (73 %)

The Queries (presented as is) -Just some queries to fellow members

1. Should internship be a curricular or extra curricular activity for library science students? (When I proposed stipend for our interns our school board advised me to convert it from extra curricular to curricular)

2. Can internship replace the library housekeeping paper (job diary/tour diary) since students have to anyway undergo the same training for both?

Maybe the paper could be divided into internship and study tour. And the students prepare internship diary and study tour diary.

Please advise. I would be highly obliged

Opinions

Following are the opinions expressed in response to the queries posed on social media and sms

The Yays:

On the second part of the query ma'am I think the paper can be divided into internship provided the students have the thorough theoretical knowledge which job diary provides.The same for tour diary that students should have theoretical background so they will have an outline of what the study tour aims to teach them.

I think internship and library housekeeping practice that we did was the same thing. It's like double work.

I believe your suggestion is much better. Internship diary and study tour diary/report. Augustine

In my opinion, as internship is on the job training i think the paper can be divided. Since the students can have hands on experience in their field of study.

Internship will be a better option

Then from my side your idea is good mam.

I personally feel that interns deserve to get stipend like in other places,so I feel if it is converted to a curricular activity also there won't be much difference as job diary and internship programme are almost similar..

The Nays

Ma'am the internship that we do after the masters programme is different from the job diary. Different in the sense that internship is dependent on the work the library staff give us which does not cover everything we learn in the job diary. Infact doing job diary made the internship easier to understand and follow. It provided the theoretical backbone, in a way,that helps with the internship.

Job diary ann tour diary helps us to explore things n internship shapes us not just professionally but our personality as well

From my point of view,,i do feel that internship should be as usual,,that is an extracurricular,,,ofcourse we can,t deny the benefit of stipend ,,but we have always manage to go through,,,,internship have always served as mini experience for fresh passout   students applying for job,,,If internship replace study tour n job diary paper,, the disavantage is that students had to faced all the expenses by their own during tour progrme, since its an extra ciricular activity,,,,,lambda suting

Other opinions

Internship could be a co-curricular (not extra curricular) activity as it is specifically leaning towards formal learning, specifically (hands on) experiences in an academic program. If the board is willing to accept the proposal of allocating a separate budget heads into it? It will be a boon for the intern. Internship can never replace Library house-keeping papers. House-keeping like job diary really assist me in getting to know the core functions of an academic library when I first joined as a professional.

I believe both job diary / study tour report offer a unique blend of learning experiences thought personally, I'd favour Job diary better. Nevertheless, the importance of both cannot be undermined!

The proposed model

For the internship paper to be successful and effective, the foundation of the relationship between the Department and the Library where practical experience is obtained by the students, needs to be unshakeable. A model is proposed for conducting internship in universities in India having two year integrated course – Masters in Library and Information Science. The curriculum would ideally include steps like the following:

Length of course – one semester

Number of Units – 4 (Four)

Ideal sites –

i. Central Library of the parent institutioni.   Other categories of libraries such as college libraries and special libraries

Supervision

i. Teacher In-Charge of Internship in the Department

ii. Staff of respective libraries

Steps:

1. The Department (in writing) asks the Librarians of potential partnering libraries for permission to carry out practical classes at the beginning of the session. The Librarians give permission (in writing), also chalking out which sections can be covered on which months according to the convenience of the library staff.

2. According to the Department's Time-Table, the practical classes are arranged, interspersing them between theory classes.

3. The teacher in charge of practical classes takes theory classes in the classroom, giving an overview

of the working of each section of a library.

4. The students can be divided into groups and be taken to the Libraries to study a section each. The head or in-charge (usually an Assistant Librarian) of the section describes the working of that particular section after which the students are allowed to observe individual activities in different sections and then assist in whichever way they are asked to by the library staff (shelving books, transcribing, filling in forms etc.). All the sections of the Library are covered thus within the session of one semester. Samples of materials used in every section (such as ordering forms in the Acquisition section, users' registration cards in the Circulation Section, spine labels in the Technical Section and a variety of threads and paper used in the Binding Section) can be distributed to the students for pasting in their reports or Job Diaries.

5. The students note down whatever has been described to them in their notebooks. They are allowed to ask questions to clear their doubts.

6. After the completion of a section, the students submit their observations about that section in loose sheets of paper (stapled together), to the teacher in charge.

7. The teacher in charge evaluates the observations submitted by the students, makes the necessary corrections (including grammar and spellings) and returns the loose sheets to the students.

8. On completion of all the sections of the Library, the students then work on their formal report or Job Diary. This can be an interleaved science laboratory book. Each section of the Library is described under different chapters in the Diary. The samples distributed by the Library are pasted and labeled on the blank side and the text is written on the lined side. The other information should include, a Contents Page, Acknowledgement Page, a Brief Introduction and a Conclusion page.

9. Internal tests and seminars can be conducted after every session.

10. The final reports or Job Diaries are submitted to the teacher in charge a week or so before the commencement of the semester examinations.

11. The Diaries can then be submitted by the teacher in charge to an expert from another University (usually of Professor status) who arrives a day or two before the Viva Voce. He or she evaluates the Diaries and marks them.

12. The Viva Voce is the final step in the process. Here each student is quizzed on his or her experiences during the internship in the allotted Library.

Conclusion

 Sproles' and Ratledge's 2004 study had concluded that practical experience throughout the graduate programme – whether through assistantships, internships at local institutions, or part- or full-time employment – should be a part of every student's portfolio. Reeves and Hahn (2010) also wrote along the same lines, in fact going so far as to warn that "without significant library or archives experience (even including in some cases supervisory experience), [LIS] graduates will have a hard time finding themselves qualified for a professional position." Internship is vital in professional courses like medicine and librarianship. It is sad that this crucial aspect of library and information science education has not been given its due importance especially in India. This paper has attempted to highlight the significance of including internship in the library and information science curriculum and has proposed a model for the same. It is hoped that the library and information science fraternity would consider this proposal for whatever it is worth.

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Information Needs and Seeking Behaviour of theRainbow Community-
A case study of transgender individuals in Shillong

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Abstract

Information need of a transgender individual can be summed up as the information that is required in different aspects such as legal, health, emotional, socio-cultural especially in connection with their gender. In line with this, information seeking behaviour of transgender individuals refers to the path(s) which they follow in order to satisfy their information needs. This paper reports results of a study on the information needs and seeking behaviourof the transgender community in Shillong. The study found that the information of transgender individuals in Shillongclearly deviates from the other individuals especially in the coming out stage. The issues and stigma faced by the transgender community often makes them take several unconventional paths to seek for information they need. The internet is the most preferred source of information because for them it is safer and the information is readily available and libraries are not used to find transgender information because of the lack or unawareness of the presence of transgender collection. This study however proposes that libraries need to take necessary measures like training their staff and working with external organisations who specialize in gender minorities in order to be able to properly serve the information needs of the transgender users

Keywords: information needs of transgender, information seeking behaviour of transgender, transgender community and the library.

Introduction

Information is a vital part of every individual in this day and age. It is universal- it is known to all men in all languages (Laloo, 2002). Every single individual today requires information in one form or the other in their daily lives- personal and professional for growth and survival; and thus the term information need comes into the picture. Laloo also added,"That information exist goes without saying. We talk about it, we seek it, we exchange it and we pay for it. Ironically though despite our familiarity with information, we have not been able to define the term"

Information needs in general terms can be defined as "the information that individuals ought to have to do their job effectively, solve a problem satisfactorily or pursue a hobby or interest happily" (D. Nicholas, 2000)

"Information Seeking Behavior is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems

(such as a newspaper or a library), or with computer-based systems (such as the World Wide Web)." (Wilson, 2000)

Rainbow Community is used in this article taking into account the Rainbow flag, which is a symbol of the gender/sexual minorities (LGBT). Thus Rainbow community is considered here as the community that is comprised of people who belong to the gender/sexual minorities.

"Transgender is an umbrella term for persons whose gender identity, gender expression or behaviour does not conform to that typically associated with the sex to which they were assigned at birth" (American Psychological Association, 2006). All human beings are assigned a gender at birth (male or female) but when it comes to gender identity, it is the internal sense of our gender. Thus our gender identity may or may not be the same as the gender assigned at birth, and so the word transgender describes those whose gender identity does not exactly match the gender they were assigned at birth. Transgender is independent of sexual orientation and transgendered people can live part-time and full-time in the opposite gender (Pohjanen and Kortelainen, 2016). Therefore, a transgender is "someone who is anatomically born in a certain sex, but is more comfortable with the gender/sexual identity of a different gender, and chooses to go in for a sex reassignment surgery or hormonal treatment." (People's Union for Civil Liberties-Karnataka Report, 2001)

Information need of a transgendered individual can be summed up as the information that is required at the coming out phase which can be in different aspects such as legal, health, emotional, socio-cultural and also at the later stage of their transgender life in dealing with the different sections of the society. In line with this information seeking behaviour of transgender individuals refers to the path(s) which they follow in order to satisfy their information needs. This may also include face-to-face communication with others, as well as the passive reception of information as in, for example watching television advertisements without any intention to act on the information given.

Statement of the problem

"Despite a society that is moving forward in acceptance of differences, many people still maintain uncomfortable and confused attitudes towards non-heterosexual lifestyles" (Sharpe, 2002). "These attitudes lead to discrimination and oppression of the lesbian/gay/ bisexual/ transgender (LGBT) community" (Johnson & Greeley, 2007). "Discrimination, marginalization, and violence against transgendered persons occur everywhere in the world. Violations of rights are widespread and sometimes even justified by political and religious leaders as an important cornerstone to safeguard morality and social order, making transgender individuals scapegoats for crime, corruption and health problems and made to represent the evil deviating from religious, moral and family norms and values. Thus the transgender community is prone to several sexual and mental health diseases and alcohol and other substance abuse. They also face several issues such as: shame, fear, and internalized trans phobia; disclosure and coming out; adjusting, adapting, or not adapting to social pressure to conform; fear of relationships or loss of relationships; and self-imposed limitations on expression or aspirations" (United Nations Development Programme, 2010).

These discrimination have also been reported in libraries, which are supposed to be common grounds for everyone and anyone who requires information or help. The work of Curry (2005); Bates and Walker (2016) and O'Leary (2005) provides evidence that the transgender community faces a whole lot of problems in acquiring information they need and also in seeking the help of librarians and other library staff. William &Deyoe (2014); Hart &Mfazo (2010) and Chapman (2012) reported that this community receives less help and assistance from the library because of the non-availability or absence of materials that will help them understand themselves more.

Literature Review
1. Information Needs of the transgender community

"Transgendered people have different information needs from the non-transgendered people. This is prevalent in the coming out phase where they not only strive to develop or accept their identity, but also to find out more about it" (Mehra&Braquet, 2006). And thus "it is considered that the primary information need of transgendered people is information to assist with the coming out process" (Freeman, 2011). However, "the first encounter with the transgender phenomenon does not necessarily provoke a full information need" (Pohjanen&Kortelainen, 2016). "Slowly as the phenomenon progresses, they grow more concern about their own identity and aspects such as the terms and words concerning gender minorities, other people's experiences, the phenomenon itself, other transgendered people and peer support. There will also come a stage where their needs will not just be about facts but also role models and examples on how to build their own identity" (O'Leary, 2005).

Some studies have also demonstrated that information need of transgendered population also encompasses very specific types of information, primarily legal, health, emotional, and information via computers and the internet (Pohjanen&Kortelainen, 2016; O'Leary (2005). Examples of the kind of legal information required included legal name changes, how to change government identification to reflect the appropriate sex, discrimination issues, filing for insurance appeals as many insurance companies do not cover sex reassignment surgeries (SRS) or hormone replacement therapy (HRT), and issues surrounding legality of marriage, whether pre-existing or forthcoming. (Beiriger& Jackson, 2007).

On the other hand, it is also important to note that the information needs of such a group does not stay static over time (Freeman, 2011). The information needs of those in the process of coming out and those that have already come out are very different (Freeman, 2011). Pohjanen&Kortelainen (2016) noted that the information needs of these people change over the course of their lives. At first it might be different but after they have completed the transition or coming out process, their information needs tend to be more similar to the normal people (O'Leary, 2005).

2. Information seeking behaviour of the transgender community

Given that public information services should be designed for the entire population and should respond to the demands for information of any citizen, some researches have been geared towards knowing what is being done in meeting the growing demands for information by the transgender population (Vázquez&Teruel, n.d). This is the case of Curry's works (2005), wherein the reference librarian's behaviour in the public library was taken in view to the information demanded by the young transgender, or the study led by Mehra and Braquet (2006) that provides a more detailed understanding of information-related concerns of "transgender" youth in terms of its determinants, characteristics, nature of information needs, and application towards initiatives that libraries and information professionals can support during the coming out process.

The process of sexuality acceptance occurs mainly at an early stage or during adolescence. The place where they lived, their family's reaction which is merely positive and finally, the views of friends on sexual diversity had an influence on the informants' behaviour in their

"Coming out of the closet" process. (Vázquez&Teruel, n.d). Freeman (2011) states that the primary information need of transgender youth (transgender) is information to assist with the coming out process. Transgender youth primarily use libraries as a conduit to information during their coming-out and self-identification processes (Hamer, 2003). But because of the sensitive nature of these information needs, Schaller (2011) advised that confidence and privacy are primary concerns of transgender youth information seekers due to a desire to remain unidentified as transgender individuals. This need for privacy also applied

to self-identified transgender people as they (often rightfully) believed that they would experience prejudice in public situations if their self-identity as a transgender individual became public knowledge (Curry, 2005) and thus often neglect libraries.

Because the information needs of this community is not met by libraries during the coming process (Hamer, 2003) and during self-identification process (Mehra&Braquet, 2007), they turn to other places for information. Most commonly, they make up for the lack of library support by looking for information from the internet and from other members of the community (Pruitt, 2010). Available research suggests that the LGBT population, including youth, have been early adopters of the Internet and social media technologies, as well as more frequent users of such tools (Boyd & Ellison, 2008; Haag, 1997 &Huffaker& Calvert, 2005). Studies have also shown that LGBT youth were five times as likely to have searched online for information on sexuality and sexual attraction compared to non-LGBT youth (62% vs. 12%). In addition, LGBT youth were more likely than non-LGBT youth to have searched for health and medical information online (81% vs. 46%) and information on HIV/AIDS and STIs (19% vs. 5%) (Gay, Lesbian & Straight Education Network, 2013). However studies have also reported that the Internet, does not typically narrow gaps in access to LGBT-related resources, it nonetheless provides substantial benefits to more marginalized LGBT youth, and on the whole, LGBT youth appear to be better off having them. (Kitzie, 2015;GLSEN,2013) As was the case for in-person victimization, LGBT youth experienced a high degree of harassment online on the basis of their sexual orientation and/or gender expression. LGBT youth commonly said they felt unsafe when they were online and overall, felt less safe than non-LGBT youth both online and offline. Youth were commonly bullied online when they were at home. Thus, the Internet and related technologies have expanded opportunities for bullying and harassment beyond the school context (Gay, Lesbian & Straight Education Network, 2013).

On the other hand, another strategy considered by transgender individuals at the beginning is to resort to institutions which provided help to people living this kind of situations (LGBT collectives, psychologists, specialised medical units, etc.) (Vázquez&Teruel, n.d). This is why we find that people in this group often have mixed feelings regarding libraries. (Freeman, 2011). Studies has also shown that although many transgender individuals reported using libraries as children, this usage lessened as they enter their teen and collegiate years (Rothbauer, 2004). This is problematic as these are the years when most transgender individuals begin to grapple with their self-identities. However, this lessening usage did not necessarily correlate with a decline in patron trust in the library. (Mehra and Braquet, 2006)

Mehra and Braquet (2006) also noted that it is important to meet the information needs of this group, because they are more likely to experience prejudice, suicidal tendencies, and social stigma related to coming to terms with their sexual identity than other groups in the same age bracket. Meeting of the information needs of the group also is important because of its capability of saving lives (Encarnacion, 2005), preventing AIDS (Hamer, 2003), reducing suicide rates (Mehra and Braquet, 2006), and increasing the interior comfort that transgender youth have with self-identification (Curry, 2005).

In several recent studies, transgender teenagers became more likely to use remotely-accessible OPACs to search library catalogues for transgender-appropriate materials than they were to visit the library in-person (Hamer, 2003; Rothbauer, 2004). These searches were often of limited success because of a patron's unfamiliarity with the controlled vocabulary used for searching library OPACs (Curry, 2005). Transgender patrons were more likely to use terms that they had familiarity with from other sources (such as television, other transgender individuals, or other media) than the controlled terminology that manages most library searches (Adler, 2009; Rothbauer, 2004).

This can also be a problem for libraries to meet the needs of these people, as Schaller (2011) noted, "it can be hard to find a balance between the information needs of the LGBTQ individuals that are not

already out and the ones that are confident about their sexual identity." Bates and Walker (2016) state that librarians generally have poor knowledge of transgender needs. However, Bridge (2010) and Wright (2007) demonstrated that most librarians are willing to have training on transgender needs and seeking behaviour.

Mehra and Braquet (2006) however, recommended that libraries develop strategies for meeting the needs of transgender youth at all stages of the coming out process. They further advocated for libraries to become a resource in their communities for transgender individuals of all ages to seek information to further their knowledge about their transgender self-identity. Mehra and Braquet also called for libraries to become gateways to other geographically-related services for the transgender community that they may be previously unaware of.

Objectives

1. To findout the information needs of the transgender communityin Shillong
2. To find out the information seeking behaviour of the Transgender community in Shillong
3. To find out the role of libraries in fulfilling the information needs and information seeking behaviour of the Transgender community in Shillong

Methodology

The study focuses on transgender individuals that are enrolled into educational institutes in Shillong. These individuals were contacted through aCommunity Based Organisation- Lamjingshai Targeted Intervention Project a branch under the parent organisation Shamakamiin Shillong. The study also uses two methods of approach- questionnaire and interview methods. The questionnaire consisted of 23 questions which included a hybrid of both opened and closed ended questions. The questionnaires were distributed by the researcher to 15 respondents in Shillong. The response from the respondents in Shillong is 100% (although not all respondents answered every question).

Group interviews were also conducted for respondents in Shillong which was done in two separate occasions on the basis of availability of the respondents. These sessions were conducted inside the office of the NGO's project manager's office in order to ensure privacy and confidentiality of responses. The interview schedule is also both structured and unstructured.

Research Area

Shamakami is a Community Based Organization (CBO) of MSM/TG (Men having Sex with Men/ Transgender) which was formed in the year 2008 by the founding members Smti. RebinaSubba and Smti. Bathsheba G. Pyngrope which got registered on 27th January 2010 under the Meghalaya Societies Registration Act of XII 1983. At an early stage, this organisation was supported by the KhasiJaiñtia Presbyterian Assembly. The missions of the Shamakami include:

1. Shamakami visions of a society where MSM/TG population can lead a life of dignity and equal rights.
2. Shamakami aims to generate greater understanding in larger society of issues concerning MSM/ TG and other sexual minorities, particularly the youth.
3. Shamakami aims at guiding MSMs/TGs to lead a disciplined lifestyle, have safe sexual behaviour, awareness on sexual health, distribution of condoms, etc.

Data Analysis &Findings

When designing the questionnaire used in this study, it was hoped that some of the questions could also be used for the group interview so as to acquire more in-depth information possible. The questionnaire prompts for the respondent's basic background, library usage, their present needs as a transgender library

user and the outside information sources and library improvements they see as necessary in the future. The results are analysed below; the first section summarises transgender users' specific needs, how these needs might change with age or psychological development. The second section moves on to the basic frequency with which the library is used, typical subjects for which the library is used and how users perceive basic environmental quality or ease of service. The last section discusses the types of access points the respondents use, whether library sources or otherwise, factors affecting their information seeking behaviour, as well as users' perceptions of whether libraries should incorporate sensitivity training for library staff.
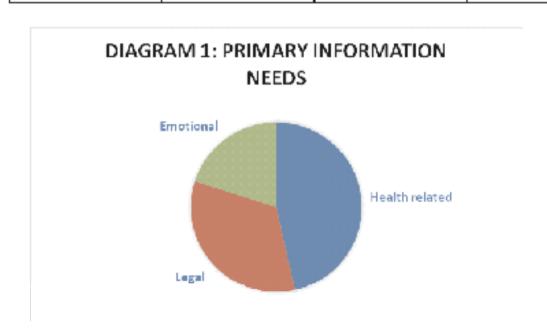
3. Information needs

It was found out from the responses that the primary information need of the respondents are mostly health, emotional and legal related information as shown in the table below:

Table 1: Primary Information Needs (n=15)

Legal	Health related	Emotional	Others
5 (33%)	7 (46%)	3 (20%)	0

DIAGRAM 1: PRIMARY INFORMATION NEEDS

Through the interview it was also found that around 75% of the respondents knew that they were transgender when they were small but they all had problems in knowing exactly who they were.

"I came to realise when I was at the age of 12 that I did not feeling good when wearing male clothes, I feel disgusted and left alone because I feel good to be with girls and I dislike boys because they would make me feel as if I'm not one of them"

"At first I thought that maybe I was gay, I always would like to put on female attire and also make-up, but I was never attracted to males instead I was attracted to females"

"If it was taught to us in our curriculum or if libraries had that kind of information, it would have proven to be more helpful for us to understand our transgender issues"

Many of the respondents also stated in the interviews that when they first realised that were different from others from the same gender, they wanted to find to find out about their condition- what caused this? Are there other people with the same condition as theirs? While some stated that they were not interested in finding out and some suppressed the feeling for fear of other people knowing about it. They also stated that because information about transgender identity is not readily available they received it through several non-conventional sources such as friends, television, other transgender individuals and mostly all of them believe that it would be helpful to have received more concrete and positive information in their coming out processes for them to better understand themselves.

"It would have been better if we had received more reliable and positive information about what was going on with us and what should we do next"

According to the respondents, their information needs change from when they first realised they were transgender until they were comfortable with their gender. They stated that they no longer require information about their identity and many other basic information such as how to legally change their names, what type of surgeries or therapies will they require and so on.

But they now require more information about their sexual practices, sexually transmitted diseases, transforming their bodies like those of the opposite sex and parenting. Some also mentioned that they do not see the difference in their information needs with the other students in the campus.

"At first I just wanted to know if the gender I was born with matches with the how I feel inside but now I feel I'm like any other normal person and am concentrating on having a bright career"

"My information needs change with time, when I was about to undergo sex reassignment surgery, I wanted to know how is it done and how much money will it require"

4. Perceptions of transgender individuals about libraries

Considering the change in the needs of the transgender individuals, libraries need to understand that transgender patrons do not always require information about themselves and their condition but that these individuals visit libraries for various other reasons also, their academics being one of the main reason. Although many of the respondents mentioned that there are no separate transgender collection in their institutes' libraries but some literature (mostly fiction) collection and magazine collection do have some transgender themes in them.

"There is no specific transgender collection in our college library but I have come through a few magazine articles and some novels that are written about transgender topics"

When asked about their feelings on integration and separation of the transgender collection with/from general collection, some of the respondents feel that there should be separation of transgender collection as one of the respondents said "*it will be of help to look for the necessary information without bothering someone or risk people knowing for those who are still in-closeted*". But those who think that it should integrate with the general collection, feel that there is a good chance that the other non-transgender individuals may come across these materials and may be helpful in sensitizing them.

Most of the respondents also mentioned that they visit the library more often and they do not often look for transgender related information (tables 2.1, 2.2)

Table 2.1: Frequency of visits to the library (n=15)

Frequency	Daily	1-2 times a week	Once a month	Never
No of Responses	0	8 (53%)	5 (33%)	2 (13%)
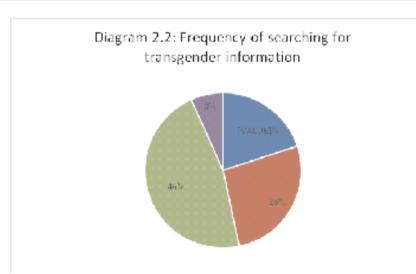
Diagram 2.1: Frequency of visits to the library

Table 2.2: Frequency of searching for transgender information (n=15)

Frequency	Never	Once a week	Twice a week	Frequently	Always
No. of Response	7 (46%)	3 (20%)	4 (26%)	1 (6%)	0

Diagram 2.2: Frequency of searching for transgender information

When it comes to the environment of the library, the many of the respondents stated they have never seek any help from a library staff to find information about any transgender materials because most of the respondents do not often look for transgender information in the library and for those who do, it is risk

that people may know and they may face stigmatization especially when they did not come out and now when they are out they do not feel the need to ask for help.

"No, especially when I did not know who I was, when I go to find such information form the library I do not ask for help because they may know that I'm a transgender and I might be harassed in the campus and not be welcome by others"

"Now I do not need the help of the librarians I can find things on my own, I think they also have a lot to do so they may not have time for me"
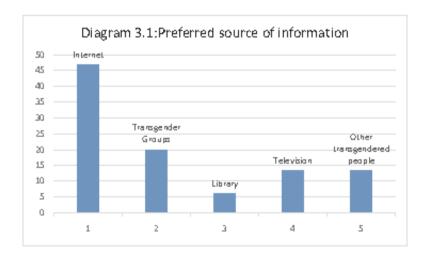
The respondents also feel that the library staff seem intimidating to them most of the time as one of them describe it "they look at me as if I am an alien from another planet or some foreigner."

5. Information seeking behaviour (other sources)

The respondents mentioned that they mostly look for transgender information from other sources like the internet, transgender groups, and other transgender individuals. Facebook and other online transgender support groups are the most reliable sources for the respondents to find information from. The Lamjingshai Targeted Intervention Project also acts a very important source of information for the respondents and as mentioned by a respondent "it saved my life and changed it completely, it made me feel that I am not alone." The NGO conducts regular lectures, workshops, meetings and field studies in order to not only impart transgender information but also about Sexually Transmitted Diseases (STIs) and sex education to the transgender and other sexual minorities in the state. Other important sources of information according to the respondents are television shows, music, movies, books and cartoons. One of the respondents also mentioned that some counsellors and medical personnel like doctors, nurses and paramedics are also some of the very important.

According to table 3.1, the internet is the most preferred source of information for most of the respondents:

Source	Internet	Library	Other transgendered people	Television	Transgender Groups
No. of responses	7	1	2	2	3

Diagram 3.1: Preferred source of information

The reason that most of the respondents prefer to use the internet because they feel safe as one of the respondents stated *"it is safer than speaking face to face with people and we can be ourselves and also get to share our problems and our experiences. These sites also give us an opportunity to find partners, so they are more exciting."*

The respondents also stated in unison that their most challenging barrier in the coming out stage was the socio-cultural factors which they explained as *"culture which does not permit them to admit that they are transgender, religious beliefs that consider the transgender community as being evil and not to be part of in anyway, and the stigmatisation they face in the society from people who live nearby and also from those in their schools and colleges."* However, some also argued that financial factors, emotional factors and cognitive abilities also form a great disadvantage for them to be able to gain proper information even after their coming out phase as well.

6. Training and sensitisation of library staff

In this aspect the respondents mentioned that the library staff need to be trained and sensitised about the needs of the transgender community in order to be able to properly serve all the users especially. According to one of the respondents, libraries can work in tandem with the Lamjingshai Targeted Intervention Project and other NGOs in order to be able to conduct workshops or seminars on the transgendercommunity. While others feel that training librarians will not help but rather they should be asked to be polite to everyone who seeks help.

Discussion

After examining the literature it can be clearly stated that the responses in this study are typical to the findings of other research done in other parts of the world.The responses of the participants clearly shows that they were aware of their own condition at a very early stage but were denied information of their exact nature due to reasons such as negligence of family and friends, fortuitous encounter with information via television show, movies, internet webpages, chat rooms etc., and lack of concrete informationin reliable sources such as libraries, school curriculum etc. Just like in the case of Pohjanen&Kortelainen(2016) in this study also respondents argued that their primary information needs encompasses health related, legal and emotional information which can be a helpful guide for libraries and library professionals.

But the ever changing needs of these people also poses great difficulties for the librarians to be of any help to them but as mentioned by Mehra and Braquet (2006) that librarians must develop strategies to meet the needs of the transgender community at all stages and this can be achieved only with proper training to sensitise the library staff and working with external organisations who deal with the transgender community, so as to understand the issues and challenges these people face in their everyday lives.

The perception of libraries by the respondents clearly show that libraries are not the favourite places for them to look for transgender related information. Even if they do visit the library often, most of them utilise their services for other purposes which can be for their academic purposes, leisure reading and for other purposes. This is generally because many of the institutional libraries do not have transgender related materials for them to utilise. This also is because libraries that even though libraries have such materials but do not display them in their notice boards for the transgender users to be aware of the collection. Because of this, transgender individuals have preferred to use the internet which according to them is safe. Transgender groups and individuals are also much preferred by transgender individuals than the libraries which has proved once again that libraries and professionals should consider working with these people

in order to help their transgender patrons.

However, for libraries to properly assist their transgender users, the incorporation of transgender related materials, which may be about the transgender community or written by transgender authors in any format should be encouraged. Following whatHart and Mfazo (2010) demonstrated that in order to provide good services, libraries should expand their LGBT oriented collection, identify materials for easy access, provide an inclusive collection, display LGBT oriented information on their community notice boards and include information relevant to LGBT people in their community information services.This will not only help the transgender individuals but also serve as an awareness initiative for removing the transphobia from other non-transgender individuals as well.

But libraries will also face problems in this as Chapman (2013) mentioned "that social pressures bring about intellectual censorship of materials that are related to these groups and thus, totally prevent libraries from holding such collections." Moreover, other issues include "lack of need, limited budgets and limited time to devote to collection development" (William &Deyoe, 2014) and also "because the collection development policies are not clear enough for librarians to have a support base to include transgender related materials" (Hart and Mfazo, 2010).

Conclusion

The information needs of the transgender individuals as shown by this study and also many other research done in the past, clearly deviates from the other individuals especially in the coming out stage. The issues and stigma faced by the transgender community often makes them take several unconventional paths to seek for information they need. But as Pohjanen & Kortelainen(2016) mentioned "It is important to keep in mind that transgendered individuals do not necessarily buildtheirgenderidentitytowards beingtransgenderbuttowards thegenderthey feel theyare. On the other hand transgendered people may not build their identity as a man or a woman, but as not belonging to either gender at all." Thus libraries must step up and act as common grounds for transgender individuals to access information they require in order to explore their nature and at the same time understand themselves.

The most preferred or important source of information found in the study is the Internet. This is because in this modern era, information is readily available on the internet for those in the form of multimedia or text formats. This has rendered libraries useless for this community but if libraries especially academic libraries formulate and develop different strategies to reach out to these individuals, it will be of much greater help especially for the poor and the marginalised section.

Since the information needs of the transgender community has just been studied only in the last few decades there is scope for much more studies in this area. While this study has covered only the information needs and seeking behaviour from the transgender individual's point of view, thus there is more room for studies to be conducted in this area from the library staff's approach and from the families of transgender individuals as well. Studies can also be conducted on a larger sample size because "While studies offer librarians the opportunity to listen to the needs of transgender communities, it is also very important to realize that they represent very specific and relatively small sample sizes, so the transgender communities in other library service areas could have other needs not mentioned, or might not experience any of the above needs." (Thompson, 2012).

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INSTITUTIONAL REPOSITORY: THE BASICS

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ABSTRACT

An Institutional Repository is the rich source of digital materials carried out and published by scholarly people. It is the perfect place for information dissemination now a day. The paper describes what the institutional repository is, the origin of the concept institutional repository, requirements for setting up an institutional repository, software for institutional repository and the importance and functions of it. These are the basics things for an institutional repository which is explained in the paper accordingly.

Keywords: Institutional Repositories, software, digital repository, digital document, information dissemination, open access, OAI-PMH

Introduction:

We are now living in an era where information is very much essential in every steps of human day to day life. Research and study are done in each and every sphere but the research outcomes are very much remained in such a condition where only a few can use it. But due to the open access movement, the scenario has been changed now a day. One such outcome of the open access movement is the Institutional Repositories.

Definition:

For defining the term Institutional Repository, we should have the knowledge about the term repository. According to the Oxford English Dictionary the term repository indicates a place where or receptacle in which things are or may be stored. In other words, a repository is a central storage place for data and from which user can use according to their needs or we can say that a repository is the storage location for multiple databases or files and which can be disseminate over a network.

Now come to the main term Institutional Repository. An institutional repository is archive for collecting, preserving and disseminating the digital copies of the intellectual output of the researchers of an institution specially the academic and research institutions. In other words, an institutional repository is set of services provided by an institution to its members for the purpose of better utilization and dissemination of digital materials which are created by the institution and its community members.

Origin of the concept:

An institutional repository is very much attached with the concept of digital resources and open access. As we know the digital resources are accessible all over the world through internet, therefore it improves the visibility, usage and impact of research conducted by the researchers of an institution. Basically the

origin of the concept institutional repository is twofold. They are-

1. Institutional repository concept is very much linked to the concept of interoperability and which is again linked to the Open Archive Initiative Protocol for Metadata Harvesting (OAI-PMH). The OAI had its roots in the notion of a "Universal Preprint Service" since superseded by the open access movement.

2. The second concept is it is linked with the digital library concept. As we know a digital library collects, stores, classifies catalogues, preserves the digital contents of an institution and also provides open access to the digital contents to its users as well as to the other users outside the institution as per their norms. This open access norms of the digital library becomes the basic of the institutional repository concept.

Requirements for setting up an Institutional Repository:

For setting up an institutional repository the following steps are required to follow. They are-

1. For setting up an institutional repository, the 1ˢᵗ requirement is to define the purpose of the institutional repository. Though the main purpose of an institutional repository is to preserve and provide open access to the recourses it has, however some institutional repositories are also concentrating digital publishing initiative on campus.
2. The second requirement is funding. Funding is very much necessary for the proper establishment and management of the institutional repository.
3. The third requirement is well defined repository service. The services may include the content access, the key users, the stakeholders, the top service priorities etc.
4. The fourth and the most important requirement is the choosing of repository software. The institution which owns the institutional repository should select the software according to their needs and affordability.
5. The fifth requirement is the staff. Though there does not exists the need of keeping a huge staff for the repository as it is digital, but there should be two types of staffs- Institutional repository administrator and institutional repository manager. Though in case of small repository the administrator can also act as the manager of the repository.
6. The sixth requirement is the setting up of the communities or the specific groups of people who are going to contribute and use the repository.
7. The last requirement is to publicizing the institutional repository over the internet so that as many users can use the repository. This is also called the marketing of the repository.

Software for Institutional Repository:

There exists a wide variety of open source as well as commercial softwares which can be used in the establishment of an institutional repository. The open source softwares are much more popular than the commercial softwares as these are modifiable according to the need of the institution, though modification needs some expertise of the person upon the software. Some of the popular institutional repository softwares are as follows-

1. Dspace:
   It is an open source digital repository software written in java and developed by DuraSpace. It was 1ˢᵗ released in November 2002. It is completely customizable according to the needs of the archival system.
2. Eprints:
   It is also an open source software package for establishing institutional repositories. It is written in perl and developed by the University of Southampton and released to public in 22 December 2015.
3. Greenstone:
   It is an open source and multilingual digital repository management software developed by Newzealand

digital library Project at the University of Waikato.
4. CDsware:
   In is developed by CERN for the purpose of document management which is also used as the digital repository management software.

Functions of Institutional Repository:

The function of an institutional repository was coined by Clifford Lynch in 20003 with respect to the universities. Though he had given the concept of function of the institutional repository in case of universities, here in general the functions of an institutional repository may include the following points-
1. It offers services to the members of its community for the management and dissemination of digital materials created by the institution as well as its community members.
2. It acts as the long-term preserver for those materials which needed it and organise the materials for better access or distribution.
3. It also acts as the knowledge manager, assesses the research and showcases the research output of an institution.

Content of Institutional Repository:

The content of an institutional repository depends upon the interest and focus of the institution. Basically, higher educational institution conducts research across multiple disciplines where a wide range of subjects are included. Therefore the content of institutional repository of such institute will include a wide variety of research outputs.

Again, in case subject specific repository or the disciplinary repository, the contents include the scholarly research output in a particular discipline. Though there can be disciplinary repositories for one institution, but disciplinary repositories are frequently not tied to a specific institution.

Importance of Institutional Repository:

In today's information oriented age, an institutional repository becomes very much relevant and important for the researchers as well as for other users in the academic field. The importance of the institutional repository include –
1. It disseminates knowledge to the end users and generates original scholarship in the academic field and thereby increases the standard of the research outputs.
2. As the uploaded documents of an institutional repository are of certain standard therefore it becomes the meaningful indicator of quality.
3. It bridges the gap between users and the research output by increasing visibility and availability of the research output over internet.
4. It increases the peer review on research output on a particular field.
5. The content in the institutional repository is easy to locate and retrieve which is very much important for the researcher and which increases the readership.
6. It fosters the interdisciplinary research and discovery.
7. It becomes a means of global networking in the academic community.
8. It becomes the digital press for the researchers of the institution.

Conclusion:

The concept institutional repository can be called the recent one but it becomes a powerful and very efficient concept in the field higher education. Authorities of higher education system should emphasise

much in the development of institutional repositories as it has the power to foster the academic community much faster than any other media. The intellectual outputs from the researcher community, active guidance from the faculties as well as the working partnership of the library we can build a strong institutional repository and thus we can change the scenario of scholarly communication of the academic world.

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INFORMATION SEEKING BEHAVIOUR AMONG THE STUDENTS OF NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY (NIELIT), KOKRAJHAR: A STUDY

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Abstract

This study has been carried out to find the information seeking behaviour of students in the National Institute of Electronics and Information Technology (NIELIT) especially in the Kokrajhar. NIELIT (formerly DOEACC Society), an Autonomous Scientific Society under the administrative control of Ministry of Electronics & Information Technology (MoE&IT), Government of India, was set up to carry out Human Resource Development and related activities in the area of Information, Electronics & Communications Technology (IECT) . It has been providing various electronics and IT related courses, besides these industrial and consultancy services in the state-of- the-art areas. It is also noteworthy that NIELIT has been taking vital role in skill development, skill empowerment and Digital India Initiatives. Keeping that in mind this study tries to find out how the students have been seeking information to cope up with the latest trends. This study comprises the query from the students such as information needs and sources, information literacy, barriers of information seeking, channels of information sources, about computer literacy, internet literacy and so on.

Keywords: Information seeking behaviour, NIELIT, information literacy, computer literacy, internet proficiency.

1. Introduction

Information seeking behaviour is the human psychology of a person which directs him or her in finding his or her required information when needed. This behaviour also depends on the cognitive state of a person. The information seeking behaviour depends on the knowledge of the person regarding information resources and how to reach them. Wilson (1981) developed a model of information seeking behaviour and it suggested that information-seeking behaviour is the consequence of information need perceived by information user, who, in order to satisfy that need, makes demands upon formal or informal information sources or services, which result in success or failure to find relevant information. There are some other information seeking behaviour models developed by various information scientists viz., Dervin's (1983) sense-making theory ; Ellis's (1989 and 1993) behavioural model of information seeking strategies Kuhlthau's (1991) model of the stages of information-seeking behaviour; and Wilson's (1996) model, which expands his 1981 model through an analysis of the literature in fields other than information science.

2. Literature Review

Jeyaprakash (2014) in his article investigated the information seeking behaviour of faculties between Arts and Engineering colleges. Prabhavathi (2011) studied the information seeking behaviour of post graduate students of Sri Padmavathi Mahila Visvavidyalayam, Tirupati and found that the main purpose

of visiting the library is preparing for examinations, followed by preparing for competitive examinations and dissertation work and books was popular source of information to the Post Graduate students. Siddiqui (2011) in his article investigated the information seeking behaviour of B.Tech and MBBS students in Lucknow to compare their information seeking habits and found that maximum number of students used internet for educational purposes. Pareek and Rana (2013) studied the information seeking behavior and library use pattern of researchers in the Banasthali University and found that Researchers use different information sources for their research including books and e-journals which are considered mostly and it was also noted that there was little awareness of e-resources available in library. Saikia and Gohain(2013) made a study of user satisfaction on library resources and services in Tezpur university and found that 82.39%(131) respondents used text book to meet their information needs followed by 79.87%(127) respondents access online journals and 75.47%(120) read News paper.

3. Scope and Limitation

The present study encompasses the students of NIELIT, Kokrajhar studying in different courses. This study will find out the information seeking behaviour pattern of students in NIELIT, Kokrajhar. The study has a vast limitation as I have taken only the Kokrajhar NIELIT students as an area of study. Due to some time constraint and cost factor the study has been limited upto this level. There is a great possibility for the study of NIELIT students especially in the North-Eastern region related to information seeking behaviour in future endeavour.

4. Objectives

1. To know the frequency of library visit.
2. To find out Computer and internet literacy level of students
3. To find out the information need and sources of students
4. To find out main barriers faced by students in meeting information needs.
5. To know the information skills of students.
6. To find out the channels of information sources.
7. To find out the skills related to IT based information sources.
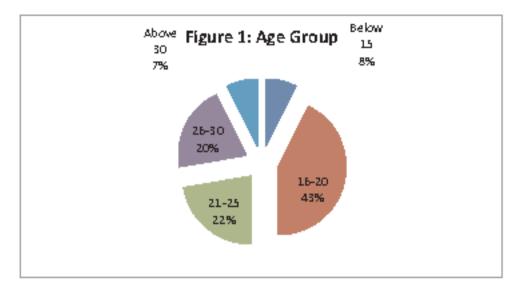
5. Methodology

An online questionnaire was prepared in Google doc form containing 14 questions and emailed to students of NIELIT, Kokrajhar and same has been distributed by hand personally. Totally 150 questionnaires (both online & offline) had been distributed to the students and out of which 110 (73.3%) questionnaires were received but in maximum cases 108 (72%) respondents were seen.

6. Result and Discussion

Table 1: Age Group
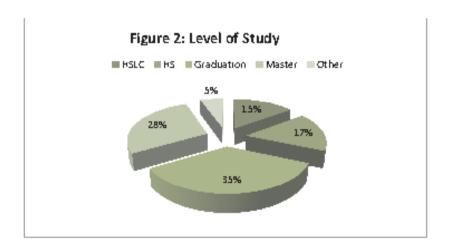
Age Group	Respondents	Percentage (%)
Below 15	8	7.4
16-20	46	42.6
21-25	24	22.3
26-30	22	20.3
Above 30	8	7.4
Total	108	100

Figure 1: Age Group

From the above table it is seen that the age group 16-20 get admitted in the NIELIT Kokrajhar is 42.6% which is maximum, followed by 21-25, 26-30, Below 15, Above 30 which percentage (%) is 22.3%, 20.3%, 7.4% and 7.4% respectively.

Table 2: Level of Study
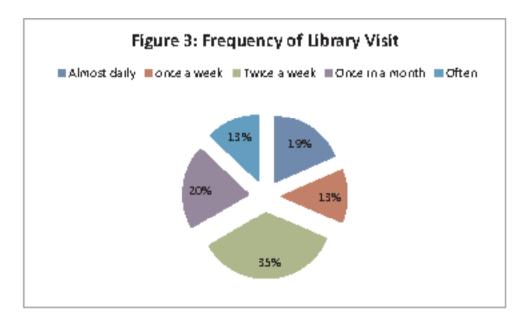
Level of Study	Respondents	Percentage (%)
HSLC	16	14.8
HS	18	16.6
Graduation	38	35.1
Master	30	28
Other	6	5.5
Total	108	100

Figure 2: Level of Study

The table 2 survey was conducted to know the level of study. Here maximum the graduate (35.1%) come to our institution. Which is followed by Master (28%), and then HS (16.6%), HSLC (14.8%), other (5.5%).

Table 3: Frequency of Library visit
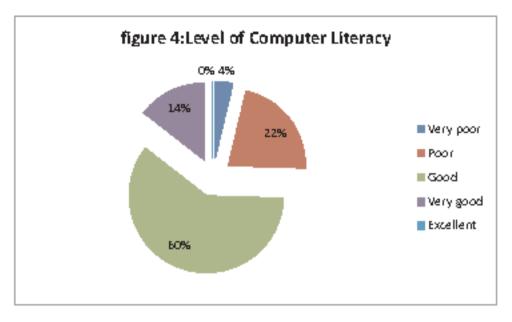
Frequency of Library Visit	Respondents	Percentage (%)
Almost daily	20	18.5
once a week	14	13
Twice a week	38	35.1
Once in a month	22	20.4
Often	14	13
Total	108	100

Figure 3: Frequency of Library Visit

■ Almost daily ■ once a week ■ Twice a week ■ Once in a month ■ Often

13% 19% 13% 20% 35%

Students visit the library Twice a week (35.1%) which is maximum followed by Once in a Month(20.4%), Almost Daily(18.5%), Once a week (13%) and Often (13%) respectively. As students are being given course materials according to their course of study they visit to the library for their daily updates and general knowledge.

Table 4: Level of Computer Literacy
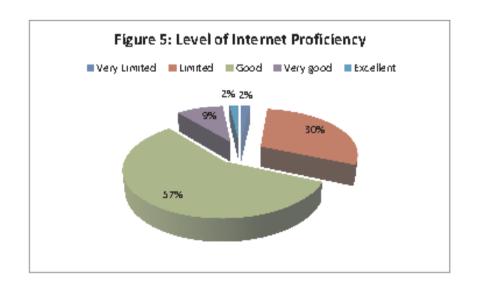
Level of Computer Literacy	Respondents	Percentage (%)
Very poor	4	3.7
Poor	24	21.8
Good	66	60
Very good	16	14.5
Excellent	0	0
Total	110	100

figure 4:Level of Computer Literacy

From the response it is found that 60% students are good in computer literacy, followed by Poor (21.8%), Very good(14.5%) and Very Poor(3.7%) respectively. Whereas it is found that there is no such students who are excellent in computer literacy.

Table 5: Level of Internet Proficiency

Level of Internet Proficiency	Respondents	Percentage (%)
Very Limited	2	1.8
Limited	32	29.7
Good	62	57.5
Very good	10	9.2
Excellent	2	1.8
Total	108	100

Figure 5: Level of Internet Proficiency
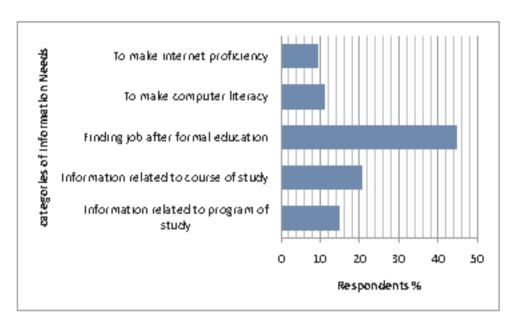
From the above table it is found that 57.5% students are Good in Internet Proficiency. 29.7% are Limited, 9.2% are Very Good, 1.8% are Very Limited and 1.8% who are excellent in Internet Proficiency respectively.

Table 6: categories of Information Needs

Categories of Information Needs	Respondents	Percentage (%)
Information related to program of study	16	14.8
Information related to course of study	22	20.4
Finding job after formal education	48	44.5
To make computer literacy	12	11.1
To make internet proficiency	10	9.2
Total	108	100
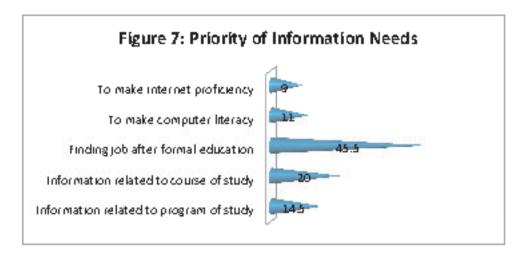
Figure 6: categories of Information Needs

Maximum students get admitted to the institution for finding job after the formal education (44.5%) as most of the respondents are graduate. Rest 20.4% are Information related to course study, 14.8% are Information related to program of study, and another 11.1% and 9.2% are to make computer literacy and to make internet proficiency respectively.

Table 7: Priority of Information Needs
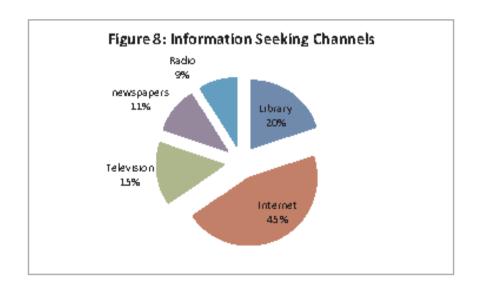
Priority of Information Needs	Respondents	Percentage (%)
Information related to program of study	16	14.5
Information related to course of study	22	20
Finding job after formal education	50	45.5
To make computer literacy	12	11
To make internet proficiency	10	9
Total	110	100

Figure 7: Priority of Information Needs

To make internet proficiency	9
To make computer literacy	11
Finding job after formal education	45.5
Information related to course of study	20
Information related to program of study	14.5

Students were asked for the priority of information needs that they searched for. Among them 45.5% students given priority for finding job after formal education followed by 20% of information related to course of study. And the rest are information related to program of study(14.5%), to make computer literacy(11%) and to make internet proficiency(9%) respectively.

Table 8: Information Seeking Channels

Information Seeking Channels	Respondents	Percentage (%)
Library	22	20
Internet	50	45.4
Television	16	14.8
newspapers	12	10.8
Radio	10	9
Total	110	100

Figure 8: Information Seeking Channels

Radio	9%
newspapers	11%
Television	15%
Library	20%
Internet	45%
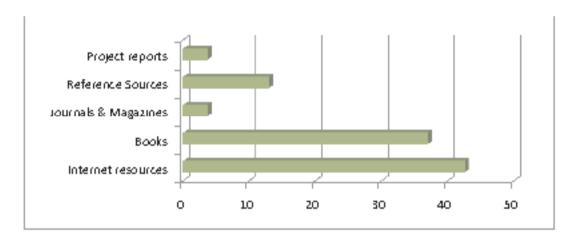
In the table 8 it was asked that from which channels students were sought information. Here it is found that 45.4% students seek information from internet, followed by library (20%) and rest students respond that 14.8% from the television, 10.8% from the newspaper and 9% from the radio as some of the students belong to remote village area.

Table 9: Currently Using Information Sources

Currently Using Information Sources	Respondents	Percentage (%)
Internet resources	46	42.6
Books	40	37
Journals & Magazines	4	3.7
Reference Sources	14	13
Project reports	4	3.7
Total	108	100

Figure 9: Currently Using Information Sources
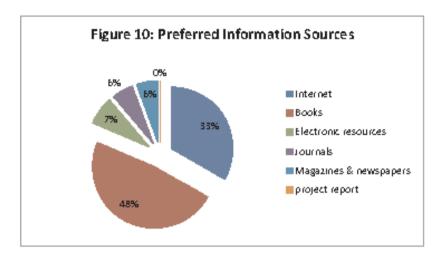
Currently students depend upon the internet resource (42.6%) which is the maximum in the survey. 37% students respond information sources as books, 13% as reference sources, 3.7% as journals & magazines and least by 3.7% as project report.

Table 10: Preferred Information Sources

Preferred Information Sources	Respondents	Percentage (%)
Internet	36	33.3
Books	52	48.1
Electronic resources	8	7.4
Journals	6	5.6
Magazines & newspapers	6	5.6
project report	0	0
Total	108	100
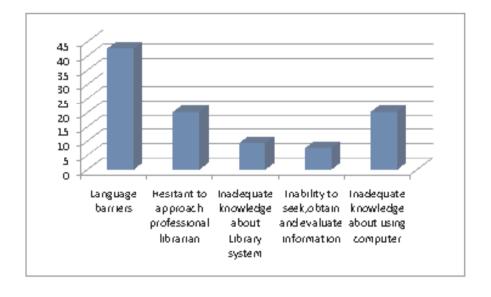
Even though it is noticed that currently students are using internet resources in a large scale. But they preferred books 48.1% as information sources which is seen in the table10. 33.3% students preferred internet, 7.4% students preferred electronics resources, 5.6% preferred journals and 5.6% preferred magazines & newspapers respectively.

Table 11: Main Barriers of Seeking Information Needs

Main Barriers of seeking information needs	Respondents	Percentage (%)
Language barriers	46	42.6
Hesitant to approach professional librarian	22	20.3
Inadequate knowledge about Library system	10	9.3
Inability to seek,obtain and evaluate information	8	7.5
Inadequate knowledge about using computer	22	20.3
Total	108	100
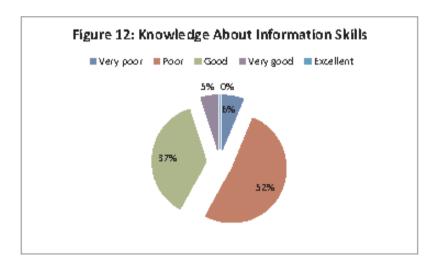
Figure 11: Main Barriers of Seeking Information Needs

Language is the main barriers of information seeking especially in Kokrajhar. As students are coming from the remote village area and they are studying in regional languages. So they found a bit tough to cope up with the situation. Here language barriers (42.6%) followed by hesitant to approach professional librarian (20.3%) and inadequate knowledge about using computer (20.3%), inadequate knowledge about Library system (9.3%) least by inability to seek, obtain and evaluate information (7.5%).

Table 12: Knowledge About Information Skills (Such as identify the information, select the most appropriate places to look for information, planning, retrieving information, evaluation etc.).
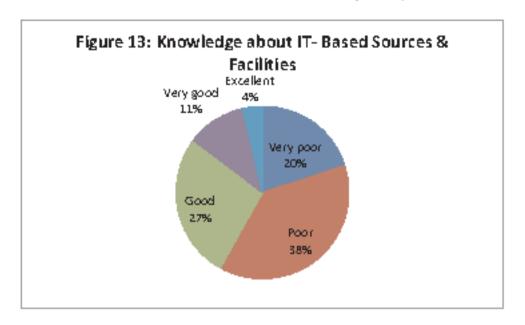
knowledge about information skills	Respondents	Percentage (%)
Very poor	6	6.3
Poor	56	51.7
Good	40	37
Very good	6	5
Excellent	0	0
Total	108	100

Figure 12: Knowledge About Information Skills

From the above table it is seen that 51.7% students are poor in the information skills, 37% are good, 6.3% are very poor and 5% are very good in the knowledge about information skills.

Table 13: Knowledge about IT- Based Sources & Facilities (Such as OPAC, CD-ROM, e-resources etc.)

Knowledge about IT based Sources & facilities	Respondents	Percentage (%)
Very poor	22	20
Poor	42	38.1
Good	30	27.2
Very good	12	11
Excellent	4	3.7
Total	110	100

Figure 13: Knowledge about IT- Based Sources & Facilities
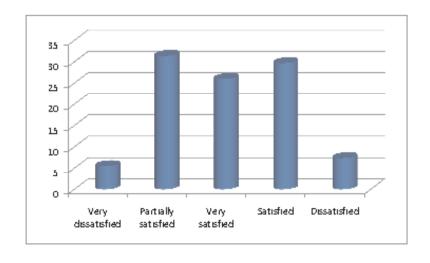
From the above table 13 it is clear that the students of NIELIT Kokrajhar are not compatible enough in IT-based sources and facilities. 38.1% are poor followed by 27.2% are good and 20% are very poor, 11% are very good respectively. Only 3.7% are excellent in knowledge about IT-based sources and facilities.

Table 14: Overall Satisfaction with the Library

Overall satisfaction with the Library	Respondents	Percentage (%)
Very dissatisfied	6	5.5
Partially satisfied	34	31.4
Very satisfied	28	26
Satisfied	32	29.7
Dissatisfied	8	7.4
	108	100

Figure 14: Overall Satisfaction with the Library

Maximum of the students i.e.31.4% are partially satisfied, 29.7% are satisfied, 26% are very satisfied, 7.4% are dissatisfied and 5.5% are very dissatisfied in the overall satisfaction with the library.

1. Findings

1) Age group 16-20 students (42.6%) get admitted in NIELIT Kokrajhar and least by Above 30 depending upon the age group 7.4%.

2) It is also found that from the study that students those who are graduate (graduation 35.1%) come to the NIELIT Kokrajhar and their motive is to find job after the formal education.

3) Students visit the library twice a week (35.1%). This means that students do not visit to the library in a regular basis. They visit to the library often.

4) In case of computer literacy it is found that 60% are good and there are no such students who are excellent in the computer literacy.

5) Students are found good (57.5%) in the internet proficiency. Maximum students are aware of using internet but there are no excellent students.

6) As it is clearly mentioned that graduate students get admitted in the NIELIT Kokrajhar. In case of categories of information needs, they need information for finding job after their formal education (44.5%).

7) In the questionnaire it was asked about the priority of information needs. Here also students have given priority for finding a job after formal education. So it is known that they gathered information to get them ready for getting job prospect.

8) As a channel of information sought students are found that for their any kind of information they collect it from the internet than that of the library.

9) Current status of information sources students respond in the internet sources (42.6%) followed by books (37%).

10) Even though students are currently using information sources from internet or internet sources, students preferred Books (48,1%) for their information sources.

11) It is also found that students are coming from the remote village area and their education is from the regional language. So in seeking information needs the main barrier is language (42.6%) followed by hesitant to approach professional librarian.

12) 51.7% students respond poor in case of information skills. They are not aware of skills such as information identification, where to get the information, retrieving and evaluation.

13) IT-based sources and facilities provided by the library such as OPAC, CD-ROM, e-resources are very little known by the students and they are poor in percentage.

14) 31.4% student respond partially satisfied with the library facilities provided by the library. So there should be an interconnection between library personals and users.

2. Conclusions & suggestions

Dealing with the different types of user is not an easy task. So understanding the behaviours of the user is very much emerging points. The success of a library depends upon user studies, needs, preferences, like and dislike. Students suggest that they need more information sources related to electronics and information technology in various format such as books, journals or in the electronic forms. Collection of more project report will help the students to prepare their future project reports. Students seek librarian and library professional should be user friendly and looking forward for well wishes of the students. Active participation and approachable behaviour is warmly suggested by the students.

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INFORMATION SEEKING BEHAVIOR PATTERN OF PHYSICIANS IN JORHAT MEDICAL COLLEGE LIBRARY IN ASSAM: A STUDY

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Abstract: Medical science information is growing enormously in various formats and for that the medical students and physicians are completely dependent on up-to–date information. With the changing technological development in the medical education, physician's information seeking behavior is growing day by day. ICT has great impact on medical college libraries information sources and services and for that the medical library users information seeking behavior pattern is drastically changed. Physicians are very busy with their hospital schedule but still they seek information regularly for different types of activities. Here discusses about the information seeking behavior pattern, usages of information resources types, spending time for seeking information, use pattern of library resources, problems in getting information by physicians in Jorhat Medical College Library in Assam.

Keywords: Physicians, Information Seeking Behavior, Jorhat Medical College, ICT, Medical Library.

1. Introduction:

A library is a hub of both print and non print documents in any kind of institution. Information is the most crucial part for the users. Information can be accessed by different ways as now days the information is stored in various formats. With the development of ICT the dissemination of information is also increasing day by day. It is the responsibility for the library staff of any particular library to deliver the right information at right time for the right user. Medical science field is the most important sector by which the physicians serve their services for the people of society. The medical librarian should be aware about what type of information will be reliable and pinpointed for the physicians. By knowing the needs of physicians the librarian should keep the resources in their library for effective use. Medical practitioners or physicians need information both for clinical as well as academic purpose.

Information seeking behavior (ISB) is the activity where a user search required information in different formats and finally able to extract their needed information by searching in various ways. Different types of information are necessary for different types of users. For the physician's clinical information, patient care related, research oriented and medical education related information is very necessary. So they can access the information by searching the printed documents and e-resources in the central library of a particular medical college. With the advancement of ICT the traditional library system is changed in the meaning of preservation and dissemination. And for that the e-resources, online databases, different search engines are also more using by the physicians than earlier in their medical science field. The information through online mode is more easily accessible at very less time.

2. Jorhat Medical College & Hospital: brief introduction

Jorhat Medical College & Hospital (JMCH) is inaugurated by honorable Chief Minister of Assam, Sjt. Tarun Gogoi on 12th October, 2009 in Jorhat district. It is under the affiliation of Srimanta Shankardeva University of Health Sciences (SSUHS), Guwahati and recognized by Medical Council of India (MCI), New Delhi. At present there are 500 MBBS students, 100 internship, 89 P G students and 200 clinical and non clinical doctors along with other 1500 staff members.

The central library of JMCH is established on 2010. The central library has 8581   books, e-resources, book bank facility for SC students, 114 titles of Indian and Foreign journals, annual reports, WHO special collections, CD/DVD, thesis, newspaper and magazine. The library has a well based internet section for the users with 50 nodes and also Wi Fi facility within the library. The library is automated by Koha OSS. At present the library has 962 registered members including students and physicians.

3. Objectives:

3.1   To know the reasons of information seeking by the physicians.

3.2   To extract the usages of information resources type by the physicians.

3.3   To investigate how physicians retrieve their required information.

3.4   To identify the preference level in the usages of library resources.

3.5   To find out the problems in getting the required information by the physicians.

4. Scope of the Study:

The present study is attempted about the "Information seeking behavior pattern of physicians in Jorhat Medical College library of Assam." The scope of this study is only limited to the physicians of JMCH though there are so many library users like medical students and other staff.

5.Methodology:

For this study questionnaire based survey method was used for data collection. To collect the data questionnaires are distributed by personally among the physicians of different departments of JMCH. A few questionnaires are also sent through mail to the physicians. Some information is also collected over telephonic conversation for accuracy.

6. Data Analysis and Interpretation:

The data collected through the questionnaire was tabulated and then analyzed for the results and discussions. The received responses from the physicians are provided in differently for better findings. The questionnaire is distributed among 85 physicians of JMCH both in clinical and non clinical sections and out of these 79 (i.e. 92.94%) physicians returned it with good responses of query.

Table 6.1: Questionnaire distribution in different sections

Sl. No.	Section	No of Respondents	% of Respondents
1	Pre Clinical Section	38	40.88%
2	Para Clinical Section	41	44.11%

 From the above table it is seen that the questionnaire is distributed among the physicians of the Pre clinical and Para clinical sections. Here 40.88% responses has given by Pre clinical physicians i.e. college section physicians and 44.11% responses has given by Para clinical section physicians i.e. hospital section physicians.

Table 6.2: Questionnaire distribution category wise

Sl. No.	Physicians Category	No of Respondents	% of Respondents
1	Registrar (Clinical Section)	13	13.98%
2	Demonstrator (Non Clinical Section)	8	8.60%
3	Assistant Professor	26	27.97%
4	Associate Professor	17	18.29%
5	Professor	15	16.13%

From the above table it is seen that the questionnaire is distributed in different category wise both in clinical and non clinical sections i.e. 13.98% Registrars, 8.60% Demonstrators, 27.97% Assistant Professors, 18.29% Associate Professors and 16.13% Professors.

Table 6.3: Reasons for seeking the information

Sl. No.	Reasons	No of Respondents	% of Respondents
1	Research oriented	17	18.29%
2	Clinical activities	53	57.02
3	To deliver the lecture in the classroom	22	23.67%
4	Patient treatment related	9	9.68%
5	Continuing Medical Education (CME)	28	30.12%
6	To keep up to date knowledge	31	33.35%
7	For paper publication	12	12.91%
8	Others	7	7.53%

From the above table it is seen that 18.29% physicians seek information for research purpose, 57.02% physicians seek information for clinical activities, 23.67% physicians seek information to deliver the lecture in the classroom, 9.68% physicians seek information about patient treatment related, 30.12% physicians seek information for Continuing Medical Education, 33.35% physicians seek information to keep up to date knowledge, 12.91% physicians seek information for paper publication and 7.53% physicians seek information for other purpose.

Table 6.4: Types of information resources usages

Sl. No.	Information Resources	No of Respondents	% of Respondents
1	Printed books	49	52.72%
2	Printed journals	37	39.81%
3	Internet	67	72.08%
4	Online medical databases	22	23.67%
5	E-journals	57	61.32%
6	E-books	24	25.82%
7	Others	5	5.37%

From the above table it is seen that 52.72% physicians use printed books, 39.81% physicians use printed journals, 72.08% physicians use internet, 23.67% physicians use online medical databases, 61.32% physicians use e-journals, 25.82% physicians use e-books and 5.37% physicians use others like magazine, newspaper, annual reports, CD/DVD, WHO collection, thesis etc.

Table 6.5: Frequency of central library visit

Sl. No.	Frequency	No of Respondents	% of Respondents
1	Regularly	7	7.53%
2	Once in a week	13	13.98%
3	Once in a month	29	31.20%
4	Rarely	5	5.37%
5	Never	9	9.68%

From the above table it is seen that 7.53% physicians regularly visit the central library, 13.98% physicians visit the central library once in a week, 31.2% physicians visit the central library once in a month, 5.37% physicians visit the central library rarely and 9.68% physicians never visit the library till now.

Table 6.6: Location in the usages of internet

Sl. No.	Location	No of Respondents	% of Respondents
1	Central library	8	8.60%
2	Department	29	31.2%
3	From home	42	45.18%

From the above table it is seen that 8.6% physicians use the internet in the central library, 31.2% physicians use the internet in their department and 45.18% physicians access the internet from home.

Table 6.7: Preference in usages of information resources

Sl. No.	Preference	No of Respondents	% of Respondents
1	Printed resources	49	52.72%
2	E-resources	65	69.93%
3	Both	58	62.40%

From the above table it is seen that 52.72% physicians prefer in the usages of printed resources, 69.93% physicians prefer in the usages of e-resources and 62.4% physicians prefer in the usages of both print and e-resources.

Table 6.8: Problems in getting information

Sl. No.	Problems	No of Respondents	% of Respondents
1	Lack of time	27	29.05%
2	Lack of e-resources in the library	17	18.29%
3	Lack of searching skill of e-resources	9	9.68%
4	Overloaded information of same topic in the internet	12	12.91%
5	Lack of cooperation of library staff in searching information	0	0
6	Poor network connectivity	5	5.37%
7	Troubling in downloading the information from internet	19	20.44%
8	Others	11	11.83%

From the above table it is seen that 29.05% physicians have lack of time in seeking information, 18.29% physicians get problems in seeking information due to lack of e-resources in the central library, 9.68% physicians have lack of searching skill of e-resources, 12.91% physicians get problems due to overloaded information of same area in the internet, 5.37% physicians have found poor network connectivity, 20.44% physicians get trouble in downloading the information from internet and 11.83% physicians get other problems in accessing information.

1. **Findings:**

1.1 Maximum Assistant Professor of JMCH has given the good responses of the query.

1.2 57.02% physicians seek the information for clinical purpose and 33.35% physicians seek information for up to date knowledge on medical science field. A few physicians seek information for paper publication, to teach in the classroom, research purpose, patient care related information, for Continuing Medical Education (CME) and others.

1.3 Maximum physicians (i.e.72.08%) use internet for seeking their required information. As now day's huge amount of information can be accessed within short time from any corner. They also use printed books, printed journals, e-journals, e –books and online medical databases.

1.4 31.2% physicians visit the library once in a month. A few i.e. 9.68% physicians never visit the central library of JMCH.

1.5 45.18% physicians access the internet facility from home and 31.2% physicians access the internet from department. As JMCH has LAN connectivity within campus and for that they can access net without going to the library. Wi Fi facility is also available in each department of clinical/non clinical section and central library of JMCH.

1.6 Physicians of JMCH give the preference both printed resources as well as e-resources. But maximum physicians (i.e. 69.93%) give the preference basically on e-resources.

1.7 Maximum physicians get the problem in seeking information for lack of time as they need to utilize more time in the hospital section. Due to overflowing of information of same topic the physicians get

confuse for extracting the information from internet.

1.8 Physicians also get trouble in downloading the information for poor net connectivity. The central library of JMCH is also not rich to provide the optimum e-resources. Physicians can access only open e-resources.

1.9 A few physicians get trouble in searching information through internet due to lack of proper technical skills.

2. Suggestions:

2.1 Need of medical library consortium for maximum use of information resources by the physicians.

2.2 Authority should give the importance for subscription of e-resources so that physicians can access huge amount of information easily.

2.3 It is necessary to arrange the meeting at least once in a year among the physicians and library staff to know the physicians information needs both in clinical and non clinical activities.

2.4 Improvement of ICT infrastructure in the central library so that the librarian may provide the ICT based library services to the physicians.

3. Conclusion:

Physicians are very much busy with their duty in clinical section and for that they can't regularly visit the library for seeking their needed information. Now day's physicians access their required information through various online medical databases, by seeing demonstration of critical operation through YouTube, by clicking mouse, through medical consortium etc. Due to impact of ICT on medical libraries and its users information seeking behavior pattern is becoming too easier than earlier. Physicians of JMCH basically give the preference on use of e-resources as they can retrieve information very easily. Understanding the requirement of physicians the authority and librarian should keep the information sources for proper dissemination. Due to technological development and the advent of web resources the information seeking behavior pattern is becoming too much easier and comfortable for the users. Physicians can easily access the required information without going to the library through smart phone, lap top etc. even in their heavy busy schedule.

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INFORMATION LITERACY: NEED OF THE HOUR FOR DEVELOPING READING HABITS

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Abstract

The term information literacy, from time to time referred to as information competency, which is generally defined as the capability to access, evaluate, organize, and use information from a variety of sources. Information literacy requires an awareness by which information systems work, of the dynamic link between a particular information need and the sources and channels required to satisfy that need. Being information literate requires knowing how clearly define a subject or area of investigation; formulate a search and the variable ways that information is organized; analyze the data collected for worth, quality etc. This involves a deeper understanding of how and where to find information, the ability to judge whether that information is meaningful or not, and ultimately the interest of reading becomes developed in a gradual manner. This paper is trying to give some idea for the development of once reading habit by the way of information literacy.

Keywords: Information literacy, Information competency, Reading habits, Social literacy, Digital information literacy, Knowledge society, Library.

1. Information Literacy

The term information literacy is generally defined as the ability to access, evaluate, organize, and use information from a variety of sources; sometimes referred to as information competency. Being information literate requires knowing how to clearly define a subject or area of investigation; select the appropriate terminology that expresses the concept or subject under investigation; formulate a search strategy that takes into consideration different sources of information and the variable ways that information is organized; analyze the data collected for value, relevancy, quality, and suitability; and subsequently turn information into knowledge. This involves a deeper understanding of how and where to find information, the ability to judge whether that information is meaningful, and ultimately, how best that information can be incorporated to address the problem or issue at hand.

Information literacy is not the same as computer literacy, which requires a technological know-how to manipulate computer hardware and software or library literacy, which requires the ability to use a library's collection and its services; although there is a strong relationship among all these concepts. Each of the literacy requires some level of critical thinking. But compared with computer literacy, information literacy goes beyond merely having access to and knowledge of how to use the technology - because technology alone does not guarantee quality-learning experiences. And compared with library literacy, information literacy is more than searching through an online catalogue or other reference materials because information literacy is not a technique, but a goal for learners (Gilton, 1994).

Information literacy requires an awareness of the way in which information systems work, of the

dynamic link between a particular information need and the sources and channels required to satisfy that need.

Today, we are moving forward from the information society to the Knowledge Society wherein knowledge has become the powerful force of the economy and a tool for overall development. A Knowledge Society creates, shares, and uses knowledge for the prosperity and well-being of the society. Development of a contemporary society really depends on the creation, access and exchange of knowledge.

The concept Information Literacy is common to all disciplines, to all learning environments and to all levels of education and to all people at different levels. It can be seen as a division of independent learning which turn in to a part of lifelong learning.

At this juncture of 21st century it is most important to the Libraries and Information centres to provide the right information to the right user/ reader/ person at the right time and at the right place while the needs and the requirements of the users are increasing and keep changing, which is a enormous challenge in front of the professionals specially related to library and information science.

2. The gamut of literacy

Alphabetic literacy	– i.e. writing name
Functional literacy	– i.e. reading and writing
Social literacy	– i.e. communication in a cultural context
Information literacy	– i.e. critical location, evaluation and use of information
Digital information literacy	– i.e. application of information literacy in the digital environment.

3. Requirement of Information Literacy

The need of evaluation of the credibility of information is not a new thinking, but until recently most learners could expect to deal with some carefully selected collections of reference materials in academic and public libraries, as well as a fairly limited range of widely accepted authoritative texts in the classroom or in the personal library.

However, since anyone can make a web page and upload it over Internet, certainly question may arise about reliability of that information available on Internet. A critical analysis about using information over Internet is required that individuals posting information aren't required to pass through traditional editorial constraints or undergo any kind of fact checking required in conventional published print media.

Not only must we be discerning learners but, in addition, we must be constantly learning. As the pace of global change has increased, simultaneously we must be keeping ourselves up-to-date through continuous learning method. Consider the tremendous changes in both the amount and variety of information resources, as well as great changes in technology that affects our lives in everything from financial transactions to health care, from travelling to marketing. Change requires us to know more and learn more about the world around us. Nowadays world is called as global village and which is possible only due to the sophisticated facilities like Internet and www.

Information literacy is to improve on library skills and strategies to use information from various sources to solve different problems. It empowers people to benefit fully from today's information age and prepares them for lifetime learning. In today's knowledge-driven society, information literacy, in fact, is no longer an optional competence but it has become a surviving skill. This has necessitated the library and information professionals of the day to be 'Information Literates' in order to effectively stay relevant with the time and the situations at hand.

4. Implication in various field

4.1 Implication for faculty members

Becoming information literate is an active process, requiring the seeking out of knowledge from multiple sources rather than passively receiving and repeating back facts, the teacher's role must evolve from the knowledge provider into being more of a coach or guide (Eisenberg and Berkowitz, 1990). Faculty members, librarians, administrators, and the community must collaborate to develop ways to involve the students not only in using classroom materials but also in using resources from the broader community and the mass media.

This is high time for faculty members to prepare themselves to "teach students to become critical thinkers, intellectually curious observers, creators, and users of information" (Lenox, 1993). The goal is to prepare students early on to "learn how to learn" and carry these skills into other areas of their lives so that they can be independent seekers and consumers of information throughout their lives. Educators and researchers must grapple with defining the standards and competencies associated with information literacy; develop effective ways to engage learners and measure the outcome and impact of such learning.

4.2 Implication for Learning

Some of our learning occurs in formal settings where what we learn is prepared for us. But much learning also occurs in non formal settings, and informally as well. Information literacy is crucial in all three types of learning situations.

Becoming information literate will involve a drastic change from the way many students are accustomed for learning. First of all, it requires students to be more self-directed in their learning. This kind of independent, active learning prepares students for real-life problem solving (Bleakley and Carrigan, 1994). Information literate students will assume more responsibility for their own learning either individually or in work groups. As students become more competent with their use of information resource options, they become aware of their individual styles of learning and preferred ways of assimilating knowledge.

One successful method for developing information literacy skills is through resource-based learning, which involves having students assume more responsibility for locating various materials from which to learn. This approach develops lifelong learning skills because students are learning from the same sources which they will come to use in their daily lives such as books, newspapers, televisions, databases, government documents, subject matter experts, and so on. Moreover, resource-based learning provides an added advantage to choose materials that match their academic levels and preferred learning styles thus individualizing the learning process for the individual student.

4.3 Implication for educational institutions

In order to produce learners who are information literate, academic institutions will need to integrate information literacy skills across the curriculum in all subject areas. Educational institutions that wish to produce lifelong learners should be engaged in some fairly basic rethinking of how teaching faculty and information specialists such as librarians and media specialists can work together for the development of information literate society. For example, the principal/ director or the authority, as instructional leader, fosters resource-based learning by providing adequate planning and budget support. As instructional partners, the classroom teacher and librarians are actively involved in identifying the learning needs of the students, developing teaching units that facilitate activities which offer meaningful practice in using a variety of information resources, and guiding students for their progress from different points of view.

4.4 Implication for Librarians and Libraries

Librarians led the technique in the early 1970s in conceptualizing the idea of information literacy and its relationship to lifelong learning. Early development of the concept of information literacy frequently focused on the future role of libraries and librarians in helping with the use and application of information (Beherens, 1994).

The impact of moving from text-based learning to resource-based learning will involve maximum use of library materials and a demand for more and diverse media resources, including print and non-print. Consequently, administrators of educational institutions will need to re-evaluate how funds are distributed between the textbook budget and the budget for their library resources.

As information specialists/ librarians will be called upon more frequently to consult with teachers and learners, and to provide training and guidance towards sharpening of information literacy skills not only in academic libraries but in public and special libraries as well.

4.5 Implication in workplace

Many changes are occurring in the workplace today. Workforce is expected to keep up with rapid technological advancements, to streamline operations and to possess the ability to be proactive problem solvers. Information literacy skills, which carry over from educational to occupational settings, are the keys for helping employees keep up with change in their jobs and careers, and in self-improvement and upgrading of skills. Awareness of market trends, the business climate, and policies affecting business involves the active pursuit of information upon which decisions will be made; such information has to be considered for its up to datedness, unfairness, source, and accuracy.

4.6 Implication for society and culture

"How our country deals with the realities of the Information Age will have enormous impact on our democratic way of life and on our nation's ability to compete internationally" (ALA 1989). As a society, we are to stand in front of a huge number of decisions to make daily among candidates, issues, products, and some other relevant issues. A few thinkers imagine that commercialization of information, control of information resources and new information technology could widen the gap between the haves and the have-nots. This approaching discrepancy can be headed off if access to information technology is provided and if ability with the information taught early in life.

5. Reading habits: its scenario

Now we live in the age of information explosion. The ocean of information is available in the form of printed matters around us. The system of education is an evolutionary process in which a person learns to read, write, express their views and above all thinks analytically by synthesizing the numerous entities of life. This process of education starts with reading and writing. In the preliminary stage a child 'learns to read' and gradually he/ she 'read to learn'. Reading is one of the chief media of learning; it promotes the development of ideas and knowledge of the readers/ students.

Habit means a thing that one do often and almost without thinking especially that is very tough to stop doing. People around the world are involved in various kinds of habits. Enough e-resources and effort are being spent to turn aside the people from bad habits at the same time indulge the people towards good habits which may yield good result on the people and as a consequence on the society. Among the significance habits is reading habit, which every parent and teacher try to inculcate among the young and fresh ones.

If we compare the reading habit scenario of today with that of past, certainly there has been a tremendous decline in the reading habits among us. It is difficult to blame anyone for this downfall. But someone has

to take the responsibility for this downward tendency. Lifestyle of people which is being highly affected by technology is a major cause for the casualness of reading habits. Plenty of entertainment through easily and economically subscribed satellite channels which brings universe of entertainment at the touch of finger, music and television has trodden the reading habits to a vast extent.

Dr. APJ Abdul Kalam said "there is tremendous explosion of knowledge in all sphere of life so it is essential to learn such knowledge as will help to understand the surrounding society and this would be possible only if we know what kind of capacities we want to have in our youth".

Any random discussion on reading should revolve round three distinct but interrelated aspects– viz. why do we read; what do we read and how do we read. To begin with the 'why' part, the simple answer may be – some of us read for self introspection, some of us read to share our emotion and joy with others, some of us read simply to laugh a lot (!). Many of us read for reading's sake, a host of us read to keep ourselves 'informed', while only a handful of us read to know for the sake of knowledge only. Gone are the days when reading used to disseminate and nourish the seed of wisdom in the soul of the readers. The second aspect as to 'what do we read' – one can observe that while a many of us read greedily the pop magazines (on sports, fashion, film, finance, politics etc.), a host of us prefer fiction, crime story etc. while a few of us have a skill for poetry and/ or plays. Coming to the last but not the least important aspect as to 'how do we read' – one will note that while some of us read transversely, some of us simply surf a book; while some of us read a book partly. Only a handful of us read thoroughly and only a few of us read both deeply and intensively.

5.1 Various Issues and non-issues – an assessment

Most often than not we find people repining on the decay of reading. But the question is – is reading habits really declining? Before examining this regret or accusation, we must first of all be certain as to the reading of 'what' are we all talking about? Is it the reading of Classics? Pop literature? Course related documents etc. and presuming that the 'regret' centres on the general decline (!) of the reading of the general printed and published works; my defence to this lamentation will be a cautious 'no'.

Statistically speaking, reading is on the rise. If we consider the number of editions of a book, the number of circulation of newspapers, periodicals, journals – we can safely argue that reading has been on the rise. Not only in case of sales of volume of newspapers; journals and books are also proliferating in variegated subjects, ideologies, specialization, etc. And the rate of increase in readership has been quite consistent with the rise in the literacy rate.

Reading is an Art, a Hobby, a Passion, an Obsession. A pen will cease to move any longer if our eyes do not lend her sight to its creation. A poet wouldn't compose, a novelist wouldn't write, an essayist wouldn't communicate, a crime buster wouldn't investigate. Because after all their pens move for the readers, not for the electronic audience.

5.2 Analysis of the degeneration

Why do we not read? We don't read because we don't enjoy it. We don't because we can't afford either the time or the price to read a book/ document. We don't because we prefer enjoying in an evening club. We don't because we find more pleasure in listening to a flute recital by Chaurasia or a classical version by Pandit Yasraj or simply playing with a video game.

We do not enjoy reading because reading has been introduced to us (in our childhood) as a boring, unpleasant but an unfeelingly formal duty. We have deliberately smashed the very bucking up of our younger generation towards reading. In almost every Indian household, one will hear a child requesting his/ her mother in a lamenting voice, 'Don't ask me to read any more, mom – I am tired of reading'. Any wakeful

Indian must have noticed how does a primary school student's shuffle on his way back home from school carrying a weight of six/ seven kgs on his back along with a burden of home assignments/ projects etc.

Some time we do not read because we don't have the time to read. But, how far is this justification acceptable? The present author agrees with a very positive way. If we look at the daily routine of a clerical staff in a financial sectors specifically the banks, who leaves home at 8.30/ 9.00 a. m. and returns with tiredness at 7 o'clock in the evening (approx). Does he/ she retain any physical strength or mental desire for scanning just the newspaper, not to speak of getting deeply with a book?

We do not read because we can't afford buying a book. A reader would often say that he/ she can't buy a book because of escalation of its price. The publisher would reply that he cannot lower the price until and unless the number of sales increased and who will break this inhuman sphere.

We do not read because we find more pleasure in listening to music i.e. instrumental and vocal as well. We find more pleasure in watching TV. Such excuse appears to be quite justifiable. E.g. what is the harm in not knowing bio-diversity when I have been trying to master in Indian rages; what the meaning of spending several thousand rupees to buy the set of encyclopaedia when I can get live in the Discovery channel – could be the instant replies from a non reader.

It seems reasonable to acknowledge that in today's world of globalised culture, in today's world of democratized art of music, dance, paintings, etc. – we must bear with this declining of reading for the time being till we prepare our promising generation to be an enlightened community of devoted readers.

6. How to overcome the difficulty

It is most important that at **first** we must make reading a pleasant activity for our kids. Reading should not appear as a formal as well as monotonous business for them. To accomplish this task, we should not only make the syllabus delightful, but also bring in brilliant youngsters to teach them. This may be done by elevating the post of primary school teacher both officially and socially as well.

Secondly, Users/ readers should be making aware about the library facilities, services, availabilities of collection, techniques for searching information/ documents/ books from various sources i.e. printed or electronic. They must be acquainted with the recent developments of various information sources, tools and techniques; which is very sophisticated and also easier to get ones required information within a very limited span of time. So that information seekers/ users may develop their interest/ habit in reading/ searching their necessary documents.

Thirdly, books must be made affordable in price by subsidizing cost of paper for the good literary works; so that common people can take the advantage out of it.

Fourthly, we may persuade the non readers into reading by reminding them the very essence of our holy books which they are very blind of. The must know that the Holy book 'Gita' has advised the path of knowledge (Jnanyog) for human rescue; that the very meaning of 'Veda' is knowledge. They must know that the first message which Hajrat Mahammad learnt from the 'Koran' is 'Allamma bill kalomi' – i.e. 'Allah has granted knowledge through pen and pen speaks only through a book'.

Finally, the adequate infrastructure facility in the library/ information/ documentation center must be provided to the readers with pleasant approaches from the staff of the library; so that users may get attracted for reading/ study.

7. Conclusion

Information literacy helps to access, evaluate, organize and use information in order to learn, problem-solving, making decisions - in formal and informal learning contexts, at work, at home and in educational settings. A key feature of the all-time learner strongly connected with significant and contemplative

thinking. It ensures maximum utilization of the information resources as well as optimization of information handling capabilities. Many libraries and information systems introduce user orientation programmes to educate users on the salient features of information resources, search techniques, search strategies, scholarly communications and other aspects.

We must take all precautions to encourage not just reading, but a 'healthy' reading and should try to ensure freedom in reading. Reading must be allowed to follow one's natural tendency and we should not either suppress or replace it. We must help the young readers in developing a healthy choice of books, keeping their freedom at no cost. They must not mindlessly follow or unwisely reject the things. They must know that continuous awareness/ information literacy is the price of reading. The young readers must feel that reading without any interaction with other readers is no-reading.

The librarians/ information providers on their part can influence the potential readers for reading by asking the authority to subscribe even a few pop magazines for the library just to evoke the reading interest of the users; they can display the recommendation of the famous books on different subjects in the library notice board; they can organize periodic readers meet and reward the best reader with the cooperation of the authority.

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IMPLEMENTATION OF SECURITY SYSTEMS AMONG THE UNIVERSITY LIBRARIES OF ASSAM: A COMPARATIVE STUDY

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Abstract: *Proper security system can help to avoid loss and damage of library collection and assets along with staff and user security. If a security program is to be effective, there must be widespread understanding of the importance of security to the mission of the repository. The study aims to find out different security loopholes and the electronic security systems are being used in University libraries of Assam. After examining the implementations of Security Systems in University libraries of Assam the study unveils that University libraries have suffered adversely from security issues and other anti-social menace and that the installation of security devices would drastically improve the situation.*

Keywords: Library Security Systems, Electronic security systems, University Library-Assam

1. Introduction:

A Library consists of intellectual capital; it might be scholarly journals, books, reports, theses etc. For security purpose, the goal of the security system is to provide a safe and secure facility for library employees, library resources and equipment and library patrons. At the same time due to application of security system, the efficiency, productivity and user satisfaction increases. Academic libraries have been plagued with security issues for a long time. It is difficult to replace materials that are stolen from the libraries or mutilated as such materials may be out of print or the library may not have enough fund to purchase a replacement copy. The traditional ways of manually checking patrons' bags are both inefficient and not user-friendly. A better way to deal with security in academic libraries is to embrace the advance electronic security systems. That will better ensure an effective security of library materials from theft, mutilation, or other forms of crimes.

Regular security is essential for library reading material is constant need security because of damage of library material by environment, atmospheric hazards, natural threats, user and staff behaviour etc. It attempts to provide some remedies and suggestion to face security. Events and physical aspects of buildings

and equipment related to protection of the collections as well as patron and staff. Libraries are incurred huge amount on reading material therefore security is more important. Various library security technologies and systems are used in the libraries are RFID, CCTV, 3M Technology, Electronic Recording, Smart Card, Glass Break Sensor, Fire/Smoke Sensor, Moisture Sensor, Biometrics, Air Conditioner for humidity control etc . Security prevention is best policy for avoidance of crime.

1.1 Definitions:

Security:

Simply security means freedom from danger, protection from unauthorized access, loss avoidance, damage prevention, reduction of long-term threat created by improper environmental conditions. Security means "the state of being or feeling safe; freedom from fear, danger, anxiety, doubt, etc; state or sense of safety, tranquillity, certainty, etc; protection; protection or defence against attack, interference, espionage, etc. b. protection or defense against escape c. procedures to provide such protection or defence." Agnes, Michael. Webster Dictionary. (2007)

Security System:

An electronic alarm system installed at the entrance and exit of a library facility to detect the unauthorized removal of library materials (theft). Most security systems use a swing-arm or pair of uprights called a security gate activated by a magnetic strip affixed to each item, which must be desensitized by circulation staff at the time the item is checked out to avoid triggering the alarm. Some security systems include a counting device for gathering statistics on traffic patterns. Reitz, Joan M. (2005)

Library has various security systems from its establishments. It is differentiated in traditional and modern systems. Modern systems were made by technological support. Traditional systems are totally based on human. This includes security systems such as electronic anti-theft devices, visual cameras, smoke detection and alarm system at entrances, exits and stack areas in the library. This system can help prevent unauthorized removal of collections and feasible monitoring and detection of user in general reading and reference rooms, as well as shelves areas.

We have the following security systems both traditional and manual that are applied in library and information centres.

Traditional – Manual security systems
- Locks & Key system;
- Installing grills on windows;
- Single door entry-exit for staff & User;
- Security guards employed to patrol;
- Observation by library staff;
- Fire extinguisher & security equipments;
- ID cards and access authorization;
- Physical checking for user;
- Entry registrar for user;
- Security Clearance procedure.

Advanced- Electronic Security Systems:
- CCTV cameras;
- Electronic recording;

q RFID system;

q 3M exit detection;

q Alarm systems installed;

q Moisture sensor;

q Glass break sensor;

q Fire /smoke sensor;

q Biometrics;

q Smart Card;

Any item that has not been checked-out either by staff or self check-out will be detected by security gates with theft detection system. Provision of self-service station is for checking out books separately by the borrower without any interference of library staff. The theft detection system of the smart tags for that book is deactivated to enable smooth passage from the security gate.

A security system is made up by different components; a security system comprises of physical security, security measures and the human element. When all security measures become operational and integrated with each other, work in conjunction or with each other, a security system is generate; which incorporates a number of security principles.

2. Objectives of the Study:

i.	To identify the different types of security systems in libraries and information centres.

ii. To find out the different types of security systems implemented by University libraries of Assam.

3. Scope and Limitations of the Study:

This study reveals only the security systems of University libraries of Assam. It covers the various issues and challenges regarding security systems and it is undertaken some selected University libraries of Assam only. The primary purpose of this study is to determine the approach, opinions and awareness of librarians regarding security systems; any other aspect of library will not be included in the study.

4. Methodology:

To get an overview of the various security systems both manual and electronic, a review of literature is conducted. Besides that, visit to some selected modern libraries like IIT Delhi, IGNCA, NISCAIR, New Delhi etc. is done to get a practical exposure of the different modern security systems applied in those libraries. To collect data regarding different aspects of security systems personal interview, telephonic conversation and questionnaire method is applied. Collected data are analysed and presented in tabular form to find out the interpretation.

5. Literature Review:

The study has been made an attempt to present a brief review of literature which are taken from books, article publications in journals etc., which are given below:

Kulkami, Shobha and Powdwal, Sushama (2007) state that libraries are the important institutions for human development and progress. The advancement in knowledge and technology is a vital issue for increasing the patron demands and resources in the libraries. To safeguard these resources for posterity, libraries adopt various security measures. This study analyzes the various scopes of existing security measures and those which may be adopted in libraries.

Kumbargoudar, Praveenkumar and Kumbargoudar, Mamta (2008) have analyzed the need for different kinds of information security in the libraries. Further, the different security systems and technological

trends such as RFID Systems, Electromagnetic Security Systems and Smart Card Security Systems are studied with reference to information security in the libraries.

Discussion was made by **Uma., et al (2010)** on the loss of books and other reading materials due to theft. It mentions different security measures adopted in University Libraries and the need for Electronic Security System in University Libraries. Finally, the focus was on the importance of the Electronic Security System in University Libraries, citing the electronic security system installed in Indira Gandhi Memorial Library, University of Hyderabad.

6. Security Systems among the University Libraries of Assam: A Comparative Study

Today high technological environment implement and suggested RFID, 3M technology for security of library collection in various surveys. Inside and outside the library building vulnerable activities are protected by using CCTV alarms. Biometrics system is used for controlling of access to user. Automatic book drop system is used for easy circulation. Policies implementation, rules and regulations are strictly followed by institutions for reducing threats. Check lists and security standards available for security management. Skillful personnel's own or outsourcing are available in local level for repair and maintenance equipments, damage collection etc, it can be utilized by libraries to maintain security.

Electronic Security technology is a boon to the librarian as well as its users. The RFID, CCTV, and Biometrics technologies make the job of librarian easier, help in fast tracking of documents and save the time of the users. It has provided rapid check out / check-in, increases the circulation, minimizes the time of the users as well as library staff, minimizes the expenditure incurred on counter and inventory staff, high reliability, high speed inventorying, automated material handling.

This study is aiming to find out the current status of security systems adopting by the University libraries of Assam. The list of the Universities under the study are given below–

Table 1: List of Universities under the Study

Sl No	Name of the University	Name of the Library	Year of Est.	Name of the Librarian	Nature of the University
1	Gauhati University, Guwahati (GU)	Krishna Kanta Handiqui Library	1948	Dr. W S Debnath	Autonomous
2	Dibrugarh University, Dibrugarh	Lakshminath Bezbaroa Granthagar	1965	Dr. Utpal Das (Deputy Librarian)	Autonomous
3	Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati	Central Library, KKHSOU	2006	Dr. Gautam Kumar Sarma (Assistant Librarian)	State
4	Assam University, Silchar (AU)	Rabindra Library	1994	Dr. A K Sharma	Central
5	Tezpur University, Tezpur (TU)	Central Library	1994	Dr. Mukesh Saikia	Central

These are the 5 (five) University Libraries selected (Table-1) for the study. These Universities have adopting various security measures for saving their library resources from theft.

Table 2: Total Collections of the Surveyed Libraries

Sl. No.	Name of the University	Textbooks	Reference Books	Journals	Magazines	Project/Thesis	E-Books	E Journals	CD/DVD	Database
1	GU	2,58,369	11,000+	323+ (with magazines)	—	4,500+	3,13,500+	15,000+	—	—
2	DU	2,10,277	11,834	143	08	4,579	370	8,500	723	11
3	KKHSOU	17,970 (including Reference books)	—	20	15	10	—	3,000	—	—
4	AU	1,28,415 (including Reference books)	—	—	—	—	—	10,000+	200	—
5	TU	77,286 (including Reference books)	—	180	10	489	500	11958	2367	46

Table 3: Software used by the Surveyed Libraries

Sl No.	Name of the University	Name of the Library Software
1	GU	SOUL 2.0
2	DU	SOUL 2.0
3	KKHSOU	SOUL 2.0
4	AU	KOHA
5	TU	LIBSYS

6.1 Study of Security Systems used in Surveyed University Libraries of Assam:

6.1.1 Traditional – Manual Security Systems:

Traditional or manual security systems are security guards, patrolling of the library staff, well building, security lighting, ID cards, physical checking, door checkers, access control etc. The data is presented in Table No.4

Table 4: Traditional – Manual Security Systems used by the Surveyed Libraries

Sl. No	Name of the University	Locks & Key system	Security guards employed to patrol	Single door entry-exit	Observation by library staff	Fire extinguisher & security equipments	ID cards and access authorization	Installing Grills on windows	Signature of every user
1	GU	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	DU	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	KKHSOU	Yes	No	Yes	Yes	Yes	No	Yes	No
4	AU	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	TU	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The Table-4 represents the responses received from respondents on various security systems used in their libraries to maintain security measures. The table indicates that all the Four (80%) surveyed libraries have used all the Traditional – Manual Security Systems such as Locks & Key system, Single door entry-exit, Observation by library staff, Fire extinguisher & security equipments, ID cards and access authorization etc. for their security purpose. Whereas, only one Library (20%) i.e., KKHSOU Central Library has not been practicing yet all the traditional security systems such as Security Guards Employed to Patrol, ID cards and access authorization and Signature of every user.

6.1.2 Advanced Electronic Security Systems:

All the manual or traditional security systems and subsystems are used today in conjunction with electronic systems. Electronic systems are worked automatically step by step as per programmed. The electronic security systems are radio frequency or electromagnetism, CCTV's, alarm technology etc. After all, any security system is as good as the person use it properly and reduces threats. The data is analyzed regarding to electronic security systems and presented in Table No. 5.

Table 5: Advanced Electronic Security Systems implemented by the Surveyed Libraries

Sl. No.	Name of the University	CCTV	RFID	3M exit detection	Alarm systems installed	Glass break sensor	Fire smoke sensor	Biometrics	Smart Card	Air conditioner for Humidity control
1	GU	Yes	No	No	No	No	No	No	No	No
2	DU	Yes	No	No	Yes	No	No	No	No	No
3	KKHSOU	Yes	Yes	No	No	No	Yes	No	Yes	Yes
4	AU	Yes	No	No	No	No	No	No	No	No
5	TU	Yes	No	No	No	No	No	No	No	Yes

The Table 5 represents the implementation of modern electronic security systems like CCTV camera, alarm gates and theft detection system, RFID etc. based on the responses received from the respondents. Out of the 5 University Libraries, all (100%) have used CCTV Camera for any kind of theft detection.

7. Findings:

The major findings of the study are as follows-

i. While a majority of University libraries have applied traditional routine general security systems, these systems can be changed in today's high technological environment as because of increasing rate of collections as well as user's need.

ii. The University libraries of this study have not much used the Advanced Electronic Security Systems for security purpose. All the Five (100%) University Libraries have been using CCTV camera for their security measures. Only one (20%) library i.e. KKHSOU Central Library has used the RFID Technology, Fire/Smoke Sensor and Smart Card technology . Only LNB Library, DU (20%) has installed alarm system for any kind of theft detection in their library. Two Libraries i.e., KKHSOU Central Library and TU Central Library (40%) have used Air conditioner for Humidity control for preservation of library documents. Regarding other Advanced Electronic Security Systems like 3M Exit Detection, Glass Break Sensor and Biometrics have not been implemented yet in any of the surveyed libraries.

iii. The libraries under the study have implemented mainly the traditional-manual security systems instead of Advanced Electronic Security Systems. The major reasons behind for non- implementation of these, are the lack of adequate budget provisions and lack of proper infrastructure facilities of the surveyed libraries except LNB Library, DU.

8. Conclusion:

Security is most important side of the libraries and information centres to prevent from damage of knowledge resource and the spent amount on it for users benefit. It is the responsibility of every Librarian to implement best security systems and measures. If a security program is to be effective, there must be widespread understanding of the importance of security to the mission of the repository. Proper security system should be implemented to avoid loss and damage of library collection and asset along with staff and user security. By implementing advance Security Systems in the library, it be can be helpful to reduce damage of reading materials, reduce tearing of inside pages, maintains discipline inside the reading room, reduces stolen/theft of reading materials.

Security is an important aspect to modern Library. Security systems in a library is a must and always advantageous. With the use of ICT, library is in an advantageous position at present day than previous. Though it seems initially, fund investment is a major factor, but in long term application of ICT in security systems is always beneficial and profitable. New technology based security systems are developed for protecting the collections and assisting different activities to the libraries. These systems are easy to inventories, stock verifications, and secure for the collections and to control user access.

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INFORMATION NEEDS AND INFORMATION SEEKING BEHAVIOUR OF WOMEN FACULTY IN COLLEGES: A CASE STUDY IN MANIPUR

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Abstract

Women play multiple roles as a daughter, wife, mother, leader, teacher etc. Their role in higher education is also very much necessity in building up a strong nation. As a role in teaching professional they need latest and up-to-date information to generate knowledge to the students through their teaching. Many journals and e-resources are available at enormous but majority of them neglected such facilities as they lack computer and ICT skills. Educating the women faculty about searching the accurate information and fulfilling their needs is possible only when the institutions are applied with information literacy program. Library being information hub needs to develop with well-equipped infrastructures so as to fulfill their needs. The present paper aims to highlight the information needs and seeking behavior of the college women faculty in Manipur for promoting value based education to the students in higher studies. Questionnaire tool was used to collect data from the respective colleges of Manipur to understand their information needs and seeking behavior and hence suggest application of IT to all colleges for better utilization of information in a more comfortable way.

Keywords: Information Needs, Value Education, Higher Studies, Library.

INTRODUCTION

Information plays a pivotal role in the development of social, economic and academic purposes. The 21st century is considered as the information and knowledge society where information is the life blood of every individual and people demand more and more accurate information so as to keep abreast themselves and it arise the concept of information needs and the information seeking behavior of them. In higher learning institutions like colleges, there also require to study the information needs and information seeking behavior of Women faculty as they should not be neglected in teaching-learning process. Development of only male faculty will not make the education system complete and therefore women faculty must also be uplifted parallel as that of the male faculty. Thus, it is the right time to study the current scenario which the women faculty faced in seeking their needy information in their teaching-learning process especially in the remotest region of Manipur, which is little bit far from the mainland India.

INFORMATION NEEDS

The concept of information needs was coined by Robert S. Taylor an American information journalist to describe how an inquirer obtains an answer from an information system, by performing the process consciously or unconsciously.

In every field of human activities information cannot be neglected as it plays major component for everything. In short information is there for use and it can be converted into whatever purposes mankind required.

The information needs is a situation where there exists an inseparable inter connection with the word "information" and "need". These are related to problems and an important issue is how problems are understood, delimited and formulated. Higher studies academicians like University teachers usually advice their students about the formulating of research problems to be treated in theses. Such process of problem formulating is intimately related to information needs. LIS professionals must learn more about information needs by considering problem relating concept in relation to writing and research studies.

The concept of information needs focus on the explanation of observed information use or expressed need; prediction of instances of information use; and control and improvement of the utilization of information through essential condition manipulations, etc. Basically there are two necessary conditions of information needs-a) presence of information purpose; and b) information required to achieve the purpose.

INFORMATION SEEKING BEHAVIOUR

As per Marchionini (1989), "Information-seeking is a special case of problem solving. It includes recognizing and interpreting the information problem, establishing a plan of search, conducting the search, evaluating the results, and if necessary, iterating through the process again"'. And accordind to Thanuskodi (2012) Information seeking behaviour is a broad term, which involves a set of actions that an individual takes to express information needs, seek information, evaluate and select information, and finally use this information to satisfy his/her information needs.

STATUS OF WOMEN FACULTY AT COLLEGE LEVEL

Higher Education is the most important platform for the students. It is said to be the backbone of the society. Faculties play an important role in shaping the future generation of today. In case of higher education (College) in Manipur the number of women faculty is more as compared to male faculty. Most of the women faculty are not computer literate and therefore lack ICT skills. Majority of them mostly depend on printed hard material available in their institutions. Modern society generates huge amount of journals and e-resources which in turn can be search through internet. But majority of the women faculty are too shy and neglect the e-resources even though it is available in their institution libraries as they are digital divide. As many of them engaged in household work and hence they have very limited time and can't spend enough time to learn the above so said computer and ICT skills even though they are willing to do so. The college authority should take certain remedial measures for the welfare of the women faculty otherwise they will be deprived of getting their required information which will lead to the decline in the quality education.

Objectives

-To know the information needs and seeking behavior of women faculty in colleges for teaching learning purposes.

-To assess the ICT skills of women faculty.

-To know the existing resources and services provided at the college libraries in Manipur.

-To understand the problem faced by them in accessing their needed information.

Methodology

A semi structured questionnaire was used as a tool to collect data from women faculty. Around 70 questionnaires were distributed to the respective college women faculty and surveyed them. Out of which 50 questionnaires were responded.

Analysis of Data

1. Purpose of information needs by faculties

Table No.1   N=50

Sl.No	Information needs purpose	Response	Percentage
1.	Class Notes/ Lecture	35	70%
2.	Ph.D Matter	20	40%
3.	Project	10	20%
4.	Others	5	10%

It is observed from the table no.1 that 70% of the total respondents requires information needs for giving class notes/lectures followed by Ph.D related matter by 40% and others by 10% respectively.

2. Place for getting information needs

As table No. 2 below shows that 80% of the respondents choose library as a place for getting their needy information followed by Personal Collection (60%), Cyber Café (50%) and others (20%) and so on.

Table No.2   N=50

Sl.No	Place of getting Information	Response	Percentage
1.	Library	40	80%
2.	Cyber Cafe	25	50%
3.	Personal collection	30	60%
4.	Others	10	20%

3.   Visit of Library

Table No.3: Library Visit   N=50

Sl.No.	Library Visit	Response	Percentage
1.	Twice a week	30	60%
2.	Once a week	12	24%
3.	Sometimes	8	16%

It reveals from table no.3 that 60% of the women faculty response their visit to library twice a week followed by once a week by 24% and the least 16% by those visiting sometimes.
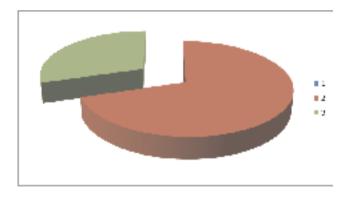
4.   **ICT Knowledge and E-resources**

Sl.No	ICT Knowledge	Response	Percentage
1.	Computer	18	36%
2.	Internet		
3.	E-resources	15	30%

36% of the respondents have knowledge on the use of computer followed by e-resources and internet by 30% and 24% which is very poor in using ICT and other e-resources in this technology age.

5. Need of User Awareness Program

From the pie-chart shown below, it is found that majority of respondents i.e. 70% (35) requires User Awareness Program from time to time to gain and update their knowledge in getting pin-pointed information needs while the rest 30% (15) respondents have little bit knowledge on it.

Findings

-Most of women faculty are computer illiterate and hence lack ICT skills.

-They need various kinds of information of their related discipline mostly in printed hard copy documents rather than soft or electronic copy.

-Majority of then prefer library for getting information needs and thus library plays a vital role for them in getting their requirements.

-Very little of have Known the families of N-list and other e-resources available in their institution libraries.

-They do not have much knowledge on library consortia or co-operation through which they can get various resources.

Recommendations:

-As the time of information explosion hard copy documents in the library/institution cannot satisfy their needs. They need to be computer literate as all the resources are made available in digital form/soft copy form.

-Those computer literate faculty were not much aware on the use of e-resources available in their library. Because of this they were not in a position to use the N-LIST e-resources provided in their libraries. As such the women faculty should be given instructional skills in the use of digital resources.

-There need user awareness program from time to time to cope up the changing information seeking pattern in getting their information needs.

-Training programs should be organized by the authority as well as the library professionals in bridging the digital divide of most of the women faculty.

-Library being an information center should be well equipped with infrastructures to help the women faculty for better utilization and effectiveness of the library resources.

CONCLUSION

Information is available at enormous and can be consumed by different user community. Among the user community faculties need more precise and authentic information within least time and effort for generating knowledge to the students. From the pilot study done it is found that majority of women faculty faced the problems in getting their needed information due to lack of ICT skills. Many of them are still lagging behind on handing the computers. They prefer on printed materials and depend on their respective institutions library as their access point of information. There need to be given training, workshops, seminars on the use of ICT gadgets for better utilization and access to information meant for their academic purpose. The library professionals should also update their library from time to time, also adopt IT application and functional at full swing for efficient use and enhanced to access e-resources for their academic pursuit.

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ICT IN LIBRARIES: A THEORETICAL ANALYSIS

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Abstract

In this digital age, library is found to adopt new technologies to manage the demands of the users. Library service is now largely depends upon the ICT. It becomes a challenging task for modern librarian. ICT cover any product that will store, retrieve, manipulate, and transmit to receive information electronically. ICT has bought unprecedented changes and transformation to academic library and information services. The concept has bought a phenomenal change in the information collection, preservation and dissemination scene of the world. Library management software, OPAC, Networking, Electronic document delivery, on line user education or tutors, E-reference service, resource sharing E-libraries, E-mail, library web sites, online searching these all are possible only by using ICT in libraries. ICT makes library work easier, faster, cheaper and more effective. This paper explore the impact and need of ICT in libraries. It attempts to explore the benefits of ICT and changing role of librarian. This paper reflects the challenges face by the libraries in implementing ICT.

Keywords: OPAC, Information technology, digital library, E-resource, academic library.

Introduction:

Information Communication Technology is often used as an extended synonym for information technology (IT). But it is a more specific term that stresses the role of unified communication as the integration of telecommunication, computes as well as necessary software middleware, storage and audio-visual system which enable users to access, store, transmit and manipulate information. In the current information society, people have access knowledge via ICT to keep pace with the latest developments. ICT can be considered as a sub-field to Educational Technology. IT is one of the wonderful gifts of modern science and Technology which has brought tremendous changes in library and Information science. Using ICT has led the library environment towards a digital evolution. A good way to think about ICT is to consider all the uses of digital technology that already exist to help individuals businesses and organizations to use information. ICT has opened up a new chapter in library communication and facilitated global access to information crossing to geographical limitation.

Objective of the Study:

This carried out to determine the following objectives-

1. To explore impact of ICT in libraries.

2. To trace the advancement of ICT in Libraries.

3. To discuss the changing concept of libraries

4. To trace changing roles of LIS performance.

Methodology:

This paper mainly based on Secondary sources which includes books, journals, documents, Seminar paper etc. Relevant information are also collected and consulted through Internet browsing.

ICT Concept and meaning:

Information and Communication Technology (ICT) is a force that has changed many aspect of way we live. ICT is an extended form for Information Technology. ICT incorporates a range of technologies used to support communication and information. The phrase Information Communication technology has been used by academic researcher since the 1980. The abbreviation ICT became popular after it was used in a support to the UK Government by Dennis Stevenson in 1997.

ICT is generally accepted to mean all devices, networking components, applications and systems that combined allow people and organizations to interact in the digital world. So, we can define it is the use and application of computers telecommunications and microelectronics in the acquisition, storage, retrieval, transfer and dissemination of information.

Why ICT ?

ICTs in education and contemporary trends suggest that we will soon see large scale changes in the way education is planned and delivered as a consequence of the opportunities and affordances of ICT. This era about the right time and to know when, where and how to search. Information has become the key to productivity and there is a shift towards a knowledge based learning oriented creative society. In this type of society following changes are noticed.

- Social values changing from "acquiring" to bearing.
- Growing motivation of individuals for knowledge.
- More people learning to use information creatively.
- More demands for multimedia information.
- More demands for global information.

In changing time concept of modern librarianship has entirely been changed. The intellectual function of libraries- to acquire, arrange and make accessible the creative work of humankind–is being transformed by explosion in the production and dissemination of information in digital form, especially over global networks.

Impact of ICT in Libraries:

The impacts of new technologies are felt by libraries in every aspect. Computing technology, communication technology and mass storage technology are some of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to uses. The concept of library and library professional has changed. An example has stated below for understanding of the changes.

Concept	Library Science	Information Science

1.	Unit	Library Canter	Information canter
2.	Medium	Book	Data base
3.	User	Reader	Recipient
4.	Staff	Librarian	Information officer
5.	Service	On demand	As & when needed
6.	Tool	Catalogue	Controlled vocabulary

ICT has impacted on every sphere of academic library activity especially in the form of the library collection development strategies, library building and consortia. ICT presents on opportunity to provide value added information services and access to a wide variety of digital based information services.

Need and Role of ICT in Libraries:

Today, the use of ICT in libraries has become inevitable in order to satisfy the information needs of users. The advantages of using computers and other telecommunication media/device in managing libraries manifold. Some of the advantages are-

i.   Speedy processing of information and its retrival.

ii. Save space and store large qualities of non-conventional information.

iii. Participating in networking programming and resource sharing.

iv. Capacity to handle large amount of data.

v.   Computers can perform functions very accurately.

vi. Handle large amount of data and information.

vii. Computers and all related technologies have long life maintained properly.

viii. A computer can be used repetitively to process information.

Benefits of ICT based Library system:

Since the 1950s use of ICT in libraries has basically gone through four stages-

a.   Improving the efficiency of internal operations.

b.   Improving access to local library resources.

c.   Providing access to resource outside the library.

d.   Interoperability of information system.

ICT is used in various fields of library activities. Such as-

i. Acquisition

ii. Serial management

iii. Cataloguing

iv. Circulation

v. Audio-visual management

vi. Information storage

vii. Reference/ Information services

ICT -Based user services:

Now a day's numbers of users are adopting electronic habits. Use of ICT in libraries enhance users satisfaction. It provides numerous benefits to users, such as-

· Provide speedy and easy access to information.

· Provide remote access to users.

· Provide 24 hours access to users.

· Provides flexibility.

· Facilitates the reformatting and combining of data from different sources.

· Provide access to unlimited information from different sources.

Changing role of libraries:

LIS professionals are supposed to play versatile role in different areas of libraries and information centers to meet the expectations and needs of the present situation. LIS professionals act as lawyer when they deal with the issue relating to law such as copyright law, intellectual property right etc. Librarians much communicate the mission, goals and objectives of the resource centre to the entire user community. The LIS professional for consortium operations is responsible for coordinating and overseeing consortium operation.

In the electronic environment of the 21st century will demand various skills from library and information services (LIS) professionals. In modern ICT based library services the information professionals handle various types of activities in relation to the use of computers and other new information technologies. This IT era demands following skills from LIS professionals-

i. Technical skills.

ii. Information technology (IT) skills.

iii. Management skills (Sridhar, 2004).

As per National knowledge Commission, India skills required fulfilling the changing role of libraries are-

a. Library and information handling skills.

b. Service orientation.

c. ICT knowledge skills.

d. Communication and training skills.

e. Marketing and presentation skill.

f. Understanding of cultural diversity.

g. Knowledge mapping skills.

Various Challenges:

The use of ICT in libraries is facing no. of challenges. These may include

1. Insufficient funds.

2. Erratic power supply.

3. Copyright and intellectual property right management.

4. Insufficient bandwidth.

5. Lack of proper guidelines and planning for using ICT in library activities.

6. Lack of technical IT knowledge by library staff.

7. Constant change of software and hardware.

Suggestions:

From the above discussion we can say that ICT is impacting on various aspects of libraries and the information professionals. Now information professional should acquired technological system thinking, commitment to continuous improvement of skills, techniques and strategies and sensitivity to network environment. Following suggestions appear to be appropriate to cop up information communication technology in libraries and overcome the challenges-

a. ICT infrastructure is greatly depends on trained manpower. Now skills and knowledge required for information professionals.

b. The library authority without any delay should accept the adoption of ICT in their libraries.

c. Special fund provision should be made for IT.

d. The librarian should always try to keep himself abreast of new technological development.

e. Proper power supply should be provided to the library for smooth running.

f. Non professional library staff should also be provided proper training for new skill and knowledge.

Conclusion:

Information and Communication Technology (ICT) has changed library service globally. ICT has also contributed immensely to the performance of libraries in the discharge of their duties. It can be said that the library and information professional communities are being affected by a range of ICT developments. ICT has affected almost every sector of our life, bringing a change in the case of peoples think interaction, etc. Technology alone cannot help bring about the required changes. Attitudes, practices and policies need to change in library. Well equipped library with the facilities of modern information infrastructure and technologies can fulfill the demand of the present technology conscious users of librarian with diverse talents and training and who flexible will be able to meet the challenges.

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INFORMATION SEEKING BEHAVIOR OF COLLEGE STUDENTS IN MANIPUR: AN OBSERVATION

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Abstract

Information has become a very essential commodity for each and every individual. The thirst of authentic information is the need of the hour in this information society .There is a need for definite pattern to search pin-pointed information which arises the concept of Information Seeking Behaviour. Education being the backbone of the society needs to strengthen in which specific trustworthy information is required. At college level learning, Information Seeking Behaviuor of students can be studied critically so that they policy and planning can be made to provide them effective information in time. College library should be well-developed for providing their specific information for all sections of the users. The present paper highlights the observation about the behaviors of the college students that how they accessto different sources to get their required informations particulary from the library. Observation method has been employed to study the situation in 5 selected colleges of Manipur.

*Key-words***:** Information Seeking Behavior, College Students Library, Manipur.

1. Introduction

Information seeking behavior is an act of searching information by an individual that is undertaken to identify a message that satisfies a perceived need. It is best suited in the user study method. To develop the way of gathering information, user should improve skill regarding the way how to navigate their relevant information by seeking using various methods.In this study, it is observation has been done about the behaviors of the college students on how they access to different information sources particurlarly from the library. Information seeking behavior is the method in which the user adopt when they seek their information. The study discusses about how the College students of Manipur who seek for their information and their behavior as well.

2. Past Studies

A good number of studies are found to be conducted by many scholars on various areas of Information Seeking Behaviour. Tenopir (2008) has tracked the information-seeking and reading patterns of science, technology, medical and social science faculty members from 1977. It seeks to examine how faculty members locate, obtain, read, and use scholarly articles and how this has changed with the widespread availability of electronic journals and journal alternatives. The study revealed that several patterns of information seeking and reading have changed, most likely due to the availability of electronic journals and the increase in the number of articles published. Vilar and Zumer (2011) studies on information behaviour of young Slovenian researchers which expressed many features of digital scholars, and also some of those of today's users of digital technology, deliberately do not use the term "Net Generation", study shown the literature that "Digital Behaviour" is not a generational issue. It noted that circumstances were not ideal for studying information behavior. Currie, Devlin, Emde and Graves (2009) determined undergraduate students' information-seeking behavior and their thought processes involved in, criteria applied to, and methods of, evaluating the results of their searches, in determining which information to apply to their research. Mizrachi (2010) in a study described five issues of undergraduates' academic information and library behaviors: where students begin their research; how they evaluate online sources; what library resources they use; what formats they prefer for reading academic material; and specific laptop behaviors. Student perspectives on these issues and their impact on libraries and information literacy outreach and instruction are discussed. Timmers and Glas (2009) described the development of an instrument designed to measure information-seeking behaviour of undergraduate students during study assignments. The study was to develop a valid and reliable measurement instrument for information-seeking behaviour.

3. Objectives of the Study

The main objectives of the study are:

- To survey the colleges of Manipur affiliated to Manipur University and their students;

- To know their purposes of using information resources;

- To observe their behavior of seeking information for different purposes;

- To understand the problems they encountered; and

- To draw suggestion for all round development of the library system to suit with the behavior of students.

4. Scope and Methodology

There are 84 colleges affiliated to Manipur University. Out of this, 34 are Government College, 16 are Government- PrivateAided Colleges, each 4 are permanently afiliated Private Colleges and temporarily affiliated Government College and remaining 18 permitted Private Colleges. In this study, Data are collected through Observation; Interview method also conducts if required. Random Observation is conducted to the College located in the areas of Imphal East and Imphal West of Manipur. The study have selected the followings Five College namely

- *DM College of Science, Imphal West*

- *Modern College, Porompat, Imphal East*

- *GP Women's College, Imphal West*

- *Manipur College, Singjamei, Imphal West*

- *MB College, Imphal, Imphal East*

In the study, field visit was performed to those colleges especially the libraries during 04 May, 2017-06 June, 2017.The survey helped to understand the behaviors of the college students.

5. Major Findings and Discussions

In this study, mainly focus has been given on 10 parameters based on Information Seeking Behaviour of the college Students. These parameters are being discussed as under:

5.1. Students and their Category:

· PG students-Post graduate Students are available in two colleges 1). DM College of Science and 2). GP Women's College and observed that their information seeking behaviour is different from the Undergarduate students in respect of visit to library particularly .

· UG students- In these colleges, maximum number of students as observed are UG students.

5.2.   From where they collect Information: Most of the students are observed to collect Information from textbook, class note, teaching- learning methods, etc. They also consult resources of the library but not found to be very frequent.

5.3.   Purpose of Seeking Information: Majority of the students seek for Information related to their assignment, project report and to fulfill their extra knowledge, preparation of examination etc. PG students are found to be involved in more time while seeking the information than what the UG students do.

5.4.   Dependency on Printed Sources and e- resources: In the study, most of the students depend on printed sources as they have lack of awareness on how to access e-resources available in the library,so they prefer to printed sources, the lack of such resources in the college libraries is a major issue in this case.

5.5.   Use of modern technology : Most of the students use mobile phones for accessing information and they invest their time in the latest technology. Social media is the most effective way to gather the information but the relevency of the contents need to be examined.

5.6.   Use of College Library: The use of the library by the students is observed to be very low, when contacted some of them, the different reasons for the same include:

-insufficient number of staff;

-relavant information not found in the library;

-less degree of satisfaction of the library services, etc.

5.7.   Frequency of Seeking Information: During the examination time students has more frequency to visit library for their purpose like preparation of report, assignment etc. Professional staff help to the students on how to search information in their own way.

5.8.   Feeling towards library resources: Most of the College students think that the available library resources are not sufficient as per their needs. They are not aware of library resources, so library professional staff tries to become a library dependable to their students.

5.9.   Problems they encountered: Various problems are encountered by different levels of students when they need their information as they do no know from where the information would be able to get. They use different means of seeking information according to their needs without knowing the exact source.

5.10.Towards improving library system: As observed the students irrespective of their levels strongly felt that:

a) Well trained library staff are required to be reqruited in the library;

b) Evaluation of library services as per needs of the students;

c) Provision of training, awareness programme etch must be made available;

d) Concerned authorities should take a main role to improve the library system;

e) Library should enhanc its accessibility to resources;

f) To make them know how to use library resources; etc.

6. Conclusion

Knowledge based information service is greatly influenced in the modern society. Users also search or enquireabout their information through ICT techniques. The user behavior of information seeking is greatly changes in the recent trends of the library service. Libraries are using many new technologies for enhancing their services to the user. Information seeking purpose of the college students need to be fulfilled according to their needs. The present study has identified the information seeking behaviour of the college students in the Manipur through observation but detailed investigation is essential in future course of action.

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KNOWLEDGE REPOSITOERIES IN THE SATRAS OF MAJULI : AS OVERVIEW

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''The Satras of Majuli are depositories of a large number of valuable religious and cultural Documents and articles of great histroical values ''   *-E.F. Muller*

Abstract

Satras are mainly vaishnavite monestries.thought there were sixty five Satras in Majuli . The Majority of Them were Compelled to leave the island by flood and erosion .Now including the small and big there are thirty two(32) satras in Majuli. It is the institution which is to motivated theminght of people thought the ritul performances to realise the existence of supreme power , various performances featuring ankia bhaona dances, nam prasanga , gayan bayan prayers religious festivals like ras yatra, palnam are regularly held.

Satra established by the sankardeva and his followers are known as mahapursia satra.Satra have now become the and nucleous of vishnava religion and culsure. It is the worth mentioning that Sankardeva and his main followers in assam were contemporary to the famous religious reformas of india like guru nanak,kabir, chaitanyadav,tulsi das of the 14th and 15 th Centuary.

Introduction

The Satra institutions is a product of the Bhakti - Movement initiated by Mahapurusa Srimanta Sankardev in the fifties Century A.D. it resembles to a certain extent, the vaisnavite math, and akharas of other parts of Bharat. Eaet Satra consists of three eategories of presons for the welfare and management, as the Satradhikar, Bhakats and Sisyas. The first two are generally reside within the four wall of the Satra Campus and Sisyas live in Villages leading a life of thouseholder. The head of a Satra is knows as the Satradhikar who is the religious head and Sprritual guide. The Bhakats lead as intensive devotional life, unmarried for the whole lives within the satra campus.

The Term Satra is a Sanskrit word where it is used in two senses - 1. A charitable institute. 2. Sacrificial session lasting for several days, month and years. The latter sense is resembled with the vaisnavitr institution of Assam.

The Satra institution Contributed considerably to the spreed of learning and education. All principal satras used to maintain Sanskrit tool with reputed Scholars a satra is a religious centre, a school and library of sanchi-bark manuscript also. Book were written in sanchi-barks with skilly hands and they were industriously and assiduously copied. In the field of literature, the contribution of satras is considerable.

Objective of the Paper

- To high light the satras of Majuli as a knowledge repositories.
- To show the problems and the challenges prevailing in the preset scenario.
- To evaluate the role of knowledge repositions in the satras of Majuli.

Methodology

The study is based on secondary as well as primary data collected from different sources. Secondary data have been collected from Satrasof Majuli. Information in the form of different publication, Magazine. The secondary data is supplemented by primary data collected from field survey and personal interviews of Satradhikar in the Satras.

Scope of the Study

This study is basically based on the satras literature an Education, It is sometime argued that the satras, has largely contributed to the growth of Assames literature and learning.

Knowledge Repositories in the Satras of Majuli

The Largest in habited river island in the world. A Virtual treasure trove of culture and spiritual heritage. The satras of Majuli over the contraries have gives a direction in the state's cultural front. There are now around 22 satras in Majuli. The prominent among them being Auniati Satra, Dakhinpat Satra, Garmur Satra and Uttar Kamalabari Satra . Majuli is the only place in the region where the past blends with the present.

It is needless to remind the role satrs have been playing in cueing the identify of Assamese culture and society. Satra is the institution which used to motivate the minds of the people through religious performances to realise the existence of supreme power. Majuli is the nerve canter of Neo- Vaishnavite religion, ant and culture. The father of Assames culture and religios, Mahapurash Srimanta Sankardev and his chief disciple Madhabdev laid the foundation of satra culture, which ushered an era of distinctive religious and cultural heritage. Though there were 65 satras in Majuli, The majority of them were compelled to leave the island because of flood and erosion at present, there are thirty one (31) satras. Following are the selected satras of Majuli which serves as a knowledge Repositoeries

Auniati satra ; total numbers of manuscripts preserved in auniati satra are 310. Some important manuscripts of this satra are-

(i) Sachitra Hasti Vidyarnava (1722year)

(ii) Mukta Hastawali)

(iii)Gopaldevar Caritra

(iv)Banaprava-Ramayanna

(v)Ghunusa kirtan

(vi) Sanskriti Bhagawata

(vii) Ram Kirtan

(viii)Dasham(1693 Shake)

Dakhinpat Satra :- Total number Of manuscripts in the dakhinpat sayra are-605. Some important manuscripts are-(i) Sacitra borgeet (ii) Bhagawata (iii) Gurucaritra (iv)Sanskrit Vyakarana

Uttar kamlabari satra:-

Total 223 manuscripts are preserved in uttar kamalabari satra . Some important manuscripts of this satra are-

(i) Nam malika (madhabdev)

(ii)Ratnawali(madhab dev)

(iii)Saransamgraha

Natun kamalabari satra:- Total 202 manuscripts are preserved in natun kamalabari satra. Some important manuscripts are-

(i) Sachitra ratnawali (1685 shake)

(ii) 12borgeet (Shankar dev & madhabdev)

Garamur Satra:- Total number of manuscripts preserved in Garamur satra are 94. Some important manuscripts of this satra are-

(i)sanskriti Bhagawat

(ii) kirtan

(iii) Bidhi

Benganaati Satra:- Total 193 manuscripts are there in benganaati Satra. Some important manuscripts preserved in the concerned satra are-

(i) Nidan Sastra

(ii) Dasam

(iii) Ratnawali

(iv) Mantra

(v) Jyotish sastra

Conclusion:-

in this writing focused only rare manuscripts preserved in some satras of Majuli, in Majuli there are so many manuscripts preserved in various institutions ,villages satras etc. But it is a matter of regret that due to some causes like natural calamities,superstitious fare and also improper preservation a huge volume of manuscripts have already been lost.

So, this is our duty to protct this in valuable manuscripts which and enrich the assamese culture till today. In Majuli satras the national manuscripts misson had also taken necessary action to protect these valuable records.

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LIS LINKS: INDIA'S SOCIAL NETWORKING PLATFORM FOR LIBRARY AND INFORMATION SCIENCE PROFESSIONALS

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Abstract

Purpose: To give an overview of "LIS Links" (http://www.lislinks.com), a social networking site and communication channel for Library and Information Science Professionals in India.

Design/methodology/approach: A descriptive paper on "LIS Links" with slight insight to inscribed how it has been achieved.

Findings: LIS Links provide CAS / SDI services to the library professionals in India. It was developed by Badan Barman, a Ph.D. student of Gauhati University. The platform is able to receive wide discussion and positive feedback in many seminars, conferences, workshops and refresher courses in LIS in India. Its popularity further goes to the extent that in many classrooms across India, LIS teachers' starts refer to "LIS Links", for some purpose or others.

Research Limitations: The LIS Links brings together the Indian LIS Professionals who are having internet connectivity. Indian LIS professionals who do not have access to internet or those who are not accustomed of working with the internet, LIS Links, unfortunately, is unable to serve them.

Practical Implications: The philosophy of "LIS Links" can be quite effectively applied & used for other subjects/disciplines on a national basis for the benefit of the people of the belonging into the domain in a very cost effective manner. In a Country like India, the principle of "LIS Links" can be successfully used in many fields. Never the less, the technical aspects of "LIS Links" can be successfully put into use by any country, specially the Developing Nations of the World.

Originality/value: When the world's leading gateway services, which are the products of large research investments are trying hard to gain popularity; a simple structure like "LIS Links" is ushering a new movement in this direction. Further, the "LIS Links" becomes a brand name for LIS professionals in India for its quality and exhaustiveness.

*Keywords: LIS Links, **www.lislinks.com,** Social Networking Site, Blog, Forum, Group, Web 2.0, Library 2.0.*

Paper Type: Viewpoint.

1. Introduction: Library and Information Science Links (LIS Links) (http://www.lislinks.com) is the India's social networking platform for Library and Information Science professionals. The name "LIS Links" as the developer named it, because it is targeted to links all Library and Information Science (LIS) professionals

in India. LIS Links is the mostly used thread through which Indian Librarians are connected with each others. It was developed by Badan Barman, a Library and Information Science professional on 26th of February, 2008 as part of his Ph.D. programme. He was assisted by his fellow professionals. There were also people who work behind the scene and helped him a lot to shift LIS Links to its present position. **In the grass root level it runs on the voluntary input of information by its members.**

LIS Links is a one stop mall for LIS related information in India and acts as a gateway or portal and a web based solution to Indian LIS professionals. Never-the-less, LIS Links connects the LIS professionals through a single thread. It has brought the Indian LIS professionals together, bestowed them with recent information, provides first hand solutions of their problems on professional issues, technical & all inclusive and most importantly, provide them an opportunity to voice their opinions on matters related to library and information science as a social networking site of a specific professional group. The interface has a provision of customize searching, browsing and subscription options through SMS, Email, RSS, etc.

2. Research Problems: The LIS Links project was conceptualized due to the following problems-

a) Multiple Address Book with Outdated Contact Details: **There is not a single association or organization in India that represents all LIS professionals in India. All are working in their own direction virtually without any collaboration, (formal or other) with one another. Resulting, a scattered list of professionals with outdated contact details about the members and multiple membership of any single individual in various associations leading to complication in creating a single unique trajectory.**

b) Slow Flow of Information: The printed newsletters of different organizations that bring current information into the focus of subscribing members become outdated as it reaches the hands of the subscribing members. There has always been an urgent need to develop a mechanism to provide the information to Indian LIS professionals in time. It has always been quite a common experience that announcements regarding Conference, Seminars, Trainings etc. often reach users after the deadlines of applications are over.

c) Isolated Environment: Each LIS professionals are working isolated from one another without knowing much about what his/her colleague is doing. This often result duplication of work and wastage of time, effort and obviously, money! Since long it had been a felt necessity to bring together all such information well in time for sharing their experience and knowledge and avoidance of unnecessary duplication of work and avoid wastage of money, man-power time & effort.

d) Paper Based Work is Costlier: In the twenty first century, **when it is possible to serve information in digital form in a more convenient way, saving time, money and most importantly, provision of digital archiving for quick and handy reference, p**aper based communication process always remains to be a costlier endeavor.

e) Paper Creating Environment Pollution: **Printing something directly or indirectly always result in destroying our mother environment. We need to save it for our successors.** So, there is an urgent necessity to eliminate the use of paper based information sources in all our formal communication process including (but not limited to) LIS profession in the form of different types of printed newsletters.

f) Information is Widely Distributed and Hard to Find: **All LIS related information are scattered over the web. There is a need to bring into some system for easy, quick and effective handling (storage, processing and retrieval).**

3. Aims and Objectives: Just, proper and timely availability of Information is extremely valuable and has a central role in today's society. The "LIS Links" has just made an experiment with sharing and

exchange of information with all its above mentioned attributes, at least to the user who have desire to go for it. While developing the interface the following aims and objectives were kept in mind:

a) To provide a person to person as well as group based communication medium for the Indian LIS Professionals with Web 2.0 tools and techniques.

b) To provide CAS/SDI services to the Indian LIS Professionals in no time based on the voluntary collaboration of the members.

c) To act as a One Window entry point for the LIS professionals of diverse categories, *viz.* students, research scholars, librarians and LIS academicians to all the resources related to Library and Information Science that makes their origin in India, and / or those outside born resources on Library and Information Science in India.

d) To support the entire LIS fraternity (as mentioned above) in their all round development.

e) To design and develop an online and continuously updated database of Library and Information Science Professional in India.

4. Coverage: The coverage of LIS Links can be understood from the following angles-

a) Subject Coverage: LIS Links only deals with the news, and people related to Library and Information Science only, contents related to other subjects not concerned to LIS are not considered.

b) Geographical Coverage: It mainly deals with the information that makes its origin in India, and those outside news which deals with Library and Information Science of India.

c) Language Coverage: LIS Links mainly deals with English language contents; only in some rare cases people can found contents in Hindi language.

5. Implementation: It is very difficult for a website administrator to keep the website updated frequently. Over the web, only those project or work are surviving that have extensive privileges for collaboration. So, considering the importance of collaboration, the LIS Links work is made highly interlinked and portable to build in the line of a free service structure for the global LIS community with special emphasis towards India. The LIS Links is a moderated membership site. When an Indian LIS professional wants to sign up to the site s/he has to answer certain predefined questions. After entering the details s/he has to wait for moderation of his membership. After moderation or approving the membership, the answers of the questions become his / her profile page over the website, which at the back end, form a database. Any member can modify/ update the answers of the questions by "Sign In" to the site at any time, as and when modifications are needed. The approved members of the site can communicate through chat, scrap message, Email with other individual members of the site. He/she can also take part in group chat, discussion forum, groups for problem solving and can share the information available with him/her with the entire community through group messaging, blogs, events, photos, music, videos, etc. Every contents of the site are under strict moderation to ensure quality and relevancy and to suit the academic purpose only. Only approved contents are distributed by way of SMS, Email, RSS, Official Google Plus, Twitter, Facebook Page to other interested members as well as non members who are already agreed upon to receive such information.

In approving the membership to the website two criteria are considered. One is- s/he must belong to LIS domain and the other is s/he must be an Indian. There is no denying however, that in some members' profile pictures the word FOREIGNER do appear but if one checks the detailed profile, it reveals the actual place of residence. People from all over the world who are interested about the news related to LIS in India can subscribe to the message from it or visit its websites but cannot be entitled for its membership. In rare cases, the above two criteria are not followed.

In developing the LIS Links (http://lislinks.com) **site, a simple PC with internet connectivity is used. In case of software, the project used multiple free as well as paid web 2.0 tools and technologies to achieve its goal. It used Google Apps (http://www.google.com/a) for Google Site and Email hosting;** GoDaddy (www.godaddy.com) for domain and hosting; **Ning** (http://www.ning.com) **for hosting;** Blogger (http://www.blogger.com) for hosting; **ChimpFeedr (www.chimpfeedr.com) for aggregating different RSS feed of Ning Site; Feedburner** (http://www.feedburner.com) **to provide Email alert service; Google Plus** (http://www.google.com/+), Twitter (http://www.twitter.com) and Facebook (http://www.facebook.com) to publicize; Hootsuite (www.hootsuite.com) to connect different applications; SMS to send alert messages; Google AdSense (https://www.google.com/adsense) and Amazon affiliates for recovering the cost and Google Analytics (http://www.analytics.google.com) to track the usage statistics. The homepage of the LIS Links appears like:

Fig.1: LIS Links (http://lislinks.com) Home Page as on June 10, 2017

The administrators of the website continuing their work as a professional obligation, as and when new technologies are emerged the chief administrator immediately integrates it to the website. The whole website is also updated continuously. The news stories, along with original writing, interviews and reviews, are updated frequently, usually 7 days a week.

Information without proper citation, author's details is treated as not authentic and not reliable for consultation and as such, they are called as disinformation. Such disinformation and the information that is not updated with time are removed from the website to provide room for the new information. Irrelevant & biased information are also removed from the website. Only frequently updated information is treated as valuable and finds a stable place over LIS Links website. They are archived over the website for posterity.

The flow of information over the LIS Links site through different platform can be described by the following flow chart
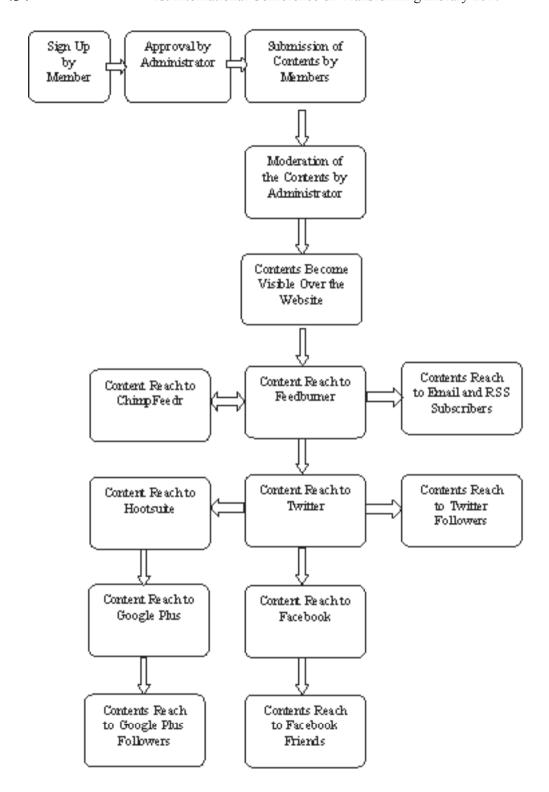
Fig. 2: Flow of Information at LIS Links as on June 10, 2017

6. Overall Impact of LIS Links and Its Achievements: "LIS Links" is considered as a huge success and a pioneering effort in the world. It brings all Library and Information Science related information into a systematic order for searching, and browsing with many provisions of subscriptions that too, without any duplication and irrelevance. It is the India's first and largest social networking and collaborating initiative platform for the LIS professionals. It makes the following impact among the professionals-

a) Act as Gateway: "LIS Links" is serving as a gateway or a single point access to the Indian LIS profession for the whole world. All information can be searched and browsed by using its website.

b) Functioning as Online Database of LIS Professionals: The project achieved an online database of 22,259 LIS Professionals (as on June 10, 2017) in India that's too continuously growing. The Table 1 below describes State wise membership numbers. The members of the database can be searched and browsed

State	Number of Members
Andaman and Nicobar Islands	68
Andhra Pradesh	808
Arunachal Pradesh	25
Assam	484
Bihar	362
Chandigarh	204
Chhattisgarh	226
Dadra and Nagar Haveli	4
Daman and Diu	7
Delhi	1,476
Goa	57
Gujarat	581
Haryana	520
Himachal Pradesh	86
Jammu and Kashmir	174
Jharkhand	88
Karnataka	1218
Kerala	736
Lakshadweep	8
Madhya Pradesh	688
Maharashtra	1,416
Manipur	32
Meghalaya	59
Mizoram	23
Nagaland	8
Odisha	326
Pondicherry	116
Punjab	363
Rajasthan	264
Sikkim	28
Tamil Nadu	920
Telangana	225
Tripura	25
Uttar Pradesh	1,577
Uttarakhand	210
West Bengal	931
Others	7,916
Total	22,259

Table 1: LIS Links Penetration in Indian States as on June 10, 2017

c) A Fully Community Driven Web Solution: The whole work is based on voluntary collaboration of the members of the database. Everyone is contributing something to the project.

d) Functioning as Communication Medium: The members of the database are able to communicate among themselves by chat, scrap message, Email, discussion forum, groups, blog, event, photo, music, video, etc.

e) Duplication and Irrelevancy are Avoided: "LIS Links" policy is rather quite tight in approving contents over the site. Customarily, it doesn't approve plagiarized, duplicate and irrelevant contents over the website.

Every kind of information input into the LIS Links is displayed in such a way that the duplication of information can easily be identified and can be shredded off regularly before its dissemination to the target user base. So, by subscribing to any of the LIS Links services, one can remain protected from receiving unnecessary massage or post, and duplicate message of earlier posts and save their online time.

f) Information is Disseminated in a High Speed: The information that goes through moderation is distributed in seconds to the respective subscribers/followers.

g) Pioneer Academic Social Network: The "LIS Links" is one of the pioneer academic social networking sites. It is the India's first ever social networking platform for LIS professionals. It is able to bring together the scattered LIS professionals from all over India to a single platform for problem solving and attain the highest coverage than any LIS related online service providers in India.

h) Large Number of Subscribers: "LIS Links" gives a mechanism by which the LIS students, research scholar, academicians, and practicing librarians and lastly the people with an interest in LIS can get free Alerting Service / Current Awareness Service (CAS) / Selective Dissemination of Information (SDI) services through SMS, Email and RSS in all subfield of LIS.

Table 2: LIS Links Daily Reach through different Platform as on June 10, 2017

Platform	Website URL	Reach
LIS Links Broadcast	http://www.lislinks.com/profiles/members	22,259
Email Digest/RSS Feed	http://feeds.feedburner.com/LISLinks	6,899
	http://feeds.feedburner.com/lislinksEvents	723
	http://feeds.feedburner.com/LISLinksForum	185
	http://feeds.feedburner.com/LISLinksJobs	1,472
	http://feeds.feedburner.com/LISLinksPhoto	45
	http://feeds.feedburner.com/LISLinksVideo	67
Google Plus	https://plus.google.com/+lislinks/posts	102
	https://plus.google.com/+LISLinksIndia	909
Twitter	https://twitter.com/lislinks	639
Facebook	https://web.facebook.com/lislinks	8,021
	https://facebook.com/groups/LISLinksIndia	8,026
SMS Alert	JOIN LLINKS to 9220092200	721

i) High Growth of Membership: As on June 10, 2017 there are 22,259 members in the LIS Links website which is increasing on an average 7 in a day. The growth of the LIS Links Membership steadily increases till the year 2012 and then it decreases. In the year 2012, highest number of members joined the website. It is needless to explain that the total number of members is quite impressive for any professional forum within just 10 years. It also explains both in favour & against the nature of the platform. In the against side, as it is already explained that the limitation of this platform is that it requires computer with internet connectivity. Indian LIS professionals who do not have such facilities are unable to become a member. As such, the particular nature of the platform is a limiting factor for expansion of the membership base. There is no denying however that it can also be claimed to be congenial to the growth and expansion of the membership base as well. Had it been a non IT based platform, the growth and expansion of the membership base (seemingly) would have been slow; as such the very nature of the platform seems to be congenial to its growth & expansion. Another important factor is that the cost factor. The Free Membership is also one of the possible reasons of its fast growth. Analogous to these facts is that it also explains the nature of IT friendliness of Indian LIS community.

Table 3: Annual Growth of LIS Link Membership

Period	Number of Member Joined
February 26, 2008 to December 31, 2008	275
January 1, 2009 to December 31, 2009	1,593
January 1, 2010 to December 31, 2010	2,656
January 1, 2011 to December 31, 2011	2,603
January 1, 2012 to December 31, 2012	3,878
January 1, 2013 to December 31, 2013	3,046
January 1, 2014 to December 31, 2014	2,643
January 1, 2015 to December 31, 2015	2,516
January 1, 2016 to December 31, 2016	2,193
January 1, 2017 to June 10, 2017	856
Total	22,259

j) High Pageviews: LIS Links start using Google Analytics account from December 16, 2011 to analyze the traffic. According to Google Analytics, the LIS Links was able to receive 22,704,445 pageviews till June 10, 2017. The website receives on an average 12584 pageviews from 1447 people in a day.

Table 4: Google Analytics Statistics of LIS Links for the period of (December 16, 2011 to June 10, 2017)

Type	Value
Pageviews	22,704,445
Sessions	6,090,072
Users	2,639,265
Pages / Session	3.73
Avg. Session Duration	00:14:20
Bounce Rate	44.75%
% New Sessions	43.26%

k) *Paper based Information is Replaced:* The LIS Links eliminates the use of paper in all round communication and by this way **helps in saving the mother environment.**

l) Frequently Updated: The news clipping and other information regularly displayed over the platform are updated daily. The important posts are also shared in Google Plus, Twitter and Facebook. As on June 10, 2017 there are 39,816 pages of content over the website that is increasing on an average rate of 11 in a day.

Table 5: Content over LIS Links as on June 10, 2017

Type of Content	Web Address	Number of Items
Profile Page	http://lislinks.com/profiles/members	22,259
Jobs	http://lislinks.com/profiles/blog/list	5792
Events	http://lislinks.com/events	1,113
Discussions	http://lislinks.com/forum	9,062
Photos	http://lislinks.com/photo	1,445
Videos	http://lislinks.com/video	9
Groups	http://lislinks.com/groups	136
Total Contents		39,816

m) Highly Acclaimed: PC Quest Magazine, June 2009 in its nomination of the LIS Links project to the PC Quest Best IT Implementations of the Year 2009 under "Online Portal and Web Based Solutions" category commented as "this initiative has made this portal one of India's best in LIS and among a very few in the world" (PC Quest 2009). Again, in the PC Quest June 2010 issue, LIS Links was included among 200 Tech success stories.

The LIS Links project was also able to receive "Jury Special Mention" award in the category of "Best Usages of ICT in Education and Learning" in the E-North East Award 2011 held at Kohima, Nagaland (India). It also received "Jury Special Mention" award in the category of Advocacy & Empowerment in the North East Social Impact Award 2015 held at NEDFi House, Guwahati, Assam (India) on 28th August, 2015.

n) Achieved Good Alexa Rank: LIS Links achieved a global traffic rank of 121,584 and the rank in India is 8,570.

Type	Rank
Global Traffic Rank	121,584
Indian Traffic Rank	8,570
Linking to LIS Links	94

Table 6: Alexa Stats of LIS Links as on June 10, 2017

Many websites over the web provide linking from their sites to "LIS Links". Further, "LIS Links" messages are displayed by way of RSS feed over many platforms of the world.

"LIS Links" project brings together the whole range of subject based information from the total output of a nation into a single platform for searching and browsing. The new contents can be submitted by members and subscribed by many alternative ways. As such, it does not face any major competition from the existing web based services. Immediately after its launching over the web it received overwhelming responses from the professionals. All key issues are nicely solved by molding the existing free and paid web based technologies.

7. New Initiatives: The LIS Links website is having Profiles of the members, a provision to add content by any members, Chat (Individual and Group), SMS, Scrap Message, Email (individual, group, broadcast), RSS, File Cabinet, Blog, Discussion Forum, Discussion Group, Events, Photo and Video facilities. LIS Links is distributing the information through Website, Mobile Version of the Website, SMS, Email Alert (to subscribers) and Email Broadcast (to members), Google Plus, Twitter, Facebook, RSS feed and LIS Links Newsletter. Any member can invite their friends to the site by using direct Email, Gmail, Yahoo Mail, Facebook and LinkedIn. The SMS alert, Circular, Samples, DDS, LIS Links Grants (Grants for Association / Organization and Grants for Libraries), LIS Links Newsletter, LIS Links Bulk SMS Services are the new additions to LIS Links. Besides, LIS Links also instituted the following awards-

a) The LIS LINK Scholars Award: To motivate the LIS Professional to contribute towards the LIS Links site, it instituted LIS Links Scholar Award from the year 2010. The award which includes a plaque and a certificate has a very good impact on the growth and development of the website.

b) India's Best Institutional Repository Award: LIS Links also started another award by name "*India's Best Institutional Repository Award*" from the year 2012 to promote Institutional Repositories in India.

8. Privacy at LIS Links: The profile section of the LIS Links comprises of both private and public data. The private data comprises of the IP address, mobile phone number and email id. As a principle, "LIS Links" will never sell or provide the private data of the members to anyone. However, if some national level library association wants to publish some directory in LIS domain, LIS Links may certainly consider sharing the public data for the benefit of all and for further advancement of the profession and the professionals. Otherwise, all details of the members remain strictly confined with the chief administrator of the site only. In the history of LIS Links, it banned many members of the site for violating LIS Links rules. The unpleasant decisions had to be taken to serve the profession in the new height.

9. Future Plan: Over the web, the LIS in India is hardly managed by approximately hundred professionals, who are responsible for developing blogs / groups / forums / gateways / social networking sites and so on. The subscriber of different services receive the same message daily as cross posting resulting out of their subscriptions to more than one platform, in their mission to keep abreast with all the latest happenings & information in the subject. This is mainly due to the fact of overlapping of scope of different platforms and mostly due to wrong moderation activities which results wastage of much group time. In simple, many groups / forums post anything that is sent to the groups / forums, ignoring the scope of the particular group / forum and relevancy of the message to their members.

In future, the LIS Links will give emphasis in reducing this type of information pollution over the web by way of making aware of the infopreneur in LIS in India. It will also try to collaborate with existing Blogs / Groups / Forum / Social Networking sites / Gateways in brining everything in relation to LIS in India into a proper system, to avoid any duplication of effort and to reduce consumption of valuable time from the user in a way of checking / re-checking and deletion of the cross posting of messages they receive and consult from more than one platform to perform their task. LIS Links as always been highly enthusiastic to work collaboratively with other national level library association in the country.

The most advantageous aspect in the present Cyber induced world is that the users can prepare & maintain various profiles so practically usable & important both for academic and research usage at one hand, and for sharing, exchange & for ready reference in need (digital archiving), on the other. LIS Links in future will explore the possibilities of using the data in its server to make traditional directories of people and organizations.

10. Continuity of LIS Links: The present annual budget of the LIS Links website includes the cost of DNS, website hosting, software, innovation and marketing. Considering the growth (server space) and bandwidth requirement of the website the recurring cost will goes on increasing every year. The main source of income is online advertisements, sponsorship and voluntary donation. The total expenditure is nicely managed through income from the above sources. So, it is hoped that LIS Links will not face any major financial crisis at any moment in future.

11. Conclusion: LIS Links is a Single window information exchange endeavor. Presumably, it is not propagating any irrelevant message to the member community if they subscribe to the appropriate Email and RSS feed of it. LIS professionals from all over India joined the platform to help other professional colleagues in the subject and by this way they also get assistance from other members. The members of LIS Links regularly post links and of important and interesting stories into the "LIS Links". The contents, always (as they need to) go through strict moderation by the administrators before being made available and distributed to all members and subscribers.

If anyone wants to connect with the other Librarians in India and want to communicate with them then there is no better alternative than LIS Links. LIS Links is a marketing powerhouse for Library related events, jobs and other information. The members can distribute their information freely to a large group of professionals and receive the messages that are targeted to their own need.

LIS Links value the online time and effort of its members, and so try its best to deliver contents that meet their need exclusively. As such, LIS Links has been highly influencing the Library and Information Science in India as well as highlighting the Indian LIS activities aboard with enhanced services. It **builds a virtual family of Indian LIS Professionals where,** each professional know each other from their profile image and profile information, and of course from their contribution towards the site. They are familiar with each other by this way only with whom many may never meet physically in their life time!

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LIBRARY RESOURCE SHARING FOR RESEARCH AND DEVELOPMENT AT NETWORKED ENVIRONMENT: A BRIEF STUDY OF ITS FUNCTIONING IN INDIA AND ABROAD

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1. ABSTRACT:

Purpose: The paper purposes to offer an analytical discussion on the activities of Library Resource Sharing in India as well as in abroad. The paper touches upon the importance of Resource Sharing and its quality services in academic libraries and its aspects of user satisfaction. It also discusses the impact of Information and Communication Technology (ICTs) in Resource Sharing. Finally the paper highlights the proud moment of Gauhati University where two of its thesis were globally accessed and has been ranked in the top position under (Pro-quest Dissertations and Theses) PQDT. This can be taken as an important example of Resource Sharing.

Methodology: The data have been collected by using a structured questionnaire method. *175 samples were collected from those users who have been attentively using the libraries.* Collected data have analysed with the help of simple table and percentage method. Sample were also collected from various academic departments of Gauhati University.

Findings: This study has given a clear indication of the fact that Resource Sharing has been playing a significant role in the scholarly world in this digital era. Users are able to access large amount of resources from anywhere, at anytime throughout the world.

Practical Implication: This will save huge amount of money and accelerate research at all levels thereby contributing greatly in national development.

Originality: This paper will enlighten about the Resource Sharing, Library Networking and Consortia in India and in abrod. It also examines the implications of (Information and Library Network) INFLIBNET on Resource Sharing.

Keywords: Resource Sharing, ICT, Inter Library Loan (ILL), Library Co-operation, INFLIBNET

Paper Type: Descriptive

2. INTRODUCTION:

Today, we are living in an information society. Every day, a lot of publications are published throughout the world. It is impossible for any modern library to acquire all the resources to meet the various needs of the end users. Now library and information centres are usually faced with the problems :

a.   Exponential growth of publication ;

b. Paucity of funds;

c.   Increasing prices of reading materials

d. Increase in the number of users;

e.   Demand for better, faster and effective information services from the users.

f.   Holding to document delivery services

g.   The advent of increasingly effective information technology etc.

Realising these problem, the concept of resource sharing came into existence so that the libraries can share the resources of one another in a co-operative spirit. Resource sharing and Networking have been one of the important areas in library and information services. Dr. S. R. Ranganathan1 has emphasized much on this concept as 'library co-operation' in his book *Five Laws of Library Science*. Indeed, all five laws guidelines have the practice of networking and resource sharing for better and effective library operations and smooth running of library services.

A revolution is sweeping across the world, making it easy to access information through a resource sharing over networks.   The information revolution has made libraries around the globe to adopt new Information and Communication Technologies for information dissemination and have also reduced the cost of information. The advent of ICT, has facilitated transmission, collection, processing, interpretation and distribution of information has become a boon for Resource Sharing throughout the world. Information Technology has becomes useful to us in the digital world. Today's library must be multi-disciplinary, multi-model, multi-media as the present education system demands. So, again the user satisfaction is another challenging task in the field of library and information services in Digital Environment. Hence Co-operation, Co-ordination and Collaboration leading to the concept of   consortium has contributed immensely in the field of research activity.

3. RISE OF RESOURCE SHARING:

No library is self sufficient in terms of its resources; as a result libraries have moved towards library co-operation and resource sharing. Co-operation is a social activity as old as human civilization itself. Resource Sharing is not a new concept, it has a long history and gained world wide acceptance particularly in this age of information explosion. Resource Sharing is based on library needs and the principle of 'Give and Take'. There are different activities under resource sharing like Inter Library Loan(ILL), Document Delivery Services(DDS), Exchange of Publications and participation in Online Library Network. It also involves a lot of efforts on the part of libraries so as to have proper protocols, standard exchange format and formal agreement within the organisations. "Resource sharing is a sort of implied agreement amongst participating libraries wherein each participant is willing to spare its resources to other members and in turn is privileged to share the resources of its partners as and when the need arises". The term "Resource" implies to a thing, a person, or an action to which one turns for assistance in time of need. The term "Sharing" entails apportioning, allotting or contributing something that is owned to benefit others. Phase wise development of Library Resource Sharing are-

First Step: "Several libraries come together for the mutual benefit of the respective users" -Library Cooperation/ Resource Sharing…

Second Step: "Libraries are linked together with the help of ICT" -Library Network.

Third Step: " Libraries come together to acquire and share e-resources"- Library Consortium.

4. OBJECTIVES:

Some of the important objectives of resource sharing are enlisted below:

i. Assisting member libraries in selection, procurement and processing of materials;

ii. Coordinating acquisitions, inter-library loan and reproduction of materials for the member libraries;

iii. Promoting expanded use of library resources;

iv. Improving library facilities and services;

v. Enabling Cooperating in the field of training and development;

vi. Achieving economy in the use of human and material resources;

vii. Knowledge Sharing being easily accessible throughout the world with more speed and accuracy.

viii. Access to thousands of E-books, e-Journals and Full Text Resources. Maximum accessibility   to information without losing the individual identity of libraries; and finally

ix. Reduction in all round cost.
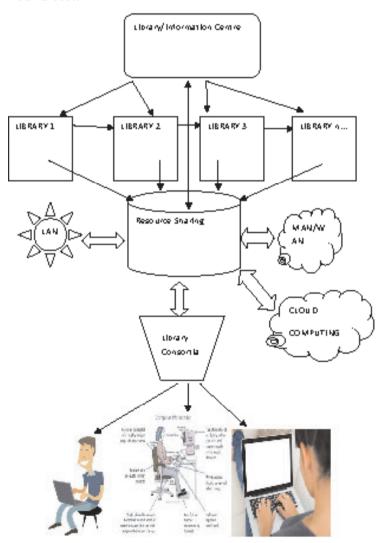
Fig 1 : Collaborative model:

Model showing collaborative resource sharing in the networked environment.

1. REVIEW LITERATURE:

Since the present study is related to the Resource Sharing of libraries in a broad dimension, only selected literature has been reviewed in this paper. However, the works of various prominent authors like Allen Kent, Ross Atkinson, M.B. Line and Richard De Gennaro emphasizing resource sharing and distributed collection development in networked environment have been consulted.

The professional organizations like International Federation of Library Associations and Institutions (IFLA), Association of College and Research Libraries (ACRL) in America and Association of Information Management (Aslib) in United Kingdom, etc. stressed Resource Sharing as global activity for excellence in academics and research. The success stories of library network in the developed countries such as the Online Computer Library Centre (OCLC), and the British Library Automated Information Service (BLAISE) and Joint Academic Network (JANNET) in UK, are some of the important examples. Horton, V. Burton, S. Rosen, F. and Priebe, L. (2010), focuses on the Rethinking Resource Sharing Manifesto for making inter lending easier and more efficient for library users and partners

Dr. S. R. Ranganathan, the father of Library and Information Science has emphasized much on this concept as "library co-operation" in his book *Five Laws of Library Science.*

The view of some Indian authors on resource sharing and networking indicates that in India also various aspects of resource sharing and networking have paid adequate attention. It has revealed that the organized efforts in this direction have started since the 1980s. The working Group of the Planning Commission headed by Dr. N. Seshagiri "stressed the need for modernization of library services and informatics during the Seventh Five Year Plan, 1985-90". An overview of the development of library networks in India by S.S.Murthy provides detailed account of the establishment of various metropolitan networks in the country.

The two books by H.K. Kaul i.e. *Library Networks: an Indian Experience* (1992) and *Library resource sharing and networks* (1999) provide detailed account about concept of resource sharing and networks in India. Sufficient literature is available in various sources about Information and Library Network (INFLIBNET): a national network of the University Grants Commission. The sufficient amount of literature about country wide networks like Education and Research Network (ERNET), National Knowledge Network (NKN), etc., is available. A lot of literature about Resource Sharing and Networking has been reviewed in proceedings of national and regional seminars and conferences. All the literatures stressed on Library Cooperation, Coordination and consortia for smooth, speedy dissemination and accessing of information for quality of academic and research outcome.

2. IMPACT OF TECHNOLOGY:

Technological advances have allowed Resource sharing, Library Networking and Consortia to more easily incorporate resources and enhance to access information. Audio and Video files and other multimedia contents are allowed for creators to use them in their works that were not available in library cooperation in the previous decades.

The INFLIBNET, National Institute of Science Communication and information Resources (NISCAIR), Developing Library Network (DELNET), Networked Digital Library of Theses   and Dissertations (NDLTD), IFLA along with many local organizations are encouraging the use of innovative technologies in Resource Sharing. Encouraging use of modern technology in Resource Sharing is a critical aspect of scholarly communication best practiced in networked environment in the Internet Age. Internet provides unlimited offers for dissemination of resources and Open Access for all type of users throughout the world.

Now-a-days, many universities provide facilities for electronic submission of thesis and dissertations using the latest ICTs. As suggested and recommended by National Knowledge Commission (NKC) India

has taken lead role by creating national policy for Resource Sharing by setting up Electronic Theses and Dissertations (ETD) of INFLIBNET centre in the country. According to University Grant Commission (UGC) notification in 2009, it has become mandatory for all M.Phil and Ph.D thesis to be submitted/ uploaded to its central repository of ETD by the Research Scholars or institutions for open access. The ETD repository has been named Shodhganga. All these can be credited or has been possible due to the impact of modern technology in the system of library and information services

3. SOME IMPORTANT INTERNATIONAL LIBRARY NETWORKS:

The International Nuclear Library Network (INLN)

WHO Library and Information Networks for Knowledge (LNK)

International Association of Aquatic & marine Science Libraries & Information centeres (IAMSLIC)

WorldCat of OCLC

International Nuclear Library Network (INLN)

Networked Digital Library of Theses and Dissertations (NDLTD) .

Following are the screenshot of two most important and highly used Library Network in the World.
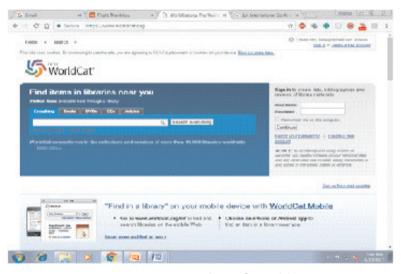
Fig. 2: Screenshot of World Cat

Fig. 3 :Screenshot of NDLTD

8. INDIAN LIBRARY NETWORKS:

It was during the period from 1986-1992 that major library network developed in India. Many library network came into existence, amongst them are:

Ahmedabad Library Network (ADINET) Calcutta Library Network (CALIBNET), Delhi Library Network/Developing library network (DELNET), Bombay Library Network (BONET), Madras Library Network (MALIBNET), Pune Library Network (PUNENET), Nagpur Library Network (NAGNET), Hyderabad Library Network (HYLIBNET) and INFLIBNET etc. There are two important network for academic and research purpose in India, which are associated with the library network, they are-NICNET and ERNET. The increasing in number of library networks indicates the usefulness of such efforts in function work of the modern academic libraries.

Following are the screenshots of 2 frequently used and significant Indian Library Networks.

Fig.4: Screenshot of INFLIBNET

Fig.5:Screenshot of DELNET

9. INDIAN SCENARIO FOR E-RESOURCES THROUGH CONSORTIA:

Libraries function as an essential integral part in higher education system in India. Academic libraries in India are facing a lot of problems due to static budget and exponential price hike of library collections. The library environment is currently undergoing a rapid and dynamic revolution leading to new generation of libraries with the emphasis on e-resources and digital library. A lot of efforts have been taken in the past few years to overcome this problem of financial crunch by resource sharing through consortia for university libraries. UGC-INFONET and INDEST-AICTE consortium are two major initiatives for university library users. These revolutionary steps are providing scholarly resources including peer reviewed journals, databases, abstracts proceeding etc. These efforts are a boon to university library users which will definitely boosted the level of higher education system in our country.

Library Consortium is a group of two or more libraries which have agreed to co-operate with one another in order to fulfil certain similar needs, usually resource sharing. It usually, refers to co-operation, co-ordination and collaboration between, and amongst libraries for the purpose of sharing information. Consortia are basically, evolving a form of cooperation among the libraries which come together to share resources electronically. Now academic libraries has transformed towards into e-consortium.

Some of the successful library consortia setup so far in India are-

E-shodhsindhu (Formerly UGC-INFONET E-journal consortium + Indian National Digital Library in Engineering, Sciences and Technology (INDEST) Consortium + NLIST).

Inter University Centres (IUC-DAEF Consortia)

Health Sciences Library and Information Network (HELINET)

Forum for Resource Sharing in Astronomy and Astrophysics (FORSA)

Council for Scientific and Industrial Research (CSIR e-journals consortium)

STI Network for resource sharing amongst S&T libraries etc.

Apart from above the mentioned consortia, there have been efforts to setup similar kind of consortia by Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), Indian council of Social Science Research (ICSSR) and other government agencies to provide access to e-resources. Among the above all consortia, UGC-INFONET(E-shodhsindhu) and INDEST-AICTE consortium are proving to be a boon for the academic users. These two major initiatives have come to the rescue of academic libraries so that they *can cater to the needs of academic depending upon them. These revolutionary steps are providing scholarly resources including peer reviewed journals, databases, abstracts, proceedings etc. which have boosted t the higher education system in India.*

Following is the screenshot of the highly used Indian Consortium:

Fig.6: Screenshot E-shodhsindh

10. INCREASED ROLE OF LIBRARIANS IN RESOURCE SHARING:

Librarians have been criticized with reference to their role in digital environment. The role has become more challengeable now compared to pre-internet age. The basic traditional role of reference service still remains in the digital environment. Earlier librarians could only advise users in finding effective information sources, but now in the digital age librarians aware or teach the users about the basic concepts of plagiarism and copy right issue and also plays an important role in uploading the thesis from time to time. In the context of resource Sharing/IR of ETD, the librarian can prove themselves as crucial contributors. It is worth recording the views of Gaur et al. Who expressed that "Librarians have bigger role as designer as well as service providers. A librarian is the focal point of Resource Sharing/IR system" (Gaur, Munshi and Murthy, 2004).

Now, Resource Sharing is an ethical issue and proactive approach requires that it should be closely related to academic ethics.

11. DATA ANALYSIS AND PRESENTATION:

Table 1: Distribution of Respondents on the basis of membership:

Membership	No.	P/c
PG.Student	75	42.85
Research Scholars	80	45.71
Teaching Faculty	20	11.42
Total	175	100

The above table shows that 42.85% of the respondent are PG students; 44.71% of the respondents are Research Scholars and 11.42% of the respondents are Teaching Faculty. Therefore, the majority of the respondent are Research scholars.

Table 2: Get idea about OPAC/WEBOPAC services as user perspective

Member	Always	Mostly	Sometimes	Rarely
PG Student	40	34	30	20
Research Scholars	30	38	50	10
Teaching Faculty	10	15	80	30

Table 3: Get Idea about IndCat Service as user perspective (Bibliographic information)

Member	Always	Mostly	Sometimes	Rarely
PG student	30	40	60	20
Research Scholars	56	56	20	10
Teaching Faculty	10	15	70	30

Table 4: To get idea about E-Shodhsindhu service as user perspective

Member	Always	Mostly	Sometimes	Rarely
PG Student	30	40	70	30
Research Scholars	70	75	15	05
Teaching faculty	86	62	17	10

Table 5: To Get Idea about Shodhganga service as user perspective:

Member	Always	Mostly	Sometimes	Rarely
PG student	20	10	80	70
Research Scholars	90	100	05	05
Teaching Faculty				

Table 6: Levels of satisfaction on the services provided under INFLIBNET programme

Sl No	Level of Satisfaction	Satisfied	Highly Satisfied	Moderate Satisfied	No Remark
1	IndCatt	85	10	67	13
2	E-Shodhsindhu	54	42	64	15
3	Shodhganga	94	61	15	5
4	OPAC/WEBOPAC	45	15	75	40
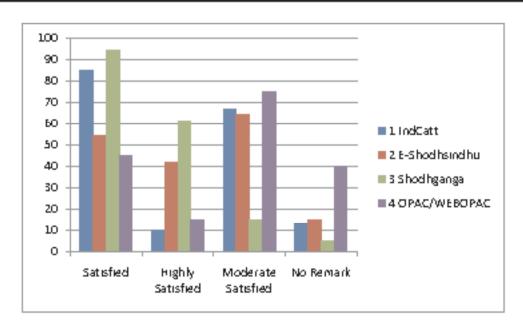
Fig. 7

The above Fig.7 states the satisfaction of users. As per the users from different streams, 90 users are satisfied, 56 were highly satisfied 15 users were moderately satisfied and 12 users opted N/R with access to Shodhganga. 85 users were satisfied, 10 users were highly satisfied, 65 users were moderately satisfied and 15 users have NR with access to IndCat. 45 users were satisfied, 37 users were highly satisfied, 62 users were moderately satisfied and 5 users were N/R with access to E-Shodhsindhu. 45 users were satisfied, 15 users were highly satisfied, 75 users were moderately satisfied and 40 users were N/R access to Online Public Access Catalogue (OPAC/WEBOPAC).

Overall activities(resource sharing) of INFLIBNET were analyzed and found that 67.5% users were found satisfied, 29.5% users were found highly satisfied, 55.25% users were found moderately satisfied and 18.25% users are indifferent about the resource sharing of INFLIBNET's resources.

12. BEST PRACTICES:

Traditional ILL – the sharing of loans and copies, of print and now digital information between libraries has been essential for library and information services. However, this traditional function is now performed more efficiently and effectively under the new technologies such as digital preservation, electronic transmission and the development of Open Access and sharing of Best Practices.

Best practices can take different forms in name and function. Guidelines, standards, and checklists are all used to describe the practice of agreeing to common values and protocols for sharing. Since ILL is not a prominent practice now, libraries should be doing and more newer modes and can stay current with the latest trends in sharing resources offer the highest quality of services.

"Inter lending specialists today recognize that not all information is available from other library partners. In order to access requested information they may have to purchase it directly from publishers or booksellers, make direct requests to authors, or search for Open Access material online. Libraries should use technology whenever possible and be willing to go beyond their local, regional, and even national partners when necessary" (Posner, 2013).

The resource sharing community continues to be actively engaged in developing best practices. Sources of best practices include the IFLA "Guidelines for best practice in interlibrary loan and document delivery".

Effective Resource Sharing enhances the skill and efficiency of users for the successful completion of their academic as well as research work without wasting time. It has been helping to produce quality research work. It also saves the time, money and energy of the users by systemizing their work with the help of ICTs.

Before coming to the conclusion of the paper, one important aspect of Resource Sharing needs to be highlighted which will reveal the importance and significance of resource sharing in academic and research. It takes out to be a proud moment from Gauhati University where under the highest theses downloaded from PQDT two thesis from GU occupying the top position and third position respectively.

Highest Access of Ph. D theses from Gauhati University in the World through PQDT:

Author	Subject	Title	Rank(World)	Database
Dr. Bidyut Jyoti Sarmah	Chemistry	Chemical composition of the Street dust of Guwahati with special reference to speciation of the heavy metals.	1st	PQDT
Dr. Phani Dutta	Environmental Science	Studies on the physico chemical characteristics of surface water, Sdiment and groundwater and bioaccumulation of heavy metals in Eichhornia crassipes of Greater Guwahati	3rd	PQDT

For a remote place like Assam it gives us immense pleasure to see that two of our thesis ranks the top position in the world ranking list accessed through PQDT. From this what can be drawn is that since the thesis today enjoy the pleasure of Resource Sharing (Open Access) we can see the potentiality of a place like Assam in the field of Research.

13. CONCLUSION:

Resource Sharing enhances academic and research activities by offering quality services in network environment throughout the world. It has strengthen further the link between knowledge and broad based development and the "knowledge revolution" provides an opportunity to foster access to basic library services and improved education and research outcomes. Effective adoption of ICTs in resource sharing in India as well in World will accelerate the level of knowledge acquisition, dissemination and consequently improve national development. Since ICTs have entered into libraries, it has been possible to achieve maximum result in information dissemination through computer networks. E-shodhsindhu (e-journal consortia) is an important tool for research and development in the country. Digital repository of research outcome (Electronic Thesis and dissertation) has helped to understand the research work being performed by other organizations. It avoids duplication of research activities and also leads towards large amount of access throughout the world. Finally the dynamic role of INFLIBNET in library resources and Resource Sharing also becomes visible.

Best practices, and new collaborative partnerships are all practical ways to improve services. Indeed, they require concerted time, budgetary support, and effort to build and maintain.

It is true that networked environment and online services and free open access publishing should make the sharing of information increasingly seamless in the near future. However, interlibrary loan services will be necessary for the delivery of print items still under copyright protection and that have not yet been or cannot yet be digitized.

With the existence of both print and digital information, librarians must supporter for liberal guidelines and open access so that they can share what they have purchased, particularly for education and research. Librarians also need to plan for preservation of information. New models, such as direct purchasing of individual articles from publishers or licensing access to articles does help to facilitate access, but this does

not ensure either the preservation of information for future use, or for the sharing of information through inter-lending.

In conclusion, Librarians must rethink current trends, policies, procedures and practices, advocate for creative resource sharing through local, regional, national and international library associations, educate themselves as to best practices, and partner with other libraries. Only by doing all of this can librarians advance and preserve information access for current and future generations of students, scholars, world citizens, and lifelong learners.

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LIBRARIES OF NATIONAL LAW UNIVERSITIES IN INDIA: A STUDY

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Abstract

One of the emerging and important domain in the Information society is Law. Law provides a rich source of scholarly inquiry into legal history, philosophy, economic analysis and sociology. Law also raises important and complex issues concerning equality, history and society in various ways and serves as a mediator of relations between people.

Law is a highly knowledge-intensive subject field and obtaining accurate and up-to-date legal information is very important because it can mean the difference between winning or losing cases. The information work carried out by lawyers can be simple or complex, often involving finding and working with a bulk of different types of documents (e.g. law reports/legal cases, legislation, commentary articles, forms and precedents etc.), a wide range of legal topic areas and a range of jurisdictions. In order to maintain the professional character, the practice of law is typically taken care by either a government or independent regulating body such as a bar association, bar council or law society. Modern lawyers achieve distinct professional identity through specified legal procedures.

The University Law Library is the principal center of legal information because it contributes directly to the training of the upcoming young future lawyers. By the functions it performs, we can clearly distinguish it from other university libraries. In fact, no meaningful teaching, study or research in law could carried out without making use of a law library.

It was with this idea in mind that this study has been under taken, to examine profile of all libraries attached to National Law Universities in India, in terms of their learning resources, human resources, information services and the extent of automation.

Keywords: Law, Libraries, National Law Universities, India.

1. Introduction
1.1 Legal Information

Legal Information sources represent original material and the body of the law itself and related publications. It can be of two types: Primary and Secondary. Primary information sources for law are publications that originate from the executive, legislative and judicial branches of government at national, provincial and local level. There are different kinds of primary sources, eg. green or white papers, bills, statutes or acts, proclamations, regulations, by-laws, unreported court cases, reported court cases, the reports of commissions, treaties, conventions, Hansard and so on.

Statutory materials such as the Acts of Parliament are available in print and electronically and are published in the Government Gazette. Significant decisions of the courts, not necessarily cases which receive a lot of media attention, but ones that will assist in the interpretation of the law in similar cases, are selectively and commercially published in various sets of law reports on a weekly or monthly basis.

Secondary sources of information are works that originate from primary sources of information but provide commentary on those sources. These include reference works such as dictionaries and encyclopaedias, books, theses and dissertations, journal articles, loose-leaf publications, indexes and abstracts. Reference sources are publications that are used to find factual or specific information, eg. the meaning of words, phrases, names of places, etc., and these include materials such as dictionaries, encyclopaedias, directories, etc. Legal reference sources contain information that is specific to law and include publications. Books often provide a useful overview or in-depth examination of the relevant branch of law. Further information may be found in the footnotes of cases, books and articles, and in the bibliographies of books, articles, theses and dissertations, reports of commissions, and so on. Books will further refer the researcher to journal articles.

1.2 Concept of Law

Law is a system of rules that are brought about by the social institutions to govern the behaviour of the different bodies, organizations, communities etc. Laws can be made by a collective legislature or by a single legislator, resulting in statutes which can be called as formal written agreement of a legislative authority which governs the state, city or country. The formation of laws may be influenced by a constitution, written or tacit, and the rights encoded therein.

Numerous definitions of *law* have been put forward over the centuries. The *Third New International Dictionary* from Merriam-Webster defines law as: "Law is a binding custom or practice of a community; a rule or mode of conduct or action that is prescribed or formally recognized as binding by a supreme controlling authority or is made obligatory by a sanction (as an edict, decree, rescript, order, ordinance, statute, resolution, rule, judicial decision, or usage) made, recognized, or enforced by the controlling authority."

The *Dictionary of the History of Ideas* published by Scribner's in 1973 defined the concept of law accordingly as: "A legal system is the most explicit, institutionalized, and complex mode of regulating human conduct. At the same time it plays only one part in the congeries of rules which influence behavior, for social and moral rules of a less institutionalized kind are also of great importance."

1.3 E-Resources

The Electronic Resources refer to those materials which require computer access, the access can be through mainframe computers, personal computer or handled mobile device. In the library the electronic resources represents an important component of the collection development activity. The access may be done remotely through the internet or locally. Some of the most frequently used and encountered types of e-Resources are:

· E-Journals
· E-books
· Full-text databases
· Indexing and Abstracting Databases
· Reference Databases
· E-images
· Numeric and Statistical databases
· E-audio/visual resources

Today, Libraries of all types gives more importance on e-resources for developing the collection. They are now spending larger shares of their budgets to gain access to the e-resources from the vendors or the publishers. This is due to the fact that e-resources are more convenient form of resources to be used, and they have enabled libraries of all types to improve their services in many convenient ways. Such as, most

of the e-resources provide powerful search and retrieval tools, due to which it enable users to search and retrieve literature effectively and efficiently. The resources can be accessed 24 hours a day, provided they have a system and network.

1.4 E-Resources Services

Several types and forms of e-resources can be found on the internet; among them some of the popular ones are full text articles, electronic journals, technical specifications, standards, reports, trade reports and hosts of other document sources. The printed editions of scholarly journals are also available on the web. The publishers of the journals also provides services themselves, like full texts, abstracts of articles, contents, before the actual printed edition is put on the stands.

Electronic resources and its publishing have changed the nature of communications and sharing, and have led to a new era of more convenient way of resource sharing and communication. It creates opportunities for the users and as well as the publishers and authors. Many of the electronic publisher or electronic books' website provides the opportunity to allow users to give their feedbacks on works, often directly to the author. However, in order to have access to these resources the users may create their own accounts, make a payment gateway through credit cards or by other prearranged methods, and request for the resources to be delivered to them by e-mail, fax, etc.

The majority of the service providers are the publishers who have several journal publications on their credit, e.g., Springer, Taylor and Francis, Elsevier, Oxford University Press, Academic press, Blackwell Science and others. These services of the publishers are available to anyone having access to RSS feed free of cost. Some of the journals are commercial basis which are only available after payment a required amount, which allows users to view and if needed, per copy for the print also.

1.5 National Law University

National law University is one of the emerging institutions in the present world. The importance of the law university is to evolve and impart comprehensive and interdisciplinary legal education that is socially relevant. Through this education, these universities aim to promote legal and ethical values and foster the rule of law and the objectives enshrined in the Constitution. The University works toward dissemination of legal knowledge and its role in national development, so that the ability to analyze and present contemporary issues of public concern and their legal implications for the benefit of the public is improved. These processes strive to promote legal awareness in the community and to achieve political, social and economic justice.

Objectives:
· To evolve and impart comprehensive legal education continuing legal education at all levels to achieve excellence.
· To organize advanced studies and promote research in all branches of law.
· To disseminate legal knowledge and legal processes and their role in national development by organizing lectures, seminars, symbiosis, workshops and conferences.
· To promote cultural, legal and ethical values with a view top remote and foster the rule of law and the objectives enshrined in the Constitution.
· To improve the ability with a view to analyse and present for the benefit of the public, contemporary issues of public concern and their implications.
· To liaise with the institutions of higher learning and research within the country and abroad.
· To hold examinations and confer degrees and other academic distinctions

·   To promote legal awareness in the community for achieving social, economic and political justice.
·   To undertake study and training projects relating to laws, legislations and judicial justice.
·   To do all such things as are incidental, necessary or conducive to the attainment of all or any of the objectives of the University.

2. Objectives and Research Questions

The primary objective of the present study is to examine profile of all libraries attached to national law universities in terms of their learning resources, human resources, information services and the extent of automation.

The specific **objectives** of the study are:

·   Understanding the status of Libraries attached to National Law Universities in terms of their **strength for learning resources**, **human resources** and **information services** and **ICT implementation.**

Some of the significant **research questions** are:

·   Are Law University Libraries are having adequate human resource to manage ?
·   Is the extent of automation in libraries is partial or complete?
·   Are these libraries are having adequate number of learning resources to fulfill the needs of users?
·   Are these libraries have a fully functional library portal to deliver library services?

3. Scope and Limitations

The scope of the present study is limited to study the status of libraries attached to national law universities in India. Here "National Law University" means an institute/department that been given the status of National University for the discipline of law.

Here, in the broadest sense, the status of libraries refers to the availability of learning resources, professional human resources and information services. The study covers the learning resources, ICT implementation, human resources and the information services at these National Universities.

The study is limited to the 18 National law Universities in India, thus excluding several other progressive law colleges/ university departments where law is taught. Also, by expanding its scope to cover these colleges, this study would have achieved a greater level of acceptance and accuracy, as these colleges/ departments are also significant players.

However, despite the limitations with regards to time, and moneys this study has made an effort to understand the status of libraries at National law Universities. The findings of this study cannot be generalized for other law colleges and departments

4. Review of Literature

A total of about 50 articles published in the last five years for the period 2010-16 has been identified. These articles substantially indicate the growth and developments of libraries in general and at times, in the law libraries specifically.

The developments in ICT have greatly influenced the provision of current awareness services in law libraries. *Ballard and Blaine (2010)* states that in response to budgetary concerns and feedback from users, the New York Law School's Mendik Library needed to streamline the way it reported current law journal table of contents (TOC) information to its users. As part of this streamlining process, the librarians discovered that most of the journals they provided in paper had web pages that provided full access to all articles in their current issues. The librarians responded to this opportunity by building web pages that provided links to these journals and noted when a new issue had just appeared. The purpose of this paper is to assess the status of current awareness information in the field of legal journals and uncover the options

for best using them.

Explaining further the methodology, it is stated that the library worked from a list of journals that they purchased through paper subscriptions. They determined the web page location of each and then checked whether the journal provided TOC data only, full text through internet protocol recognition or open full text for at least the current issue. This study led to the findings that more than 60 percent of the law journals that Mendik purchased had online TOC available with full, free access to the content.

Given the ever changing dimensions of law librarianship, *Uluocha Anyaogu, (2010),* has written an article which aims to explore the need for training and retraining of law librarians and other information professionals on the critical art of technical services. That exploration becomes even more critical in view of the exponential growth of available legal information in primary, secondary and web sources and the attendant change in legal information processing and management. According to authors, the approach was an exploratory research design. The method was to first examine the course objectives of the workshop to ensure that it is well packaged to empower and re equip law librarians and information professionals. The next approach was to discuss the NIALS as the apex Institute for research and advanced studies in law. Then, the general overview of the workshop was discussed.

The findings of this study reveals that law libraries and law librarians are challenged to develop better retrieval tools that enable access to legal and other subject specific information needed by the library's critical public and clientele system – user community. This is being necessitated by the fact that computer and other electronic systems are now used in the provision of technical services such as the production of catalogue cards, indexing and abstracting of legal materials, to mention but a few.

Clinch, Peter (2010) has explained this further with his opinion of what a modern law library should have : in terms of its resources and services. This article originated from the document Society of Legal Scholars (SLS) document: A Library for the Modern Law School: the Statement of Standards for University Law Library Provision in the United Kingdom. Author was a member of the Working Party responsible for revising the standards and in this article he adds comments describing current practices relating to the standards.

With regards to developing standards for the Law libraries, the document by *Peter Clinch (2011)* is important. This Statement of Standards for University Law Library Provision is a comprehensive and flexible set of standards providing authoritative guidance for law schools and law librarians. It represents a broad and authoritative consensus of views. The Standards were originally drawn up by a consultative group established by the Libraries Sub-Committee of the Society of Legal Scholars in 1995 and approved by the Society after consultation with academic, professional and governmental bodies. They have now been comprehensively revised by a working party of the Libraries Sub-Committee, after extensive consultation.

The Standards themselves are expressed briefly and are designed to be of general application to libraries serving an increasingly diverse range of law schools and law school activities. They are applicable to the academic stage of legal education only (undergraduate and postgraduate), delivered through all modes of study, and are supported by a more detailed commentary

Discussing the nature of law library users, *(Beljaars and Winter, 2011)* mentions the profile of current users of academic libraries in Holland. They discuss their information requirements and usage; the relationship between the library and the law faculty; the use of digital resources in legal education and developments in legal information literacy.

On the aspect of legal information management, *Ruth Bird, (2012)* discussed that The Bodleian Law Library has only existed as an entity in its own right for less than 50 years. Yet part of the collection dates back to the days before the founding of the Bodleian Library in 1602. The rise and fall in fortunes of the

teaching of law at Oxford is closely tied to the establishment of the law library. A lesser known aspect of the history includes the ties between Oxford and the United States, especially its oldest law school, William and Mary Law School. In this paper, Ruth Bird offers a brief history of the University of Oxford and then looks at the history of law teaching, before moving on to the evolution of the Law Library itself, and some links with our cousins across the pond.

Information seeking behaviour is another emerging aspect of law libraries. This is done to investigate the information seeking behaviour and ICT utilization skills of undergraduate law students from the Faculty of Law at Adekunle Ajasin University in Ondo State, Nigeria. IN this paper, *Olorunfemi and Mostert, (2013)* explains that purposive sampling was used to select the law students. The sample size consisted of 356 law students.

The findings revealed that the respondents' main reason for seeking information was to become more knowledgeable about legal issues. Most respondents favoured traditional information sources and services such as textbooks, books on legal issues, and the law library. The majority preferred to use both print and electronic sources. Awareness of electronic resources was low, with most respondents unaware of their existence. The Internet was only used "when necessary", while Internet access was mainly through the use of mobile phones. The majority of the respondents had taught themselves Internet searching skills prior to attending university.

5. Methodology

This research is exploratory in nature and focuses on understanding the status of libraries attached to Law Universities in India. Hence, the appropriate method to fulfill research objectives and to answer the research questions of this study is the use of a quantitative approach. Survey research is used in this study to gather relevant information and its findings.

6. Data Collection

For the purpose of this investigation, data related to libraries attached to Law Universities was collected as below:

All the Law Universities and their libraries were studied based on the Telephonic Interviews with the respective library faculties information provided on their website. Also, several related documents were consulted which are available through several magazines, journals and other agencies.

7. Sampling

As per the scope of this study, only the libraries attached to National law Universities in India were chosen for examination. Currently there are 18 National Law Universities in India. This study uses Census sampling and all 18 universities are covered for study. The websites of these universities and their libraries were accessed and relevant data was collected.

8. Data Analysis

1. Learning Resources Availability: Number of Books in the Library

The data collected for all universities is tabulated and analysed. It indicates that there are only 2(11.11%) libraries which have a collection strength of 40,000 and above. Most of them 8(44.5%) have a collection of books in the range of 30,000 to 40,000 books. There are about 3(16.7%) libraries with collection ranging between 5000 to 10,000 books.

Table: Number of Books in the Library

Sl. No	Number of Books in Collection (Range)	No of Libraries (Percentage)
1	1 to 5,000	
2	5001 to 10,000	3 (16.7%)
3	10,001 to 20,000	1 (5.5%)
4	20,001 to 30,000	4 (22.3%)
5	30,001 to 40,000	8 (44.5%)
6	40,001 onwards	2 (11.11%)

Library Collection: Books
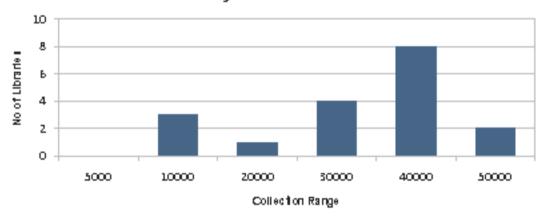
Figure 1: Number of Books in the Library

2. Learning Resources Availability: Number of e-Books

It is observed that the availability of e-books is still to emerge in a big way. There are only 3 (16.7%) libraries which have more than 1250 e-books among these law university libraries. Almost every library is having a collection of eBooks.

Table : Number of e-Books in the Library

Sl. No	Number of e-Books in Collection (Range)	No of Libraries (Percentage)
1	1 to 250	
2	251 to 500	5 (27.8%)
3	501 to 750	3 (16.7%)
4	751 to 1000	4 (22.3%)
5	1000 to 1,250	2 (11.11%)
6	1,251 onwards	3 (16.7%)

eBooks Collection Range
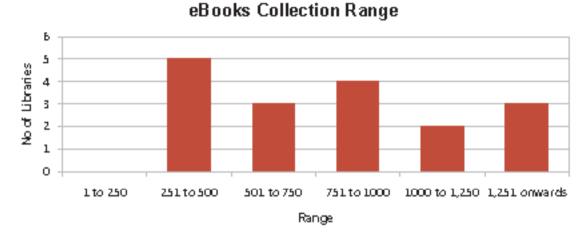
Figure 2: Number of eBooks in the Library
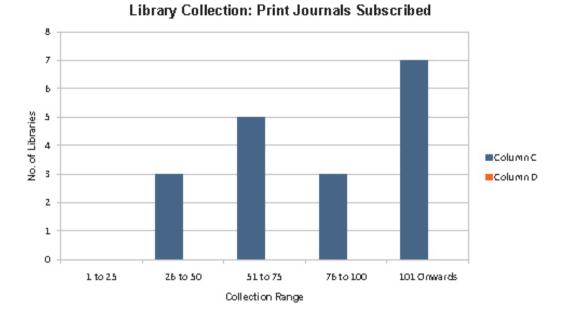
3. Learning Resources Availability: No of Print Journals Subscribed

Most of the libraries 7(38.89%) subscribe to about 101 and above print journals, followed by 3(16.7%) libraries between 76 to 100, 5(27.8%) libraries between 51 to 75 journals and finally 3 (16.7%) libraries subscribe to at least 26 to 50 print journals.

Table : No of Print Journals Subscribed

Sl. No	Number of Print Journals Subscribed (Range)	No of Libraries (Percentage)
1	1 to 25	0
2	26 to 50	3 (16.7%)
3	51 to 75	5 (27.8%)
4	76 to 100	3 (16.7%)
5	101 onwards	7 (38.89%)

Figure 3: No. of print journals subscribed

4. Learning Resources Availability: Electronic Journals

The electronic journals have a found a presence in these law libraries. There are at least 2(11.11%) libraries where about 501 or more e-Journals are being subscribed, followed by 5(27.8%) libraries which subscribe to 201 to 300 e-Journals. Ana equal number has also indicated for subscribing to 101 to 200 e-journals.. Some 6(33.33%) libraries subscribe to anywhere between to 1 to 100

e-Journals.

Table: No of electronic Journals Subscribed

Sl. No	Number of e-Journals Subscribed (Range)	No of Libraries (Percentage)
1	1 to 100	6 (33.33%)
2	101 to 200	5 (27.8%)
3	201 to 300	5 (27.8%)
4	300 to 400	0(00)
5	400 to 500	0(00)
6	501 onwards	2 (11.11%)

Figure 4: No. of E-Journals subscribed

Library Collection: eJournals Subscribed

5. Number of Online Databases Subscribed:

The Table reveals that majority of libraries 10(55.55%) have subscribed to at least 6 to 10 online databases. This is followed by 6(33.33%) libraries which subscribe to about 11 to 20 online databases. There is a single library 1(5.55%) which subscribes to about 21 to 30 online databases. The data shows a healthy trend of subscription to online databases.

Table : No of Online Databases Subscribed

Sl. No	Number of Online Databases Subscribed (Range)	No of Libraries (Percentage)
1	1 to 5	1 (5.55%)
2	6 to 10	10 (55.55%)
3	11 to 20	6 (33.33%)
4	21 to 30	1 (5.55%)
5	31 to 40	
6	41 onwards	

Online Databases Subscribed
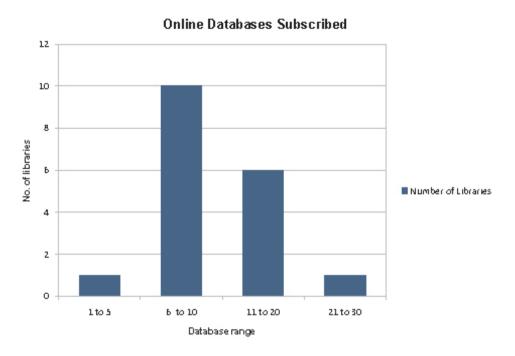
Figure 5: No of Online databases subscribed

6. Availability of Independent Library Building

It is observed that majority 11(61.11%) of law libraries have their own library building. About 7(38.9%) do not have their own building.

Table: Library Building Availability

Sl. No	Yes (Percentage)	No (Percentage)
1	11 (61.11%)	7 (38.9%)

Library Building Availability
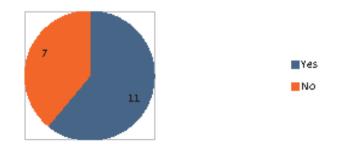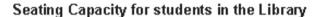
Figure 6: Library Building Availability

7. Seating Capacity of Library:

The study reveals that every library has a minimum seating capacity of up to 50 students. About 5(27.8%) libraries has seating capacity in the range of 301 to 400 and about 4(22.3%) has seating capacity of 201 to 300 students. Highest number of libraries 7(38.9%) has a seating capacity in the range of 101 to 200 students.

Table : Seating Capacity of Library

Sl. No	Number of Students that can study in library at any given point of time (Range)	No of Libraries (Percentage)
1	1 to 50	
2	51 to 100	2 (11.11%)
3	101 to 200	7 (38.9%)
4	201 to 300	4 (22.3%)
5	301 to 400	5 (27.8%)
6	401 onwards	
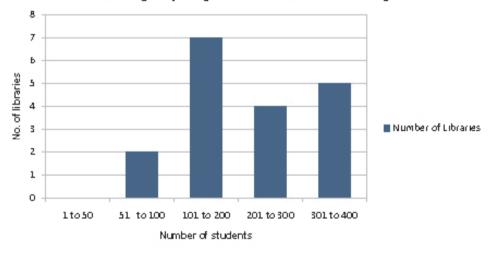
Figure 7: Total seating capacity for students in the library

8. Library Opening Hours

Based on the study, it is observed that majority of libraries 11(61.11%) have opening hours in the range of 16 hours, which is followed by 3(16.7%) libraries for 12 hours. There are 2 (11.11%) libraries which are kept open 24X7 and another 2(11.11%) which remain open for 20 hours.

Table : Library Opening Hours

Sl. No	Number of Hours that the library is kept open for Students (Range)	No of Libraries (Percentage)
1	4 Hours	00.00
2	8 Hours	00.00
3	12 Hours	3 (16.7%)
4	16 Hours	11 (61.11%)
5	20 Hours	2 (11.11%)
6	24 Hours	2 (11.11%)
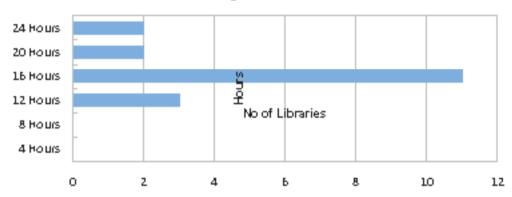
Figure 8: Library Hours

9. Library Human Resources: (Professional Staff)

The study reveals that there are at least 3(16.7%) libraries which have six professional staff and above. Highest number 8(44.5%) of libraries have about 3 professional staff, followed by 6(33.33%) libraries which have 2 professional staff in their libraries.

Table : Professional Staff of Library

Sl. No	Number of Professional Staff in Library (Range)	No of Libraries (Percentage)
1	1	00.00
2	2	6 (33.33%)
3	3	8 (44.5%)
4	4	00.00
5	5	1 (5.55%)
6	6 and above	3 (16.7%)

10. Library Human Resources: (Non-Professional Staff)

The availability of non-professional staff is examined and the data thus analysed in given in Table. Half of the libraries 9(50%) employ about 3 non-professionals in the library. About 2(11.11%) libraries employ each 5 staff and 6 and above members.

Table: Non-Professional Staff of Library

Sl. No	Number of Non-Professional Staff in Library (Range)	No of Libraries (Percentage)
1	1	00.00
2	2	5 (27.8%)
3	3	9 (50%)
4	4	00.00
5	5	2 (11.11%)
6	6 and above	2 (11.11%)

11. Information Services Provided in the Library:

The study with regards to the information services being provided by libraries has revealed interesting information.

Table: Information Services Provided

Sl. No	Information Service Type	No of Libraries (Percentage)
1	Reference Service	18 (100%)
2	Selective Dissemination of Information SDI	18 (100%)
3	News paper Clipping Service	18 (100%)
4	Digitisation	15 (83.33%)
5	Indexing/ Abstracting	16 (88.89%)

All the libraries 18(100%) are providing Reference Service, SDI and Newspaper Clipping Services. About 15 (83.33%) libraries provide digitisation services and about 16(88.89%) provide indexing and abstracting services.

12. Status of Library Automation

The study reveals that majority of libraries 15(83.33%) have fully automated their library administration and services. Negligible 2(11.11%) libraries are partially automated. Surprisingly, there is a single library which is yet to automate their library.

Table: Library Automation

Sl. No	Fully Automated	Partially Automated	Not Automated
	15 (83.3%)	2 (11.11%)	1 (11.11%)

Status of Library Automation
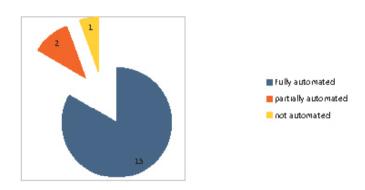
Figure 9: Status of library automation among the libraries

13. Library Portal: Availability of Library Website

Majority of libraries 15(83.33%) does have a separate library website. This functions like a portal for providing all library services. There are still 3 (16.7%) libraries which do not have their own library website.

Table: Library Website

Statement	YES	NO
Library Website is Available	15 (83.33%)	3 (16.7%)

Availability of Library website
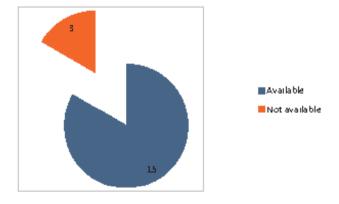
Figure 10: Availability of library websites

14. Availability of Internet Access

Majority of the libraries 17(94.44%) provide internet access within library. There is only one library 1(11.11%) which does not provide.

Table: Internet Access

Statement	YES	NO
Internet Access is provided Within Library	17 (94.44%)	1 (11.11%)

15. Availability of Wi-Fi

Among 18 libraries, there are 14(77.78%) libraries which provide WiFi within library for accessing internet. About 4(22.3%) libraries do not provide WiFi within library.

Table: Availability of Wi-Fi

Statement	YES	NO
WiFi is provided Within Library	14 (77.78%)	4 (22.3%)

16. Digitisation Services:

Majority of the libraries 15(83.33%) carry out digitisation work to create content. There are about 3(16.7%) libraries which do not carry our digitization work.

Table:Digitisation Services

Statement	YES	NO
Library carries out digitization Work to Create Content	15 (83.33%)	3 (16.7%)

9. Findings

1. It is observed that the learning resources collection of libraries is still growing at a slow pace. Majority of the libraries are yet to cross the range of 50,000 books.

2. The collection of eBooks is a mixed response as the range is distributed among various ranges. All the libraries have at least 250 eBooks in their collection, with top 3 libraries having more than 1250 eBooks in their collection.

3. Print Journals still continue to be a predominant mode as a considerable number of libraries (38.89%) subscribe to more than 100 print journals.

4. The scenario for e-Journals is encouraging. There are at least 2 libraries which subscribe to more than 500 e-journals. Similarly, the scenario for Online databases is also quite encouraging as every library has at least one database subscribed.

5. Majority of the libraries have acquired their own library building.

6. Seating capacity provided by these libraries is satisfactory as considerable number of libraries have at least 200 seating capacity.

7. Library opening hours range from 24 hours to 12 hours. Every library is open for a minimum of 12 hours.

10. Recommendations

1. Libraries are expected to spend considerable amount of their budget to strengthen the library learning resources like Books and Journals.

2. The major e-Journals and Online databases in the field of law needs to be subscribed. This will certainly strengthen the research culture.

3. There is a need to increase the number of professional staff in these libraries. This will help in providing quality LIS services.

4. The Internet and Wi-Fi facilities needs to be strengthened, as that is the area where libraries are heading in this age.

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LIBRARIANSHIP WITHOUT BORDERS: TAKING LIBRARY COLLECTION CONTENTS TO THE DOORSTEPS OF PRINT ILLITERATES AND TECHNOPHOBIC PUBLICS IN DEVELOPING COUNTRIES

C. P. Uzuegbu[1]
M. M. Naga [2]

Abstract

Framed under the authors' concept of librarianship without borders, the specific objectives of this paper include to describe effective methods for communicating information and knowledge to print illiterates and technophobic publics, and to draw inferences of the methods for library practice and library and information science education in developing countries. The desk research method was adopted for the paper. Taking a conceptual approach, the authors looked through the philosophical glasses of empiricism and rationalism to compose the paper.Community visits, information mapping, and focus group interactive meetings were didactically outlined as innovative and effective strategies of helping print illiterates and technophobic masses benefit from the variety of information and knowledge contents hosted in libraries'print and electronic collections. The implications of implementing the strategies were broadly examined. With the public library institution found suited for serving the user groups in focus, the resulting modifications required in practice and in education of library and information sciencewere discoursed. The authors recommended that librarians and their associated professional bodies in developing countries should consider and adopt thephilosophies proposed in this paper, as they are practicable and effective ways of actualising knowledge inclusive societies and fostering the overall progress of all mankind.

Keywords : Librarianship without borders, print illiterates, technophobic people, library collection contents, community visits, information mapping, focus group meetings.

Introduction

Libraries nowadays areenabled on a combination of print and technology platforms. This amalgamation of platforms help many libraries reach out to the hitherto unreached publics. Through computer and technological devices, libraries conduct rapid acquisition, organisation of collections,and circulation of information and knowledge materials to people regardless of their distance, race, and educational backgrounds. In turn, people's ability to read and write and utilise technological devices effectively has underlined the success of libraries. While this is where librarianship is today, the burgeoning reality in many developing countries where the manifestation of populaces who neither read nor write – the print illiterates – is unarguably common. And the fact that many people still fear or dislike computer and technology devices – the technophobic publics – even when they have access to it cannot be denied. All these make it

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imperative for library and information professionals to think out ways of helping theprint illiterates and technophobic masses access and utilise useful information and knowledge as specific contents of libraries' varied collections.This is where the concept of librarianship without borders comes to play.

Librarianship without borders is used in this paper to define the idea of taking library and information services outside the walls of libraries– both in libraries as traditional structures and in libraries as electronic and digital spheres. The idea here is to designate a team of information professionals whose sole responsibilities would be to constantly extract suitable and relevant information from the libraries' varied collections, repack and deliver same to the masses that are excluded from the print and technological service platforms of library and information centres. Yet, to pursue this venture effectively requires the exploration and articulation of peculiar ways and means, and thus, constitutes the focus of this paper.

Objectives of the Paper
·   To describeeffectivemethods for communicating information and knowledge to print illiterates and technophobic publics.
·   To draw inferences of the methods for library practice and library and information science education in developing countries.

Literature Review
Librarianship without borders can easily remind a reader of the popular term *Doctors Without Borders* which was all about a team of medical professionals established as an international humanitarian organisation in 1971 after working in Biafra during Nigeria's civil war of 1967-1970(Bortolotti, 2004). They, the Doctors Without Borders, served in Biafra and continues to serve in different parts of the world as an aid organisation whose sole interest is on welfare of war and disaster stricken victims This, perhaps, initiated the coining of the terms "Librarians Without Borders", "Libraries Without Borders",and "Librarianship Without Borders" as varying conceptions within the field of librarianship. Generally, the terms describe the umbrella bodies or associations of like-minded library and information professionals. For instance, "Librarians Without Borders" was constituted in 2005 as an organisation of socially-minded librarians whose motive is to bridge the information resources inequity across the world (http://lwb-online.org/). This organisation has built and equipped libraries, and has supported librarians in many developing countries of the world.

"Libraries Without Borders" is an active international non-profit organisation headquartered in London and works to accelerate learning and education in war and disaster stricken regions of the world (https://www.librarieswithoutborders.org/). For example, the intervention of Libraries Without Borders in Syria has provided lots of children access to technology and programmes to access reliable information and knowledge. And as to the term "Librarianship Without Borders", The Law Librarians of New England Newsletter (http://llne.org/wp-content/uploads/2014/01/Volume-26-Gazetteer-2006-2007.pdf)has described it as a professional development training programme for its members, but didnot explain further what the term implies.

Understandably, these three conceptions have focused on aiding access to learning, education and culture through the usual print and technological systems. The implication is that they teach people around the world how to read and write where necessary, and make people utilise technological devices to learn and get informed. But in cases where learning to read and write is not attainable among the people in focus, and wherebroad access to technology appears not to be the solution for people to learn and get informed, the mission of these conceptions would have failed. This, therefore, arouses the need to think along the concept of this paper where novel methods of helping print illiterates and technophobic people

get informed and utilise knowledge effectively is a primary concern.

The concept of this paper is somehow a modification of the practice of the twentieth century barefoot librarians. The barefoot librarians were mostly autonomous individuals whowere not affiliated with any library, but went out of their way to serve as agents between libraries and people living in remote locations where access to books/libraries is difficult (http://www.pitara.com/non-fiction-for-kids/features-for-kids/perus-barefoot-librarians/). From another perspective, the barefoot librarians were also seen as library professionals who take the pain and time of taking books and other reading materialsto people living hundreds and thousands of kilometres away from libraries and cities, and they had to travel by foot (Mchombu, 1986; Wijasuriya, Huck-Tee, &Nadarajah, 1975). Their efforts were recommendable. But even as their work benefitted some people then, Mchombu(1986) infers that many people in the African continent who could not read nor write and were not willing to learn or practice reading and writing could not benefit from the services of the barefoot librarians.This is where the difference lies from the present paper.

The concept of this paper is not set on serving reading materials to people living in remote places as barefoot librarians did. Rather, the idea of this is paper includes to deliver to remote dwellers some relevant and suitable contents (not books) taken from the broad collections of libraries. And the people that will serve the contents will be library and information professionals themselves as they are the most trained professionals that can identify, extract from collections and sources, match contents with information needs, analyse and repackage contents, and share contents in the most effective way and means. This is what similar concepts – as previous or as existing conceptions reviewed herein – could not accomplish and thus, becomes a gap that this paper would fill.

Methodology

The desk research method was adopted for this paper. Taking aconceptual approach, the authors looked through the philosophical glasses of empiricism and rationalism to compose the paper.Empiricism-wise (Psillos& Curd, 2010), the doctoral field experimental works of the authors which, individually, focused on information utilisation among rural publics in India and Nigeria provided them some real life experience into what print illiterates and technophobic publics face in relation to information access and utilisation. And as characteristics of rationalism (Stanford Encyclopedia of Philosophy, 2004), the authors' innate concept was pulled along, and was infused into their field experience in order to fulfil the outlined objectives of the study. As the two philosophical frames – empiricism and rationalism – remain valid approaches to research in library and information science (Hjùrland, 2000), synthesising or drawing from both of them in one study is epistemologically acceptable in social science research (Lacey, 1996).

Objective One – EffectiveMethods of Communicating Knowledge to Print Illiterates and Technophobic Publics

Print illiterates basically refer to those who cannot read and write fluently. Often than not, they have no attendance in any formal education. Most of them reside in villagesin rural parts of developing countries. Yet, thiscategory of people, as youths and adults, are not idlers as they are naturally engaged in one occupation or the other. They largely constitute the unskilled labour force in developing societies, and stand indispensable in the collective growth of their communities.

The technophobic publics represent the luddites. They are people who fear or dislike computer and technology devices, and consciously or unconsciously avoid using them to access information and acquire knowledge. Anecdotally, the educated people, especially the older people born before the evolution of computer technology, are the most technophobic group. But fundamentally, a majority of the technophobic

public are illiterates. And in the cases where many youths, like of these days, who are neither in school nor are educatedare seen using computer and technology devices effectively, studies are yet to show how much of required knowledge they acquire and utilise through their competence on technology devices.

Meanwhile, as real as it is, the library institution have not been and would not be relevant to the print illiterates and technophobic groups until these groups are located, identified, and systematically connected to the library institution through appropriate and individualistic information services. This is the core concern of this paper, and the objective of this particular section is to didactically describe how to effectively include these publics into the information service provision of libraries and information centres. Hence, the following successive innovative techniques ensue.

Community visits

This is the first innovative approach towards connecting print illiterates and technophobic people to information and knowledge. This approach requires a shift away from some traditional ethos. Here a team of information professionals are to be organised and saddled with the mandate of touring communities regularly. Their mission will be to locate specific communities and identify the print illiterates and technophobic masses in each community; articulate the information needs of the identified masses through varied means such as research and interviews; and sort the masses into categories that represent their information needs. These are the three-fold steps necessary to successfully implement the community visit approach.

Information mapping

After a successful outcome from a community visit, the next move expected of the constituted team is to go back to the library collections – the print collections and the electronic databases – and extract specific information according to the sorted information needs of the masses. Hence, the team would have to search through a variety of information collection and sources; extract and match contents with information need; and repackage contents into formats and structures that will suit the identified users. These are the procedural approach required to complete information mapping.

Focus group interactive meetings

With the required information ready to be delivered to the people that have needfor them, the next and final move is to revisit the communities and conduct focus group meetings with the people as earlier sorted into groups. The primary goal of the meetings would be: to verbally and expressively communicate the required information or knowledge to the people of each group; to interact on their feedbacks and clarify them accordingly; and to determine the value of the services rendered by assessing the people's application of information on real life situations, and by comparing their testimonies.To facilitate effective communication here, some technological tools would be necessary – such as computer projectors to project images, diagrams, films, and practical demonstrations – and would only serve the purpose of simplifying

Figure 1: A methodical approach to communicating information and knowledge to print illiterates and technophobic publics.

Objective Two – Inferences of theMethods for Library Practice and Library and Information Science Education in Developing Countries

The inferences of implementing the effective methods of communicating information and knowledge to print illiterates and technophobic publics have two facades. One is about librarianship as a practice, and the other is about librarianship as education.

Librarianship as a practice

Practice-wise, the implementation of the methods discussed in objective onehasfourimplications. Firstly, the concern to pinpoint the branch of library institution that will cater for print illiterates and technophobic masses would be a fair explanation. There are several types of libraries, best grouped into five as: academic libraries, school libraries, public libraries, special libraries, and national libraries. Academic libraries are designed to cater for the information needs of academicians, students, and researchers in higher institutions of learning, and ultimately support the tripartite function of academic institutions which are teaching, learning, and research (Budd, 1998).By its service scope, academic libraries are not supposed to be the branch of libraries that will objectively address the print illiterates and the technophobic masses of the society. School libraries are designed for school pupils and teachers and thus, refer to libraries that support the teaching and learning needs in elementary and secondary schools (Morris, 2013). The scope of this branch of the library institution excludes it from the context at hand. Public libraries serve the general public which naturally include everyone living within the service confines of a specific public library (Rubin, 2010). The centrality of the public library institution in serving information and communicating knowledge contents to print illiterates and technophobic masses is obvious and thus, exonerates the special and national libraries which function for and focus on user groups quite distinct from the type of user public covered by the public library institution. Forthwith, the discourse of this paper, without further recap to the type of library in context, is fundamentally addressed as a public library matter.

Secondly, the traditional philosophy of seeing the library as a static structure to be visited by anyone

wishing to benefit from its services must be modified. The modification in turn will add to the position of libraries by including them as institutions of outreach to communities. This is not an utterly strange idea to librarianship. Over the years, libraries and information services, both in their of print and technology platforms, have often been promoted on the concept of outreach services, extension programme, content repackaging, selective dissemination of information, and so on(Boyce & Boyce, 1995; Nkiko&Iroaganachi, 2015; Rosenberg, 1987).In like manner, the methods discussed in objective one are constructed in the spirit of these afore mentioned concepts but takes on novel steps to actualise the same goal. The point to draw within this frame is that library collections which cut across books, periodic and daily publications, reference works,research documents and so on, both in their print and in their electronic formats, contain specific information and knowledge which might be of varied relevance to those who cannot access them, extract or read through them by themselves. Hence, finding means and ways of conveying the contents of the diverse collections of libraries is absolutely necessary.

Thirdly, the departmentalisation of libraries would need some expansion or adaptation to create room for a team of professionals who will focus on the non-library user public. The non-library user public here are the print illiterates and the technophobic masses. This user public in question do not visit libraries and would likely not visit one throughout their lifetime. Why? – Because they are deficient in the skills and abilities that are required of effective library users of today: skills to use computer and technology profitably, and the ability to read and write fluently. Thus, recruiting or pulling together, under a designated department, men and women whose job routine would hub on reaching out and serving information to print illiterates and technophobic publics is essential. Library organograms would need to be redesigned to include such department and define its job. This is part of what scholars have called "rebranding"(ALA, 2013; Potter, 2013; Singh, 2011). The call to rebrand the traditional library and information services is a part and parcel of this approach.

Fourthly, the popular mind-set that libraries disseminate information would be overridden by the ideology that libraries through its staff communicate information as well. Apparently, *information communication* has a far-reaching implication as compared to *information dissemination*. Both terms, at a closer look, have different meanings. *Communication* broadly suggests some kind of two-way process of information exchange. In communication, the receiver of information shares an immediate active link with the sender of information, and can follow up on feedback where necessary. Hence, the feedback mechanism in communication largely differentiates it from the term dissemination. As clearly described in English dictionaries, to disseminate means to broadcast, to publish, and to spread information and knowledge without necessarily keeping immediate active connection with recipients, or to interact on feedback. So, implementing the methods discussed in objective one would also imply the adoption of communication – giving information content to people and interacting with them further on the feedbacks. This introduction is only an innovated process of the traditional concept of "ask the librarian", "reference desk", "inquiry portal", and so on which prevail in print and technological service platforms of libraries (Elmborg, 2002; Genz, 1998; Mane &Panage, 2015; Sachs, 2005).

These entire practice-wise philosophies are not mere theories and concepts that are impracticable. The authors have well corroborated this philosophy in various field experimental studies they have conducted. How does itwork? Let us examine one of the recent field experimental studies of the authors. In the said study, the focus of the authors was on how to connect print illiterates and technophobic men and women to dietary-related health information. The authors embarked on a library community visit to a village in Nigeria whose members were interviewed beforehand. Subsequently, the authors sourced information from the MEDLINE database of an academic library enabled on the PubMed search engine. They extracted and repacked information pertaining to dietary habits and lifestyle. After crosschecking that the repacked

contents matched the health related information needs hitherto identified, the same was verbally and interactively communicated to the village men and women during a two-time meeting with them in their village hall. So, a practice such as this is what this paper is proposing to libraries – particularly the public library institutions – to formally adopt and systematically replicate.

Librarianship as education

The education-wise implication of the methods outlined in objective one spins on modifying the curricula of training library and information professionals in developing countries. Librarianship as education and training is hinged on producing men and women who are able to manage information and knowledge, and aid people's access and use of same through countless ways and means. Globally, such men and women are having designations such as: librarians, library and information professionals, information scientists, documentalists, knowledge managers, and so on. These nomenclatures are in line with course modifications which have made the traditional library science education, previously viewed as a bookkeepingtraining, to transform into a broad spectrum of ways of connecting people to information and knowledge. There is no doubt that the global librarianship community acknowledges this educational shift. It is high time we understood that developing countries have got print illiterates and technophobic masses in their populations, and as such the curricula that will train people who will incorporate these categories of publics into library services need not to be a replica of the western curricula.

Actually, librarianship in developing countries requires a balanced education and training for its professionals. A balanced education and training here is that which will accommodate the print illiterates and the technophobic masses as much as it caters for the literate user groups. Ogundipe (1994) foresaw this long ago when he wrote that the training of librarians in developing countries needs to acknowledge their milieu. His argument was that the librarianship curricula of developing countries must be designed to graduate men and women who can be able to explore varied means and ways of rendering tailored library services to non-library users. Earlier on, Aboyade (1981) and Ogunsheye (1981) had independently shared the same view when they promoted a curriculum on rural librarianship and noted the need for localised library services respectively.

Evidently, the education and training of librarianship manpower in developing countries needs to take into consideration the information environment, social context, and cultural background of their populations. To conclude blindly that information and knowledge transfer has over the years evolved from oral, to textual, and now to electronic tools, without accepting the reality that many of the world's population still depend on oral communication, with many others still interchanging across the three, is a dilemma. The course and curriculum of librarianship education for developing countries needs to acknowledge this reality. We agree that training a manpower that will depend on technology to provide electronic information services to literate communities is nowadays (in today's digitally-global society) as important as never. Yet, we must accept as true that preparing a workforce that can manage information and knowledge orally and render effective information services to the print illiterates and technophobic publics that dominate the population of most developing countries is an extant need. So, it will be ideal to henceforth consider the user characteristics aspect of the developing countries' population and thus, modify the curricula of education and training of librarians to reflect same.

Conclusion and Recommendation

The incontestable fact that people who cannot read and write fluently (as print illiterates), and individuals that fear or dislike computer and technology devices (as technophobics) are present in many

developing countries steered this paper. The concept of librarianship without borders that ispromoted in this paper is practicable. However, implementingthis concept in public library institutions require some modifications in library practice and education. Such modifications are mere innovated processes that are within the purview of traditional philosophies of librarianship. The philosophies have been practically verified by the authors. This paper recommends librarians and their associated professional bodies in developing countries to consider and adopt the philosophies proposed in this paper as they have proved to be effective ways of actualising knowledge inclusive societies and fostering the overall progress of all mankind.

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LIBRARY AND INFORMATION SCIENCE LITERATURE DURING 2007-2016: A BIBLIOMETRICS ANALYSIS

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Abstract

Bibliometrics is a method where quantitative and statistical methods are used in the written communication to analyse them. It is a very important research in the field of Library and Information Science. It helps the library staff to select the most important literatures of any subject area and also the researchers to gain knowledge about the developing areas of any discipline. In this article bibliometrics methods are used to analyse the literatures of Library and Information Science available in the Web of Science Database. Total 2949 papers of 10 years during 2007 to 2016 are collected and analysed. The analysis is mainly based on biometrics laws and methods. It is applied to determine the year wise publication, Annual Growth Rate, geographical distribution, language wise distribution, degree of collaboration etc. This analysis helps to calculate the core literatures as well as the most prolific authors of library and Information Science available in the Web of Science Database.

Keywords: Bibliometrics, Library and Information Science, Annual Growth Rate, Degree of Collaboration

Introduction:

In today's competitive environment, data and its efficient management is the most critical objective of any organization. It is also a fact that now we are in the age of information explosion where people are bombarded with data and it is a difficult task to get the right information at the right time to take the right discussion. Bibliometrics helps to analyse the information and choose the right one from the ocean of information. It is one of the most productive research areas in the field of Library and Information Science. Lots of developments have been carried out by scholars and a lot of papers are published day by day. In this era of information explosion bibliometrics is very much important to choose the best one (mainly scientific journals). Bibliometrics means the mathematical and statistical analysis of books, journals and other media of communication. Total 2949 literatures are available in the Web of Science database during 2007-2016.

Bibliometrics:

The term "bibliometrics" was first used by Pritchard (1969) in his article "Statistical Bibliography or Bibliometrics" published in the "Journal of Documentation". "Biblio" means book and "Metric" means a scale or measure. Bibliometric means application of statistical studies in various documents mainly in scientific journals. According to Pritchard, bibliometrics is defined as "the application of mathematics and statistical methods to books and other media of communication." Potter defines bibliometrics as "the study

and measurement of the publication pattern of all forms of written communication and their author". The study of bibliometrics includes bibliometric distribution, citation analysis, content analysis etc. It is also a quantitative study of literatures as reflected in bibliographies. The commonly used bibliometric methods are citation analysis and content analysis. Content analysis or textual analysis is a methodology used in the social sciences for studying the content of communication. Content analysis uses citations in scholarly works to establish links to other works or other researchers. The three basic laws of bibliometrics are Bradford's law of scattering, Lotka's law of author's productivity and Zipf's law of word frequency.

Bradford's Law of scattering:

Bradford's verbal formulation stated that if scientific journals are arranged in order of decreasing productivity of articles on a given subject, they may be divided into a nucleus of periodicals more particularly devoted to the subject and several groups or zones containing the same articles as the nucleus, when the number of periodicals in the nucleus and succeeding zones will be as 1: n: n2, where 'n' is a multiplier.

Lotka's Law of author's prodctivity:

Lotka in his classic paper published on frequency distribution of scientific productivity presented an analysis of the number of publications listed in Chemical Abstracts from 1907 to 1916 with the frequency of publications of the authors and proposed an inverse square law of author productivity. This law states that the number of authors making 'n' number of contribution is about $1/n^2$ of those making 1 contribution.

Zipf's Law of word frequency:

This law states that in a long textual matter, if words are arranged in their decreasing order of frequency, then the rank of the text will be inversely proportional to the frequency of occurrence of the word.

Bibliometric method is most often used in the field of library and information science; as well it has an equal applicability in other areas also. In fact, in many research fields use of bibliometric methods is carried out to explore the impact of their field, the impact of a set of researchers, or the impact of a particular paper etc. Bibliometrics are now used in quantitative research assessment exercises of academic output.

Literature Review:

Prameswaran and Smitha(2004) in the paper 'Bibliometric analysis of LISA' discussed 60 issues of LISA published during the period 1994 to 1998. They highlighted in the analyses of subject wise breakup of articles, authorship pattern, India's contribution to LISA etc.

Sen (2010) discuss the meaning of author productivity and research productivity and shows the difference between the two in his paper 'Lotka's law ; a viewpoint'.

Deshmukh(2011) in citations in Annals of Library and Information Studies during 1997 to 2010 : a study' analysed 4141 articles in volumes 4141 articles in volumes 44 to 57 of Annals of Library and Information Studies. The main objective of this paper is to prepare a rank list of core journals in Library and Information Science, find the half-life period of journals and book citations and to analyse the authorship pattern.

Jasmine (2011) in the research paper 'Bibliometric analysis of earthquake literature 1998-2007' accessed 36049 records from Web of science and analysed authorship pattern, language and country wise distribution, authors productivity, the growth rate of earthquake literature in relation to some selected countries etc.

Mamdapur, Govanakoppa and Rajgoli (2011) analysed 8489 articles in Baltic Astronomy published during 2000-2008 and determine the distribution of contribution, authorship pattern of contributions, analysis of length of papers etc in the paper ' Baltic Astronomy (2000-2008) – a bibliometric study'.

Author from USA have contributed maximum papers and Astrophysical Journal is in the top position of the ranked list of journals.

Roy and Basak (2013) in 'Journal of Documentation : a bibliometrics study' analysed the articles of Journals of Documentation for authorship pattern, degree of collaboration, geographical distribution of papers and citation analysis of the papers. They also find out the author self-citation ratio.

Singh and Chander (2013) analysed 336 articles published during the period 2006-12 in the journal 'Library Management' and highlights the chronological distribution of articles, authorship pattern, geographical distribution of authors, citation pattern etc. The result showed that majority of the contributions by single authors and most cited documents are journal articles.

The main purpose of the paper 'Research productivity of Library Scholars: Bibliometric analysis of growth and trends of LIS publications' of Jabeen, Yun, Rafique & Jabeen (2015) is to explore the growth rate and trends of global publications in the field of Library and Information Science produced by Library Science professionals. They analysed 18,371 research articles published from 2003 to 2012 and observed significant growth of 11.3% in 2009.

Objective:

The main objectives of this study are –

i)   To analyze the year wise publication and hence to calculate the annual growth rate of the literature;

ii) To analyze the geographical distribution of the literature and geographical annual Growth Rate;

iii) To determine the core journals;

iv) To analyze the language wise and form wise distribution of the articles;

v) To find out the most prolific authors of the discipline;

vi)   To calculate the degree of collaboration;

Scope and Limitation:

Bibliometric techniques are not free from criticism. The analysis covers the WoS database of Library and Information science during 10 years. Some of the major limitations of the study are –

i)   Only the Web of Science database is analyzed in this study. But there are so many other Library and Information Science literatures are published which are not included in this study.

ii) The study is limited to only 10 years (2007-2016) literatures.

iii) Journal citations are not studied in this paper.

iv) The number of Web of Science changes every day.

Methodology:

Total 2949 literatures of the discipline Library and Information Science are retrieved from Web of Science database during 2007 to 2016 have been taken for this study. Web of Science (WoS) is a citation database which is a part of the largest Web of Knowledge. It is a comprehensive research platform in which journal articles, patents, websites, conference proceedings etc. can be accessed using powerful search and analysis tools. The details regarding each published literature such as title of the,authors, number of references with list, page number , year of publication, geographical area, language of the literatures etc., have recorded and analysed for this observation. All the data are saved in preparing tables in excel and word format to analyse them in excel.

Data Collection and Analysis:

Year-wise distribution of literatures:

Table:1 Year wise distribution

Year	No. of articles	Percentage
2007	198	6.71%
2008	220	7.46%
2009	208	7.05%
2010	244	8.27%
2011	244	8.27%
2012	267	9.05%
2013	316	10.72%
2014	285	9.66%
2015	454	15.40%
2016	513	17.40%
Total	2949	100.00%

Fig 1: Year wise distribution of articles
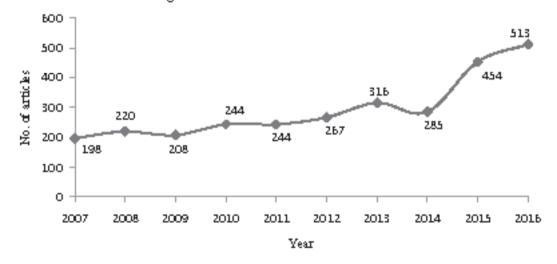
Table: 1 and the adjacent graph (Fig: 1) shows the distribution of 2949 papers (2007-2016) 0f library and information Science. The maximum 513 papers was published in 2016 which was 17.40% of the total publication and minimum 198 (6.1%) was published in 2007.

Annual Growth Rate (AGR):

Annual Growth Rate (AGR) means that what percentage the literature growsor decays from the previous year literature. Mathematically,

$$AGR = \frac{\text{Current decade publication} - \text{Previous decade publication total}}{\text{Previous decade total}} * 100 / \text{No. of years}$$

Table: 2 Annual Growth Rate

Year	No. of articles	AGR(%)
2007	198	
2008	220	0.11
2009	208	-0.05
2010	244	0.17
2011	244	0
2012	267	0.09
2013	316	0.18
2014	285	-0.09
2015	454	0.59
2016	513	0.13
Total	2949	4.74

The year wise Annual Growth Rate list is shown in the Table: 2. The AGR of the year 2015 is highest i.e. 0.59% followed by 0.18% in 2013. The AGR of 2012 is minimum 0.09% AGR of 2011 is 0 i.e. the number of literature published in 2010 and 2011 is same so there is no growth of literature. The AGR of the year 2009 and 2014 s negative, i.e. the number of literatures published in both 2009 and 204 is less than the number of literatures published in 2008 and 2013 respectively.

Geographical distribution of the literature:

Table: 3 Geographical distributions

Country	Total no. of articles	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)
USA	919	71	84	68	91	85	84	72	81	133	150
ENGLAND	362	25	25	24	21	33	35	68	42	42	47
PEOPLES R CHINA	228	1	5	7	10	14	22	27	39	54	49
CANADA	198	10	12	17	17	17	21	20	20	31	33
SPAIN	155	10	18	15	14	15	14	19	11	19	20
AUSTRALIA	149	9	11	12	25	14	14	18	9	18	19
BRAZIL	127	2	8	9	12	8	11	14	11	18	34
GERMANY	109	7	9	5	7	7	8	9	14	23	20

INDIA	79	1	4	5	8	8	6	6	7	16	18
IRAN	78	1	5	5	2	9	5	10	9	10	22
NETHERLANDS	74	5	5	2	5	5	5	12	11	12	12
SOUTH AFRICA	66	2	1	8	2	1	7	9	9	15	12
ITALY	59	1	1	3	6	5	7	10	5	9	12
SCOTLAND	58	6	4	5	7	5	4	9	5	4	9
DENMARK	57	7	4	0	5	6	6	12	4	7	6
SWEDEN	54	5	1	4	8	2	6	8	6	3	11
MEXICO	43	3	2	7	4	5	3	2	2	7	8
SOUTH KOREA	43	0	2	3	3	0	5	1	8	7	14
TAIWAN	43	0	6	2	3	4	8	6	3	5	6
FINLAND	41	6	2	5	2	1	2	5	3	7	8
MALAYSIA	40	3	1	5	1	3	1	6	5	8	7
NORWAY	38	3	1	6	3	4	5	6	2	5	3
BELGIUM	35	1	3	3	5	1	5	1	5	8	3
FRANCE	32	0	2	4	2	1	2	5	3	6	7
JAPAN	32	0	4	2	1	2	1	6	7	6	3
ISRAEL	31	2	2	2	5	2	3	2	6	4	3

Table: 3 depict the geographical distribution of contributions of the literatures. In the table top 26 prolific countries are listed each of which contributed at least 1% of the literature. Out of 2949 papers, highest 919 (31.163%) was contributed by USA, followed by England 362 (12.27%) and Peoples R China 228 (7.73%). India is in the 9th position in the ranked list. India contributed 79 articles in the field which is 2.68% of the total literature.

Country wise Annual Growth Rate:

Table: 4 Country wise Annual Growth Rate

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
USA	0.18	-0.19	0.33	-0.06	-0.01	-0.14	0.12	0.64	0.12	1.00
England	0	-0.04	-0.12	0.57	0.06	0.94	-0.38	0	0.11	1.14
Peoples R China	4	0.4	0.42	0.4	0.57	0.22	0.44	0.38	-0.09	6.76
Canada	0.2	0.41	0	0	0.23	-0.04	0	0.55	0.06	1.41
Spain	0.8	-0.16	-0.06	0.07	-0.06	0.35	-0.42	0.72	0.05	1.28
Australia	0.22	0.09	1.08	-0.44	0	0.28	-0.5	1	0.05	1.79
Brazil	3	0.12	0.33	-0.33	0.375	0.27	-0.21	0.63	0.88	5.08
Germany	0.28	-0.44	0.4	0	0.14	0.12	0.55	0.64	-0.13	1.57
India	3	0.25	0.6	0	-0.25	0	0.16	1.28	0.12	5.17
Iran	4	0	-0.6	3.5	-0.44	1	-0.1	0.11	1.2	8.66
Netherlands	0	-0.6	1.5	0	0	1.4	-0.08	0.09	0	2.30

South Africa	-0.5	7	-0.75	-0.5	6	0.28	0	0.66	-0.2	12.0
Italy	0	2	1	-0.16	0.4	0.42	-0.5	0.8	0.33	4.29
Scotland	-0.33	0.25	0.4	-0.28	-0.2	1.25	-0.44	-0.2	1.25	1.68
Denmark	-0.42	-1		0.2	0	1	-0.67	0.75	-0.14	-0.28
Sweden	-0.8	3	1	-0.75	2	0.33	-0.25	-0.5	2.66	6.7
Mexico	-0.33	2.5	-0.42	0.25	-0.4	-0.33	0	2.5	0.14	3.89
South Korea		0.5	0	-1		-0.8	7	-0.12	1	6.57
Taiwan		-0.66	0.5	0.33	1	-0.25	-0.5	0.66	0.2	1.28
Finland	-0.66	1.5	-0.6	-0.5	1	15	-0.4	1.33	0.14	3.30
Malaysia	-0.66	4	-0.8	2	-0.66	5	-0.17	0.6	-0.13	9.17
Norway	-0.66	5	-0.5	0.33	0.25	0.2	-0.67	1.5	-0.4	5.05
Belgium	2	0	0.66	-0.8	4	-0.8	4	0.6	-0.63	9.04
France		1	-0.5	-0.5	1	15	-0.4	1	0.16	3.26
Japan		-0.5	-0.5	1	-0.5	5	0.16	-0.14	-0.5	4.02
Israel	0	0	1.5	-0.6	0.5	-0.33	2	-0.33	-0.25	2.48

In the Table: 4 the list of country wise AGR is shown. The AGR of South Africa is highest i.e. 12% followed by Malaysia 9.17%, Belgium 9.04%, Iran 8.66% and Peoples R China 6.76%. The AGR of India and USA are 5.17% and 1% respectively. The AGR of Library and Information Science literature of Denmark is negative (-0.28%), i.e. the growth rate of Denmark decreases.

Journal distribution:

Table: 5 Journal distributions

Journal	No. of articles	Percentage
Cochrane Database of Systematic Reviews	276	9.36%
Journal of Documentation	94	3.19%
Information Research an International Electronic Journal	91	3.09%
Journal of the American Society for Information Science and Technology	88	2.98%
Scientometrics	87	2.95%
Electronic Library	76	2.58%
Library Information Science Research	73	2.48%
Health Information and Libraries Journal	72	2.44%
Journal of The Medical Library Association	67	2.27%
Library Trends	67	2.27%
Journal of Academic Librarianship	60	2.04%
Library Hi Tech	60	2.04%

Profesional De La Informacion	45	1.53%
Library Quarterly	39	1.32%
Investigacion Bibliotecologica	38	1.29%
Qualitative Quantitative Methods In Libraries	37	1.26%
Knowledge Organization	36	1.22%
Journal Of Librarianship And Information Science	34	1.15%
Malaysian Journal Of Library Information Science	34	1.15%
College Research Libraries	33	1.12%
Libri	32	1.09%
ASLIB Proceedings	31	1.05%
Journal of Ethnopharmacology	31	1.05%
Informacao Sociedade Estudos	30	1.02%

In the Table: 5 most prolific 25 journals are listed. Cochrane Database of Systematic Reviews contributed 276 (9.36%) followed by Journal of Documentation (3.19%) and Information Research an International Electronic Journal (3.08%). If the all journals are divided in 3 divisions then almost one third of the total papers i.e. 991 are covered by first 10 journals, the second zone contains 38 journals covering 989 articles and the third zone consist of 128 journals containing 969 articles. The ten core journals f Library and Information Science are Cochrane Database of Systematic Reviews, Journal of Documentation, Information Research an International Electronic Journal, Journal of the American Society for Information Science and Technology, Scientometrics, Electronic Library, Library Information Science Research, Health Information and Libraries Journal, Journal of the Medical Library Association, Library Trends.

Language wise distribution:

Table: 6 Language wise distribution

Language	No. f articles	Percentage
ENGLISH	2674	90.68%
SPANISH	142	4.71%
PORTUGUESE	64	2.17%
GERMAN	37	1.09%
JAPANESE	9	0.31%
FRENCH	7	0.24%
TURKISH	7	0.24%
RUSSIAN	3	0.10%
ITALIAN	2	0.07%
KOREAN	2	0.07%
POLISH	2	0.07%
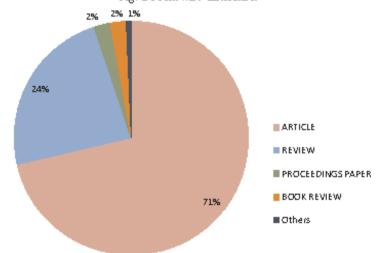
Major portion of the literatures are published in the English language as shown in the Table: 6. The number of papers published in English language is 2674 which is 90.68% of the total literature. The second and third positions are occupied by Spanish and Portuguese language 142 (4.71%) and 64 (2.17%) respectively.

Form wise distribution:

Table: 7 Form wise distributions

Document type	No. of article	Percentage
Article	2105	71.38%
Review	692	23.47%
Proceedings Paper	67	2.27%
Book Review	65	2.20%
Others	20	0.68%

Fig: 2 Form wise distriution

The form wise distribution is listed in Table: 7 along with the pie diagram. 2105 literatures are published in article form. It covers almost 71.38% of the total literature. Other form of literatures are Review 692 (23.47%), Proceeding papers 67 (2.27%), Book Review 65 (2.20%), and Others (like Book Chapters, Abstracts etc.) 20 (0.68%).

Most Prolific authors:

Table: 8 Prolific authors

Author	Contribution (No. of articles)	Percentage
Sugimoto CR	18	0.61%
Thelwall M	17	0.58%
Fourie I	16	0.54%
Gurusamy KS	16	0.54%
Davidson BR	14	0.48%
Bawden D	13	0.44%
Hjorland B	13	0.44%
Marshall JG	12	0.41%

Ding Y		11	0.37%
Robinson L		11	0.37%
Yan EI		11	0.37%
Jaeger PT		10	0.34%
Murphy J		10	0.34%
Pinto M		10	0.34%
Walters WH		10	0.34%
Aharony N		9	0.31%
Chang YW		9	0.31%
Rathbun-Grubb S		9	0.31%
Tsay MY		9	0.31%
Willett P		9	0.31%

The most prolific 21 authors are listed in the Table: 8. Sugimoto, CR contributed highest 18 papers (0.61%). He is followed by Thelwall, M (17 papers) and Fourie, I (16 papers).

Degree of collaboration:

In order to calculate the degree of collaboration among the authors in Library and Information Science Database the formula given by Subramanyam id used which is expressed mathematically as,

Collaborative degree of authors;

$$C = N_{(m)}/N_{(m)} + N_{(s)}$$

Where $N_{(m)}$ is the number of multi-authored papers during a specific period in a discipline & $N_{(s)}$ is the number of single-authored papers during a specific period in a discipline

In this literature,   Total paper = 2949

Single authored paper = 861

Multi authored article = 2088

It is clear from the above analysis that the percentage of single authored papers is less than that of multi-authored papers. So, degree of collaboration,

C   = 2088/(2088+861)

=2088/2949

=0.708

The highest degree of collaboration (DC) during the period is 0.708%.

Result and Findings:

The followingsresults have found from the above analysis:

·   In the year 2016 most of the Library and Information Science literatures are published and the Annual Growth Rate is highest in the year 2015.

·   USA produced most of the literatures in the discipline. India is in the 9ᵗʰ position in the production of Library and Information Science literature.

·   The AGR of South Africa is highest and the AGR of Denmark is negative.

·   The number of core journals of the discipline is 10.

·   Most of the literatures are published in article form in English language.

·   The Degree of collaboration is 0.708 i.e. majority of the library and information scientists prefers to contribute their papers jointly.

Conclusion:

There is an important role of bibliometrics and bibliometrics laws in the field of Library and Information Science. It helps in library management,bibliographic control and also to identify the users need. This is a tool used by the library and information science professionals for studying the research trends and growth of knowledge. It also helps in determining the obsolescence period of any literature of a particular discipline and it helps in wedding out policy of the library. Many researches have been carried out in various branches of bibliometrics. Hence we can conclude that, there is an important role of bibliometrics and bibliometrics laws in the field of Library and Information Science.

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LEARNING COMMONS: THE 21ST CENTURY LIBRARY WHERE THE USERS WANT TO BE

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Abstract

Today in the era of ICT libraries are to provide the 21st century learning environment to the society. Libraries are to be the Learning Commons, a creative space, an economic incubator, learning hubs and the key hole to the digital world where people can swim the information tsunami. In this paper the author tries to point out possible measures that may be adopted by the librarians to transform the traditional library into a learning common where the users want to be.

Keywords: Learning Commons, Traditional Library, Digital Library, Virtual Library, Cloud Computing

INTRODUCTION

Traditional concept of a library gives us the image of a place or building where books/documents are stored, processesed, organized and lent to its members in demand. The general concept among the public is library is all about lending books. If it is so, libraries in this era of googling and 365x24 hours access to internet library is nothing to its users. This attitude towards the library should be changed to keep library and the profession relevant. We, the library professionals, have the responsibility to make people believe that libraries are not merely about lending books, they are creative spaces, learning commons, economic incubators, learning hubs and the key hole to the digital world. In order to do this libraries are to be equipped with modern and relevant technologies. The government should come forward with positive approach towards library and be ready to provide adequate funding.

What is Learning Commons?

Learning commons, 'are learning spaces, similar to libraries and classrooms that share space for information technology, remote or online education, tutoring, collaboration, content creation, meetings and reading or study'.

*(*https://en.wikipedia.org/wiki/Learning_commons*)*

'A learning commons is an inclusive, flexible, learner-centered, physical or virtual space for collaboration, inquiry, imagination and play'.

https://education.alberta.ca/learning-commons/learning-commons/

TYPES OF LIBRARY

· Traditional Library

In Traditional Library emphasis is on storage and preservation of documents (books, journal, periodicals, manuscripts) under the supervision of the librarian. The role of the librarian is passive here. Users must travel to the library to use the documents available in the library.

· Digital Library

With the development of Information and Communication Technology the concept of digital library has become popular. In digital library the emphasis is on digitization of documents. Unlike traditional libraries where rowsing of documents is based on physical proximity of related materials, browsing in digital library is based on hyperlinks and keywords. Here users may use the library from anywhere and at their own pace and time.

· Virtual Library/ Electronic Library

WWW or internet is the basis of virtual library. The whole collection of a virtual library is available on the computer system and the services are accessible via internet.

PLANNING OF FUTURE LIBRARY

Today in the era of ICT libraries are to provide the 21st century learning environment to the society. Libraries are to be the Learning Commons, a creative space, an economic incubator, learning hubs and the key hole to the digital world where people can swim the information tsunami.

Library Building

Though it is the era of Virtual Library and internet is affordable to everyone through PCs, tablets or mobiles etc. it impossible to everyone to afford all the infrastructural facilities on these devices alone. So a especially designed library building with every kind of technological facilities is very important.

The library building should be designed in such a manner that it reflects the motto of the library i.e., access not collection, communication not preservation. It should be so designed that it takes care of different needs of the customers. It should be so designed that it proves to be at once ' a school, a home, a workplace, a church, a theatre and many other things besides.' It should be so designed that it can adapt changes as technology and user community needs change in future. It should be so designed that it "can provide places for commuter can easily access a variety of study settings and resources."

Library Furniture

If we want our library to be a place where people want to be, we should give our library a trendy look and in this regard library furniture play an important role. If we take library space as the stage in the theatre , furniture may be seen as props that can adapt and change with each act and scene (Paul White, 2013)[3]. Library furniture are to be designed to give the users a sense of belongingness and homely comfort. Furniture should be designed in such a way that they allow the library space to be used optimally. Furniture should eliminate the barrier between the library staff and its patron.

Library Collection

Traditional concept of library collection does not prove to be effective because of proliferation of web based documents. Other recent developments like web-based library management systems, open access publishing, new models of subscription also have posed challenges or the libraries.

If libraries want 'to thrive in 2020, libraries need to make ferocious and sustained shift in focus from collection to users' (Fontichiaro, 2013)[4]. Still the physical or print materials are very much important. They are not going away from the library. But libraries should give priority to broader access to e-resources and varieties of multimedia tools.

Library Technologies

Applications of latest ICTs in providing library services offer an excellent opportunity for the libraries to transform the traditional libraries into learning commons. Librarians should actively experiment and incorporate latest and cutting edge technologies in their digital library projects. The following sections deal with the technologies that libraries may incorporate in providing user services.

·   ILMS: Integrated Library Management Software automate library services like acquisition, processing and circulation. Now a day open source software like KOHA, New Gen Lib etc are very popular in India.

·   **Library Bookmark and guide:** This device gives the user turn by turn direction to locate documents in the shelves.

·   **Cloud Computing:** Digital contents are of the main focus now in library collection development policy. Digital contents include e-books, e-journals and different multimedia materials. All these require extra ordinary precautions in their preservation. Libraries have to maintain a full-fledged secured digital repository with digital preservation standards. But to maintain such a server is very costly. In this case libraries may take resort to cloud based services like Amazon Cloud Front, Dura Cloud, Rackspace ,Windows Azure etc.

·   **Mobile Library Applications:** Almost every patron now a day has smart phones in his or hand. This should take as an opportunity for the library. Libraries may develop a mobile view of their library data. They may use Word Press or Drupal Content management system.

·   **Application of Social Networking Sites:** Social Networking Sites like Facebook, Twitter, Academia. edu   etc. are very important to promote library services and marketing of the library.

·   **Campus wide Wifi Access,RFID, VUprint, 3D printing,   book delivery drone etc.**

Librarian

All the changes, whether they are about library architecture, library collection development, personnel recruitment and management revolve around the concept learning commons. One may find that recruiters look for a librarian who has sound knowledge of emerging technologies like HTML, scripting languages, back end of the OPAC, trouble shooting basic computer and printer problems and be able to translate library services into the online medium.

So, the librarians in the 21st century library environments must be able to embrace changes, comfortable in the on-line medium, able to troubleshoot new technologies, easily learn new technologies, keep up with new ideas in technology and librarianship. 21st century librarians are expected to have project management skill, to be able to question and evaluate library services, to be able to evaluate the needs of all patrons, to be critical of technologies and be able to compare technologies and be able to market and sell library services.

CONCLUSION

The world is changing very fast. The demands from the users end are also changing even faster. So, the libraries are to adopt changes not only to survive but also to perform its social responsibility. The libraries will have to adopt all possible measures with the help of latest technologies so that libraries may become learning commons, learning hub of the society, economic incubators and marketplaces of ideas.

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LIBRARY AUTOMATION USING Koha OS/ILS

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ABSTRACT

The research on Library Automation Using Koha OS /ILS Software was carried out to find out the software application problems, basic requirements of library automation, and users friendly status between applicant libraries and their merits, demerits, features, system architecture and its module, the international standard, and the cost effectiveness of Koha OS I LS. For the study primary and secondary data was used. Pretested questionnaire was used to collect the information on ILS Cost in terms of initial and perpetual cost, maintenance cost and infrastructure of the library. 27 related literatures have been reviewed from different literature sources i.e. different books, journals, website, library field visit, email message, conversation with professional staff and its expert. Descriptive analysis of the data collected from Central Medical Library, National Academy of Medical Sciences, Bir Hospital, Mahaboudha, Kathmandu, Nepal was done. It was found that that the Koha OSS is popular in both national and international market and was very useful and relevant on the aspect of service delivery. Koha software on the basis of its cost was found to be better software for medical library and its users.

1. Introduction:

In Nepal, ninety percent of the libraries are operated manually and remaining ten percent are using Koha ILS and other proprietary software. Proprietary software such as LIBRA,SILU, Libinfo, Siya, MIDAS, Milestone, Lib Info,Libsys, Momulus, Alice for Window, Free and open source software eg. Koha, PMB,PHP My LibraryFree software eg. CDS/ISSIS, WINISIS and Library Manager. For full text digital library used free and open source eg. Green Stone Digital Library (GSDL),d'space, E-print, Resource Space and Invenio. Proprietary Software for full text e.g.E-Zone. Open source software eg. Koha software is freely available in the web but it does not fulfil the library operation requirement i.e. acquisition, circulation, and serial management. Above mentioned proprietary software are costly and need service charge for problems handling.

Digital Library Network South Asia (2011) has mentioned that Koha is open source software of package. Koha software is popular in field of medical library because it has many features forretrieving bibliographic records but it does not have facility of providing full text document. One the other hand, Green Stone Digital Library (GSDL) and d'space has the facility of providing full text search facility. The similarity is that the software use open standard of OAI-PMH. Using this facility, effort is being made to integrate both the software packages so that users can have facility of bibliographic database as well as full text access.

Koha is first open source integrated library automation system. Koha was created in 1999 by Katipo Communications for the HorowhenuaLibrary Trust in New Zealand and the first installation was done in January 2000.

Koha software uses full featured Integrated Library System (ILS) for library automation. Now it is

maintained by a dedicated team of software providers and library technology staff from around the globe.

In OSS, the sequence of human readable computer instructions known as source code is open to view. Open source ensures that OSS and its derivatives may be freely viewed, used, copied, modified and redistributed. It is often developed in a public and collaborative manner. The license does not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources i.e. it include the Mozilla web browser, Apache web server, and Linux operating system. So, in the field of library automation popular OSS Koha.

1.1 Open Source Integrated Library System:

Library means a place where literary and artistic materials i.e. books, periodicals, newspaper, pamphlets, prints, records and tapes are kept for reading reference or for lending. All collected materials are systematically arranged systematically in various types of library i.e. special, community, public, academic library etc. But quick and fastest service in library is genuine question for library reader service and development of the library. So we need to develop fully automated library system in any country. It helps to save the time of user and staff. It also helps in preservation of collected reading material and information further generation.

Koha ILS is full featured software having facility of cataloguing, circulation, acquisition, serials control etc. It is based on client server architecture. Koha can be used from any operating system. Koha software includes MARC 21, Z39.50,Barcode generation, Web based, Unicode support and conversion features.

1.2 Implementation of Integrated Library System (ILS):

In a developing country like Nepal- aspect of cost, user friendly, access and maintenance are the deciding factor in the implementation of free open source ILS software. It is most widely used OSS in Koha ILS. The other reason for using Koha is its standardization and its features.

Possible cost that go along with open source might include fees for development, hosting of database, customization, installation, training and helpdesk support.

The other reason for using open source is not just about the code and the freedom to after the code but sharing of resources.

1.3 Statement of problems:

1. To know the adoption of International Standard.

2. To find out the cost effectiveness in term of initial software.

3. To find out the satisfaction rate of users.

4. To find out trained manpower.

5. Collection and development especially in changed context of increasing academic and research activities.

1.4 Objectives of the Study:

General Objectives:

To trace out technical gap of Koha on the basis of its users.

Specific Objectives:

1. To find out the expectation of library staff and the ILS has meet the requirement of library staff or not.

2. To analyze ILS cost in term of initial and perpetual cost

3. To find out the satisfaction rate of users with ILS.

4. To find out Koha facilities for users and librarians update as per modern technology development.

1.5 Scope and Limitation of the study:

1. The questionnaire included very few, simple and precise questions which could not deal more detailed information about library.

2. Study is confined inside the Kathmandu valley only.

3. The study is limited to Koha ILS and IT persons.

1.6 Significance of the study:

It is the new topic of the research. This study on National Academy of Medical Science (NAMS) library hopes to improve the way for the other similar studies in future and various medical purpose. This study will help to guide for the other libraries in future.

1.7 Define terms:

ILS: Integrated Library System: It is functional modules share a common bibliographic database.

OAI-PMH: The Open Archives Imitative Protocol for Metadata Harvesting provides an application independent interoperability based on metadata harvesting.

OPAC: Open Public Access Catalogue is an electronic catalogue. It also based called a webpac. It is used by libraries to share bibliographic information.

OSS: Open Source Software refers program of software in which the source code is available to the general public for use and or modification from its original design free of charge.

OS: Open standard are specifications such as equipment sizes, data formats, and network protocol. It facilitated for communication.

MARC21: Machine Readable Catalogue format is the standard used for the representation of bibliographic and related information for books and other library materials in machine readable form and their communication to from other computers.

Z39.50: This protocol is defined as the information search and retrieval protocol standard used primarily by library and information related systems. It is client server based protocol for searching and retrieving information from remote databases simultaneously using a single interface.

2. LITERATURE REVIEW:

2.1 History of Koha

Koha was originally developed in 1999 (Engard, NC, 14 May 2009). Since then it has been functionally adopted worldwide by thousands of libraries by adding features and functions, depending on their need capability of the system. The integration of the powerful Zebra indexing engine with the 3.0 release in 2005.

Introduction of Koha:

Koha is the first free and open source software library automation package (ILS). The development is sponsored by libraries of varying types and sizes, volunteers and support companies from around the world. The term of open source software is not always free only the source code is open and free to access

them, modify and distribute them as per need. It is a full featured integrated library system. There is no cost for the license, any organization have the freedom to modify the product to adapt as per institutional needs. Current source code and documentation are available for downloading under the GNU.

2.2Advantages of Open Source Software:

1. Timely access to information due to the fact that searching and browsing will be made easier and quicker, time for issuing and receiving of items to and from users will be reduced among others.

2. Enforcement of the Library regulation will be made easier by the fact that the system alert staff in case of violation and reminders automatically.

3. Reduced time of processing of library items.

4. Online supervision of library staff on carrying the library services will be made possible from the sectional head of the libraries as the activities in the system can be seen online.

5. Library statistics generation is possible.

6. Controlled expenditure i.e. through acquisition module, enabling management of budget.

7. Koha provides a number of modules that enable the performance of several library functions namely circulation, patron management, cataloguing, serial management, report generation, acquisition among others.

8. Any user can easily use koha system.

9. Other advantages are - MARC21 and UNIMARC facility for professionals cataloguers. It helps to manage online and offline resources.

2.3 Disadvantages of Open source software:

1. Koha automation software efficient handle only trained manpower professionals.

2. Documentation tends to be limited and aimed at developers. The usually is limited technical support, especially for users of the software.

3. Customization may not be as great as others proprietary software.

4. Currently unfeasible for the larger and more complex libraries.

Why Open Source Koha:

1. Cost effective.

2. Free to innovate and improve the software to meet their needs.

3. It is economical.

4. It is tested and demonstrated both stability and scalability, used in more libraries in worldwide.

5. Software collaboration and resource sharing software.

6. Long-term support i.e. technical - OS solution, stable code.

7. Under driven features in Koha.

8. Free download facility under the GNU and cost effective.

2.4 Features of Koha:

1. Full-featured ILS.

2. Full text searching.

3. Library standards compliant.

4. Web-based interfaces.

5. Free software/OS.

6. No vendor lock-in.

7. Operating System.

8. Support system.

9. Customizable web based.

10. Koha system architecture.

11. Koha server based OS.

12. Koha based on different modules.

3. FOCUS OF THE STUDY:

This study has tried to find out gap between user and staff. It has been analysed on the basis of cost and its services. It will identify in the same way to find out the better software for medical library and its users.

Different types of OSS are used in different libraries. The OSS software is highly required for knowledge management, without these we can't systematically arrange large amount of resources. So OSS is permanent solution and it gives us quick information about availability of resources. Now different libraries are using different OSS and proprietary software. Minimum Standard or parameter software should be mention MARC 21, Z39.50, Barcode generation, Web based, Unicode support and Minimum modules: Acquisition module, cataloguing module, circulation module, serial management module, administration module, report generation module, and OPAC.

Koha is full featured software having facility of cataloguing, circulation, acquisition, serials control etc. Data is easily converted from Winsis to koha and it is web based cataloguing so can be accessed through online Public Access catalogue. Books in Devnagari, Hindi can be catalogued by using Unicode. It also supports barcode reader for circulation. So, it is a full featured modern integrated library software.

3.1 Introduction of National Academy of Medical Sciences (NAMS):

Central Medical Library, NAMS is situated in Bir Hospital, which was established in 1971, as Bir Hospital Library. Government of Nepal, Ministry of Health and Population in January 1982 officially designated this library as the national focal point of HELLIS (WHO) program of Nepal. This library was serving to senior administrators, planners, researchers, doctors, faculties chief, student of different departments such as internal medicine, surgery, ophthalmology, paediatrics, radio diagnoses, dental etc.

3.2 Objectives, Mission and Vision of NAMS Library:

Central medical library NAMS library, Bir Hospital is a special library so the objectives of library is also special. **The objective of the library are:**

1. To provide quality medical literature service in the library.

2. To provide needed health information in producing highly trained manpower in the medical field.

3. To develop the academy as the national medical library to support quality health service and research.

Mission: The mission of the NAMS library is to advance the education, research, patient care and

public service programs of the university by obtaining, applying and dissemination biomedical information and the tools for its management and use.

Vision: The context for achieving this mission is the vision of an environment in which individuals using personal computers in classrooms, offices, laboratories, hospitals libraries and homes can access and obtain information when and where they need it, and in the format most appropriate to their need, regardless of where that information is located physically.

3.3 Facts and figures: 6000 medical books, 35 items of journals, 12 computers, 2 printers, 10 items daily news papers. Different types of services provided i.e. text book, reference book, photo copy, print, news paper and medical journal, internet service, HINARI service etc. There are also general rules and regulations and published by NAMS, PMJN (Post Graduate Medical Journal of Nepal) full text service available in www.nams.org.np

This library is fully automated by Koha software but was still found unmanaged due to the lack of professional librarian.

4. RESEARCH METHODOLOGY:

To carry out this study, researcher has followed the descriptive and questionnaire methods.

4.1 Research Design:

This study has tried to find out the role of open source Koha software. Descriptive method was used for the study. For the collection of primary data site visit, email, and questionnaires were used.

4.2 Population:

Central Medical Library, NAMS, Bir Hospital is the greatest and first medical library in Nepal for post graduate, DM, McHand other medical students. The library provides access to 276 post graduate students specialized in different subject, medical officers more than 200, staffs more than 1200 and over1000 student alumni of NAMS. For the purpose of research random sampling method is used. Its primary aim of a sample survey depends on the basis of field visit, objective of the study, statement of the problems, and questionnaire. All information are collected on the basis of the fact.

4.3 Data collection procedure:

Data collection techniques includes questionnaire and literature review. Descriptive method is used for the application of feedback and data analysis.

5. ANALYSIS AND INTERPR ETATION:

1. The cost of Koha software only covers the Koha Training cost. The initial cost of Koha software and new version updating cost are not necessary.

2. It is institutional standard and all basic requirements are available.

3. The NAMS library have strong basic infrastructure, former institutional librarians are efficient to handle Koha software and to participate in Koha software training.

4. Koha software includes all features and its models i.e. acquisition, cataloguing, full text, and circulation etc.

6. SUMMARY, FINDINGS, CONCLUSIONS, ANDRECOMMANDATION:

This study has been carried out in the central medical library, NAMS, Bir Hospital. The main objectives of this study was to investigate and find out better software which is more users friendly for library

automation and that are more adopted by other libraries on the basic of cost and software maintenance services in the local market. The researcher prime objective is to find out the better software on the basis of library management and digitalized resources.

6.1 Findings:

1. The Koha OSS have played vital role in the field of library automation in different medical library.

2. The library users are satisfied from bibliographic and full text data base management.

3. Collection in both the libraries are not adequate for users.

4. OS Koha software is comparativelymore cheaper but there is lack of trained manpower.

5. Comparatively Koha software are easy to handle than others proprietary and free software.

6. Comparatively Koha OS has long installation process than other software. Linux software is basic requirement for installation, and new version is frequently updated causing difficulty in updating the new knowledge.

7. There is monopoly market of OS software in Nepal.

8. Koha software is more user friendly because all Koha information's are available in website.

9. For an uniformity of libraries of Nepal, use of Koha is better option because less libraries are using other proprietary software.

6.2 Conclusion:

1. Both staffs and users are satisfied from using Koha OS software for library automation.

2. Lack of trained manpower on Koha.

3. Koha software popular in internal market of Kathmandu, Nepal and international market i.e. Koha software is being used in large number of library.

4. Koha software fulfil the five laws of library science

6.3 Recommendation:

1. Data conversion method should be made easier.

2. All library should focus on digital library and update with latest information in various fields.

3. Number of library staff should be increased on the basis of work load.

4. Accurate and relevant information should be provided to the users.

5. Library networking should be developed from web linkage.

6. OS Koha, electronic tools and software training program should be increased.

7. Library grant should be provide to expand the software application.

8. Library act and depository act should be provide for its development.

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MAPPING OF OPEN ACCESS LIBRARY AND INFORMATION SCIENCE JOURNALS ON SCOPUS: A SCIENTOMETRIC ASSESSMENT

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Abstract

Paper discusses the scientometric analysis of open access LIS journals based on Scopus. There are 21 open access LIS journals have been identified for the research which are published in English language only. SJR indicator and h-index values for the journals have been discussed and established that SJR will be future science quality indicator. Research productivity of open access LIS journals have been analyzed and found that "Library Philosophy and Practice" is most productive LIS journal. Further total references and 3 years base citations have been calculated and found that "Library and Information Science Research" has the highest number of citations and "Library Philosophy and Practice" has the highest number of references. United States has been found as most prolific country for LIS research.

Keywords: SJR indicator, *h*-index, Open Access, LIS Journals, Scopus, Citation Mapping.

1. Introduction

The foundation of modern librarianship rests on an essential set of core values that define, inform and guide our professional practice; these values reflect the history and ongoing development of the profession. A definition of the term is offered and the main functional areas of librarianship identified, together with characteristic of activity in the fields. Advancement in information and communication technology (ICT) has brought a multi-dimensional change in libraries and librarianship. Library and Information Science (LIS) professionals are very vigorous to show performance in disseminating knowledge as well as taking every problem in a collaborative way. So, day by day LIS research is going on to update the LIS professional with the current trends and build a rich collection of LIS publication. According to Parker (1974) "international librarianship consists of activities carried out among or between governmental and non-governmental institution, organization, groups or individual of two or more nation, to promote, establish, develop, maintain and evaluate library, documentation and allied service and librarianship and the library profession generally, in any part of the world".

"Scientometrics" was introduced by T. Braun in 1977 as the name of a journal. Scientometrics refers to 'those quantitative management methods which are used in the analysis of science regarded as a process of information' (Repanovici, 2011). According to Tague-Sutcliffe (1992), scientometrics is the study of the quantitative aspects of science as a discipline or economic activity. Thus, Scientometrics is a part of the sociology of science and has application to science policy making. Scientometric measurements include H-index and G-index. The *h*-index was introduced by Hirsch (2005) and simultaneously measures the quality and the sustainability of the impact of a researcher's publication. Egghe (2006) proposed

the G-index to measure the productivity of the researchers based on their publications. Scientometrics analyses the quantitative aspects of generation, dissemination and utilization of scientific information in order to contribute to the understanding of the mechanism of scientific research. The primary data of any scientometric investigation are represented by all the authors, their works, their bibliographical and the citations they receive. The set of data produced by a community (such as research groups, departments of universities, institutions, corporations, societies, countries, geopolitical regions, scientific fields or subfields) represent can vary and thus the evaluation indicators as well.

Scopus is the largest abstract and citation database of peer-reviewed literature in the form of scientific journals, books and conference proceedings. Scopus is delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, and arts and humanities. Scopus features smart tools to track, analyze and visualize research. There are number of scientometric studies conducted to map the research of specific field at micro and macro level. In the field of Library and Information Science (LIS), very few studies have been found which deals with mapping of LIS research in specific topic or country or database whereas no scientometric study conducted so far which have the coverage of open access LIS research indexed in Scopus. Therefore, the study is an attempt to map the open access research published in LIS journals indexed in Scopus. There are various scientometric indicators (SJR index, *h*-index, G-index) which are calculated based on total researches published in the journals and total citations received for that. Nowadays *h*-index, SJR index, G-index and citations are deciding factors for quality of research and builds high reputation of the journal itself. These factors give impression about quality of research of country as well as continent also.

2. Literature Review

Tripathi & Garg (2016) studied the publication output of India on cereal crops as reflected in Scopus database from 1965 to 2010 and observed that growth of publication output is highest in 2010. There were 38.93% research output in the field of rice; and the highest (33.6%) contribution by India, in domestic & foreign journals, with most of the prolific authors were from IARI, New Delhi. Renjith & Devarajan (2016) studied 444 publications published by Indian Institute of Geomagnetism (IIG) scientists during 2010-2015. Multiple authorship patterns are predominant factor in all publications and further linear growth of publications during 2010-2015 has been observed. Singh et al. (2016) analyzed 3529 scholastic output on breast cancer in India from 2005 to 2014 using Scopus and found that scholastic contribution is increasing since last 3 years with the highest four authored paper while 80% authors contributed only one paper. Total 25 core journals have been identified with the highest impact factor of 9.329 and observed that 11.81% papers were contributed by Indian researchers in collaboration with US researchers. Stojanovski et al. (2015) investigated 112 mapping science journals to determine the visibility of scientific publication using 14 bibliographic databases. The highest 94 journals were included in Google Scholar, Web of Science contain the fewest papers from mapping science journals (15,204) but it included an average of 800 papers per journals, which is more than Google Scholar and Scopus. Patra (2014) traced the citation and authorship pattern of selected LIS journals during 2000-2013 based on Google Scholar. Publish or Perish software was used for analyzing results and found that Indian LIS journals were not covered in Web of Science whereas their coverage in Scopus and ISI databases was very limited. Finally, concluded that Indian LIS researchers should focus more on collaborative research for better visibility and relevance. Barik & Jena (2014) analyzed 385 articles indexed by Scopus database during the period of 2004-2013 to know the growth of LIS research articles of India, and it has been found that highest number of (20.7%) articles published in 2013 with annual average growth rate of 16.49%. Two authors collaboration has dominated with highest (43.89%) articles, degree of collaboration has range from 0.2 to 0.57 with mean value 0.36.

Jalal (2013) investigated the quantitative growth and development of webometric research through the publication output. There are 154 articles published during the study period and average publication per year was 12.83. The journal "Scientometrics" produced highest papers on Webometrics. Wilson et al. (2012) surveyed 693 Australian LIS educators serving for at least two years in Australian LIS programs from 1959 to 2008 by using 8 databases. They observed mean of over 80% across databases, increase of number of authors; sharing of journals articles in more national than international, a heavily skewed productivity distribution with nearly one third of longer serving academics producing number of journals articles and small number of longer serving academics authoring or co-authoring over one-fourth of all the journals articles. Hussain & Fatima (2011) analyzed 62 articles of the specific journal and found that USA has the highest number of contribution and the journal is notably become a scholarly journals for LIS professionals. Burtis & Taylor (2010) identified the updated list of core health education journals for the year 2006-2008 and determined the coverage of these journals by electronic indexes. There were 19,907 citations in 602 source articles. Of the 1,896 journal titles cited, 20 (1.1%) made up the core journals. Together, the fields of Medicine, Health Education, and Psychology accounted for 85.0% of the journals in the core. Self-citation was found to be a common practice in the source journals. Scopus had the broadest journal coverage of the indexes examined. Leydesdorff et al. (2010) using Scopus dataset from 1996-2007, a grand matrix of aggregated journal-journal citations constructed which can be compared in terms of the network structures with the matrix contained in the Journal Citation Reports (JCR) of Institute of Scientific Information (ISI) and find that ISI data are more cleaning, standardization and normalization procedures than Scopus in the cited references. Meho & Sugimoto (2009) studied about uses of citation from 1996 to 2007 to the work of 80 randomly selected full-time, Information Studies (IS) faculty members from North America to examine differences between Scopus and Web of Science and found that when analysis is on smaller citing entities (journals, conference proceedings, institution) the two databases produce considerably different result while for large citing entities (research domains, country) produce very similar pictures of scholarly impact.

Boell (2007) compiled a comprehensive master list of 1,205 journals publishing articles relevance to LIS over the last 40 years. A total 968 active journals mostly published in English with one third of the journals from US and other third from U.K. and Germany. Nearly 16% of all journals were open access, 11% had ISI-JIF and 42% were peer reviewed. Costas & Bordons (2007) found the relationship of *h*-index with other bibliometric indicators at the micro-level, analyzed for 337 Spanish Research Council scientists in the area of "Natural Resources" published during 1994-2004 from Web of Science. The findings indicate that production of Natural Resources scientists amounted to 6093 documents and productivity ranged from 1 to 162 documents, while the number of citations ranged from 0 to 2201 and the number of citations per document from 0 to 40.96. The *h*-index ranged between 1 and 29. Sin (2006) analyzed the geographical affiliations of authors in 20 International LIS journals which were indexed in SSCI to track the longitudinal changes in LIS authorship patterns. USA contribution was found to be 57%. In 2003, the highest papers were contributed by authors from 51 countries and there were 432 international papers with 703 international authors. Gini co-efficient of LIS publication distribution was found 0.9890 in 1980 and 0.9527 in 2003. Also found that high income countries tend to publish more articles and their publication tends to get cited more often than those of low income countries. Jacso (1998) discussed the use of advanced search commands and the journal Name Finder database of DIALOG, to simplify the collection and processing of posting information for 42 prestigious LIS serials between 1966 and 1996 in six databases. In his study, it has been found that 42% journals claimed to be core journals by ISA. Harter (1998) covered 39 scholarly peer-reviewed e-journals in his study and found that top-five most

highly cited e-journals were 'Bulletin of the American Mathematical Society (BAMS)', 'Online Journal of Current Clinical Trials', 'PACS Review', 'Digital Technical Journal', and 'Phycology'. BAMS has the most significant impact and a successful journal on the field of Mathematics. The raw citation data in the study shows that almost none of the scholarly, peer-reviewed electronic journals in the sample have had a significant impact on formal scholarly communication in their respective fields.

3. Scope of the Study

The study is confined to map the research contributions of open access LIS journals indexed in Scopus database through scientometric assessment during 2011-2015. Further the study is made limited to the journals published in English language only. There are 21 open access journals published in English language worldwide and indexed in Scopus. The list of open access LIS journals are given in table 1.

4. Objectives of the Study

The objective of the study is to map the open access LIS research in global perspective through scientometric methods. The specific objectives for the study are to:

a) Examine the SJR indicator and *h*-index of LIS journals indexed in Scopus.

b) Identify most productive journals in the field of LIS indexed in Scopus.

c) Find out the total published documents and references for LIS journals.

d) Calculate the citation data for LIS journals indexed in Scopus.

e) Find out the most prolific country for LIS research as per Scopus.

5. Methodology

The study is designed to investigate the mapping of open access LIS research published in journals indexed in Scopus database through scientometric methods. There are 21 open access LIS journals indexed in Scopus database. The study has been conducted for five years starting from 2011-2015. The data has been collected from Scopus database and tabulated in MS-Excel.

6. Data Analysis & Interpretation

a) Mapping of LIS Journals based on SJR indicator and h-index

SCImago Journal Rank (SJR indicator) is a statistical technique to measure the scientific influence of scholarly journals that accounts for both the number of citations received by them and the importance or prestige of the journals where such citations come from. The SJR indicator has been developed to be used in large and heterogeneous journal citation networks. SJR indicator values for the journals represents their "average prestige per article" and not for the whole journal and this indicator can be used for journal comparisons in science evaluation processes.

Table 1 represents the SJR indicator as well as *h*-index values to the open access LIS journals for five years. From the observation of table 1, it has been found that journal "College and Research Libraries" has the highest SJR indicator during 2011-2015 which displays the highest average prestige per article for the journal followed by "Library and Information Science Research", "Information Technology and Libraries", "Journal of the Medical Library Association", "ASLIB Journal of Information Management", and "D-Lib Magazine" etc. in the case of Indian open access LIS journals, there have been two journals (Annals of Library and Information Studies and DESIDOC Journal of Library and Information Technology) are in the list. The SJR indicator value for "Annals of Library and Information Studies" and "DESIDOC Journal of Library and Information Technology" is 0.29 and 0.22 respectively. This SJR indicator values

for Indian open access LIS journals are very less than "College and Research Libraries" but comparatively higher than few of the journals. The figure 1 displays graphical representation of SJR indicators for open access LIS journals which also proves the correct interpretation of data given in table 1.

Table 1: SJR indicator & h-index values of open access LIS journals

Journal Title	SJR value					Average SJR value	h-index
	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015		
Annals of Library and Information Studies	---	0.139	0.283	0.334	0.4	0.29	5
ASLIB Journal of Information Management	0.731	0.684	0.571	0.57	0.65	0.64	29
College and Research Libraries	1.856	2.447	3.62	2.925	2.296	2.63	38
DESIDOC Journal of Library and Information Technology	---	---	0.139	0.229	0.279	0.22	4
D-Lib Magazine	0.48	0.467	0.606	0.809	0.408	0.55	40
Evidence Based Library and Information Practice	---	0.101	0.294	0.316	0.586	0.32	6
Information Research	0.544	0.579	0.514	0.338	0.427	0.48	34
Information Technology and Libraries	0.698	0.778	1.312	0.917	1.126	0.97	25
International Journal of Information Science and Management	0.177	0.2	0.135	0.113	0.148	0.15	6
Issues in Science and Technology Librarianship	0.228	0.46	0.444	0.376	0.18	0.34	9
Journal of Educational Media and Library Science	0.149	0.146	0.184	0.117	0.115	0.14	5
Journal of the Medical Library Association	0.871	1.406	0.765	0.843	0.726	0.92	43
LIBER Quarterly	0.217	0.331	0.269	0.219	0.315	0.27	8
Library	0.17	0.116	0.101	0.15	0.101	0.13	9
Library and Information Science Research	1.596	1.957	1.848	1.483	1.629	1.7	41
Library Philosophy and Practice	0.273	0.312	0.174	0.285	0.158	0.24	11
Libres	0.412	0.138	0.136	0.147	0.199	0.21	7
Pakistan Journal of Library and Information Science	0.104	0.101	0.143	0.15	0.102	0.12	2
School Library Media Research	0.182	0.188	0.101	0.187	0.243	0.18	9
Transinformacao	0.101	0.101	0.113	0.13	0.165	0.12	2
Webology	0.237	0.234	0.25	0.29	0.208	0.24	8

The table 1 also displays the *h*-index values for the open access LIS journals. Figure 2 represents *h*-index values for the open access LIS journals in graphical manner. Based on *h*-index value, it has been observed that "Journal of the Medical Library Association" has the highest *h*-index (43) amongst open access LIS journals followed by Library and Information Science Research (41), D-Lib Magazine (40), College and Research Libraries (38), Information Research (34), ASLIB Journal of Information Management (29), Information Technology and Libraries (25) and so on. Rests of the open access LIS journals have *h*-index less than 20 and Indian open access LIS journals have *h*-index values 5 for Annals of Library

and Information Studies and 4 for DESIDOC Journal of Library and Information Technology which is very low in comparison to Journal of the Medical Library Association (JMLA) though many of the prestigious journals have lower h-index.
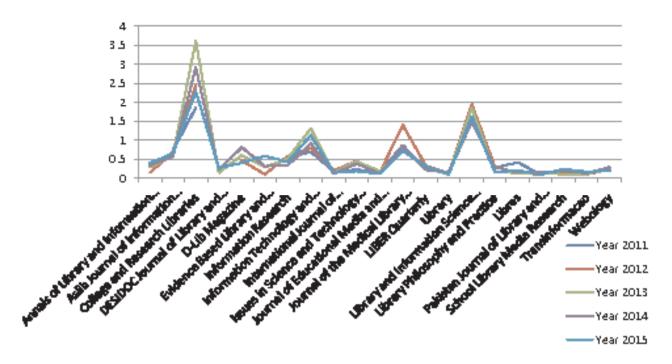
Fig. 1: Graphical representation of SJR indicators of open access LIS journals
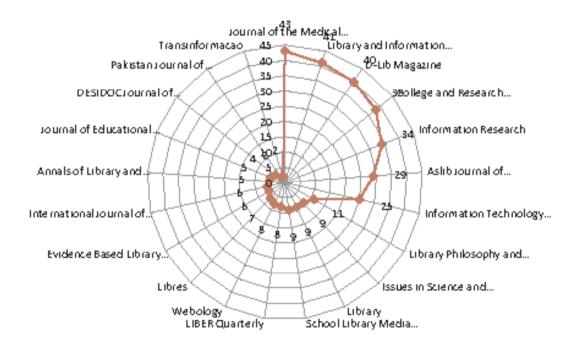
Fig. 2: *h*-index of open access LIS journals

So, based on SJR indicator and *h*-index values of the open access LIS journals, it have been established that Journal of the Medical Library Association, Library and Information Science Research, D-Lib Magazine, College and Research Libraries, Information Research, ASLIB Journal of Information Management, and Information Technology and Libraries are the highly reputed and prestigious journals in the field of Library and Information Science.

a) Mapping of Productivity of LIS Journals

Table 2 displays the productivity of open access LIS journals during the study period supported by figure 3 also. On the observation of table 2 and figure 3, it has been found that there are 3381 research documents produced by the open access LIS journals during the five year period and on an average 676 research articles per year. The year 2014 encountered as the highest productive year followed by 2012, 2011, 2015 and 2013 respectively. Further, in the case of 21 open access LIS journals, on an average 161 research documents published by the each journal during the study period. The journal "Library Philosophy and Practice" has been found the most productive journal during the period with 493 research documents followed by Evidence Based Library and Information Practice (299), Journal of the Medical Library Association (289), D-Lib Magazine (251), Information Research (234), College and Research Libraries (217), Library and Information Science Research (193), DESIDOC Journal of Library and Information Technology (182), ASLIB Journal of Information Management (177) and so on. Three journals have not reported their productivity data for few years and so reported less research documents than others which lead to lower productivity during the study period.

Table 2: Productivity of open access LIS journals

Journal Title	Total Documents					Total
	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	
Annals of Library and Information Studies	--	29	27	45	22	123
ASLIB Journal of Information Management	36	36	34	35	36	177
College and Research Libraries	39	38	40	46	54	217
DESIDOC Journal of Library and Information Technology	--	--	66	63	53	182
D-Lib Magazine	44	41	43	55	68	251
Evidence Based Library and Information Practice	--	67	87	62	83	299
Information Research	56	52	52	52	22	234
Information Technology and Libraries	32	32	26	19	27	136
International Journal of Information Science and Management	15	26	23	30	20	114
Issues in Science and Technology Librarianship	36	27	18	35	36	152
Journal of Educational Media and Library Science	25	25	19	22	18	109
Journal of the Medical Library Association	57	77	57	51	47	289
LIBER Quarterly	16	37	8	18	13	92
Library	11	13	10	10	6	50
Library and Information Science Research	43	40	41	35	34	193
Library Philosophy and Practice	195	78	0	156	64	493
Libres	6	1	7	11	4	29
Pakistan Journal of Library and Information Science	17	7	7	0	0	31
School Library Media Research	11	14	8	7	5	45
Transinformacao	18	18	24	30	27	117
Webology	10	10	12	9	7	48
Total	667	668	609	791	646	3381

Moreover, some journals are having productivity less than the average of each journal and even reported 29 research documents during the five years of study period. The "Pakistan Journal of Library and Information Science" is the one of prestigious journal of LIS published from the Pakistan and reported the second least productivity amongst all open access LIS journals.

Indian journals are much better than Pakistan based LIS journal and some others in terms of research productivity during the period and even both of the Indian journals have not fully reported by the Scopus database then comparatively having good number of productivity also. DESIDOC Journal of Library and Information Technology have three years research productivity data which is higher than the average research productivity of each journal during the period. It has been inference that Library Philosophy and Practice, Evidence based Library and Information Practice, Journal of the Medical Library Association, D-Lib Magazine, Information Research, and College and Research Libraries are the most productive LIS journals in open access form.
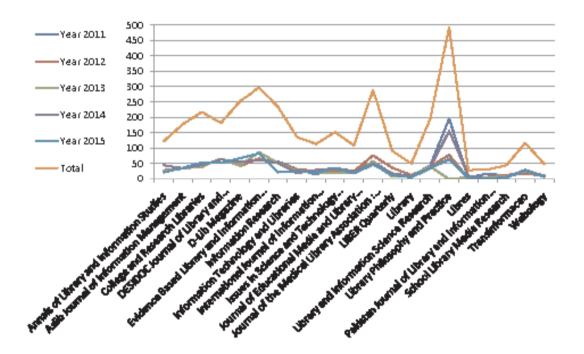
Fig. 3: Productivity of open access LIS journals

a) Mapping of Total Published Documents and Total References of LIS Journals

Table 3 presents the total number of published documents in the LIS journals and total number of references cited in those documents during the study period and its graphical representation has been supported by figure 4. On the analysis of table 3 and figure 4, it has been found that there are 3381 research documents published in the open access LIS journals and 85382 references found in those documents. It gives on an average more than 4065 references per LIS journal. The journal "Library Philosophy and Practice" has the highest number of references (10789) for its highest number of published documents (493). The journal "Evidence Based Library and Information Practice" has second highest number of published documents (299) and have only 3293 references whereas "Information Research" has 9846 (second highest) references for its 234 published documents.

Table 3: Total published documents and total references of open access LIS journals

Journal Title	Total Documents and Total References										Total Doc.	Total Ref
	Doc. 2011	Ref 2011	Doc. 2012	Ref 2012	Doc. 2013	Ref 2013	Doc. 2014	Ref 2014	Doc. 2015	Ref 2015		
Annals of Library and Information Studies	--	--	29	468	27	598	45	1043	22	478	123	2585
ASLIB Journal of Information Management	36	1375	36	1169	34	1370	35	1680	36	2117	177	7711
College and Research Libraries	39	1158	38	1090	40	1456	46	2008	54	2148	217	8455
DESIDOC Journal of Library and Information Technology	--	--	--	---	66	995	63	988	53	888	182	2816
D-Lib Magazine	44	541	41	544	43	570	55	568	68	1164	251	3387
Evidence Based Library and Information Practice	--	--	67	794	87	1088	62	500	88	961	299	3298
Information Research	56	2109	52	1989	52	2526	52	2277	22	945	294	9846
Information Technology and Libraries	32	558	32	608	26	382	19	440	27	552	136	2540
International Journal of Information Science and Management	15	322	26	547	23	598	30	602	20	617	114	2686
Issues in Science and Technology Librarianship	36	500	27	428	18	222	35	405	36	398	152	1946
Journal of Educational Media and Library Science	25	788	25	794	19	817	22	818	18	763	109	3980
Journal of the Medical Library Association	57	1173	77	999	57	1122	51	970	47	498	289	4762
LIBER Quarterly	16	307	37	538	8	133	18	425	13	310	92	1613
Library	11	681	13	548	10	628	10	955	6	249	50	3061
Library and Information Science Research	43	1652	40	1809	41	1780	35	1394	34	1788	193	8513
Library Philosophy and Practice	195	3500	78	1404	0	0	156	3875	64	1911	493	10790
Libres	6	197	1	29	7	175	11	337	4	154	29	892
Pakistan Journal of Library and Information Science	17	111	7	146	7	154	0	0	0	0	31	411
School Library Media Research	11	548	14	538	8	325	7	260	5	270	45	1941
Transinformacao	18	462	18	412	24	558	30	624	27	658	117	2714
Webology	10	289	10	380	12	296	9	294	7	182	48	1441
Total	687	16180	638	15400	609	15740	751	21000	646	17000	3881	85000

"Library and Information Science Research" has 8513 (third highest) references for its 193 published documents. Similarly "College and Research Libraries" has 8455 references for 217 published documents. "ASLIB journal of Information Management" has 7711 references for 177 published documents. Indian journal "Annals of Library and Information Studies" has 2585 references for 123 published documents which is comparatively lower than other prestigious journals. Similarly "DESIDOC Journal of Library

and Information Technology" has 2816 references for its 182 published documents during the five year period. "Pakistan Journal of Library and Information Science" has the least number of references (411) for its 31 published documents during five year period. As a whole, year 2014 encountered as the highest productive year as well as highest in terms of total references also.
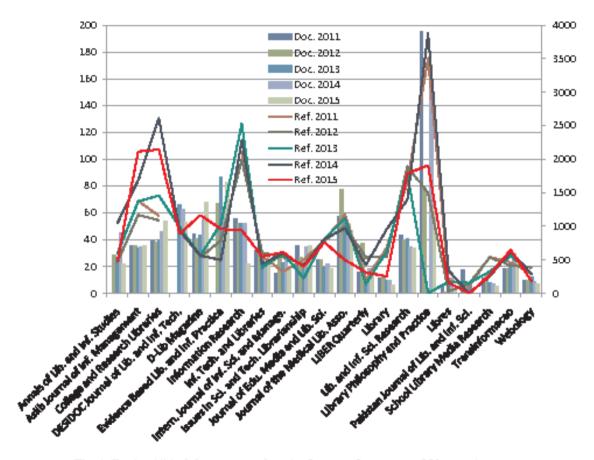
Fig. 4: Total published documents and total references of open access LIS journals

a) Citation Mapping of Open Access LIS Journals

The table 4 displays citation patterns of open access LIS journals on 3 years base. The 3 years base counts previous three years citations from the current year. On the observation of table 4, it has been found that not a single journal has either a uniform citation pattern or citations growing positively. The journal "Library and Information Science Research" recorded the highest number of citations on an average during the study period followed by College and Research Libraries, Journal of the Medical Library Association, ASLIB Journal of Information Management, Information Research, D-Lib Magazine, Information Technology and Libraries, and Library Philosophy and Practice etc. Indian open access LIS journals have recorded less citation during the period whereas Pakistan Journal of Library and Information Science has recorded the least number of citations during the period amongst all open access LIS journals. Figure 5 represents citations patterns with total number of documents.

Table 4: Citation pattern of open access LIS journals

Journal Title	Total Citations (3 years)				
	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015
Annals of Library and Information Studies	--	7	27	53	38
ASLIB Journal of Information Management	160	144	104	139	139
College and Research Libraries	166	182	273	275	265
DESIDOC Journal of Library and Information Technology	--	--	9	43	70
D-Lib Magazine	112	112	134	139	82
Evidence Based Library and Information Practice	--	7	41	65	98
Information Research	123	147	141	127	100
Information Technology and Libraries	52	72	116	112	82
International Journal of Information Science and Management	12	22	22	13	19
Issues in Science and Technology Librarianship	28	46	49	37	25
Journal of Educational Media and Library Science	8	7	7	6	4
Journal of the Medical Library Association	216	262	207	230	184
LIBER Quarterly	21	32	39	24	38
Library	9	8	7	9	5
Library and Information Science Research	227	247	273	255	224
Library Philosophy and Practice	74	65	80	85	24
Libres	15	5	6	3	3
Pakistan Journal of Library and Information Science	0	2	1	8	1
School Library Media Research	5	7	14	13	12
Transinformacao	1	4	3	8	13
Webology	23	9	13	31	19

Fig. 5: Citation pattern of open access LIS journals

On the analysis of figure 5, it has been found that two journals i.e. College and Research Libraries, and Library and Information Science Research have more number of citations than total number of documents whereas some journals like Jo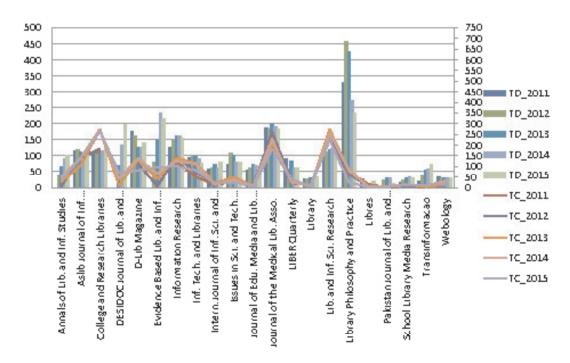urnal of the Medical Library Association, Information Research, Information Technology and Libraries, D-Lib Magazine, and ASLIB Journal of Information Management have more or less 50% citations of the total number of documents published. Rests of the journals show the poor citation patterns during the study period.

a) Most Prolific Country for LIS Research

The table 5 displays the summary of different types of data of open access LIS journals. On the observation of table 5, it has been found that majority of the journals belong to United States (7) followed by United Kingdom (4), Iran (2), and India (2).

Table 5: Country wise data of open access LIS journals

Journal Title	Country	Total Doc.	Total Ref.	Average Citations	Average SJR	h-index
College and Research Libraries	United States	217	8455	232.2	2.63	38
D-Lib Magazine	United States	251	3387	115.8	0.55	40
Information Technology and Libraries	United States	136	2540	86.8	0.97	25
Issues in Science and Technology Librarianship	United States	152	1946	37	0.34	9
Journal of the Medical Library Association	United States	289	4762	219.8	0.92	43
Library Philosophy and Practice	United States	493	10789	65.6	0.24	11
School Library Media Research	United States	45	1941	10.2	0.18	9
ASLIB Journal of Information Management	United Kingdom	177	7711	137.2	0.64	29
Information Research	United Kingdom	234	9846	127.6	0.48	34
Library	United Kingdom	50	3061	7.6	0.13	9
Library and Information Science Research	United Kingdom	193	8513	245.2	1.7	41
Journal of Educational Media and Library Science	Taiwan	109	3980	6.4	0.14	5
Pakistan Journal of Library and Information Science	Pakistan	31	411	2.4	0.12	2
LIBER Quarterly	Netherlands	92	1613	30.8	0.27	8
International Journal of Information Science and Management	Iran	114	2686	17.6	0.15	6
Webology	Iran	48	1441	19	0.24	8
Annals of Library and Information Studies	India	123	2585	31.25	0.29	5
DESIDOC Journal of Library and Information Technology	India	182	2816	40.66	0.22	4
Evidence Based Library and Information Practice	Canada	299	3293	52.75	0.32	6
Transinformacao	Brazil	117	2714	5.8	0.12	2
Libres	Australia	29	892	6.4	0.21	7

In the case of research productivity, journal belongs to United States have the highest number of published documents than other countries. Similarly, the highest records for total references also belong to United States journals followed by United Kingdom. Majority of the United States journals have higher average citation rate followed by United Kingdom. The higher average SJR indicator values also belong to United States and United Kingdom based journals. The *h*-index values for United States journals are higher than other countries. Thus, from the observation and analysis, it has been found that United States is the most prolific country for LIS research followed by United Kingdom.

1. Conclusions

The research of LIS is not enough in terms of numbers as compared to other subjects specifically Science disciplines. There is a lack of number of prestigious journals in the field of LIS due to which more publication burden on few prestigious journals whereas other journals are waiting for research documents to be published and this situation witnessed from the data obtained for open access LIS journals. SJR indicator has been calculated for per research document of the journal and it gives the average impact/prestige of per research documents rather than journal. In future, SJR indicator will be a guiding factor for deciding the prestigious journals of the field. The *h*-index values for the journals have been assessed and observed that it is higher for prestigious journals rather less prestigious journals. The research productivity of the journals is another key factor to assess the impact of journal in the field. Few journals have been found higher research productivity whereas rests of the journals are below average productivity per journal. The research productivity of the journals has positive relationship with their prestige. More research productivity tends to higher prestige among journals which lead to higher SJR indicator as well as higher *h*-index. Similarly references as well as citations to prestigious journals are also higher than other LIS journals. From the observation, it has been found that prestigious journals have higher level of references cited in their research documents and they are getting more citations than other less prestigious journals. The number of references used in writing a research documents tends to quality research, in general perception, though it is difficult to judge the quality by any instrument or any method. The United States based LIS journals are leading in terms of SJR indicator, *h*-index, total research productivity, maximum number of citations, and maximum number of references and thus United States is the most prolific country for LIS research followed by United Kingdom. The overall position of Indian LIS research is not so good but it is higher than some other countries like Iran, Canada, Australia, Brazil, Pakistan and Netherlands as per data obtained through Scopus.

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MOBILE TECHNOLOGY AND LIBRARY SERVICES

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Abstract: The use of Mobile technology has become an integral part of our daily lives. Mobile technology is fast becoming the preferred method for connecting to the Internet, especially for people on the go. Mobile technology and Mobile devices are playing an important role in the educational system. It offers Libraries and Librarians a host of opportunities to reach out to its users and to show the value of their institutions and profession. Librarians must keep pace with this trend and integrate themselves into the mobile realm if they wish to deliver enhanced user services. This paper gives an overview of mobile technology and its application and challenges in library services.

Keywords: Mobile Technology, ICT, Mobile Devices, Mobile Phones, Libraries, Library Services

1. Introduction:

Mobile technology has revolutionized the day-to-day lives of ordinary people by playing a vital role in the communication of information. Mobile phones do not use wire or cables, but work with radio waves and can be carried about and used anywhere. Before the advent of Information Communication Technology (ICT), communication in the library was done through books, newspapers, microforms, slides, etc. Electronic communication systems began to develop with the increase in scientific knowledge. The use of telephones and computers led to the development of Internet. With the application of telecommunications, an automated library can give more efficient library services to its patrons. The use of social media applications and mobile devices are the latest technologies that academic libraries are taking advantage to enhance their overall service delivery.

Many types of Mobile Operating Systems (OS) are available today for smartphones, including: Android, BlackBerryOS, webOS, iOS, Symbian, Windows Mobile Professional (touch screen), Windows Mobile Standard (non-touch screen), and Bada. Among them most popular are the Apple iPhone, and the newest – Android. Android is a mobile operating system (OS) developed by Google. Android is the first completely open source mobile OS, meaning that it is free to any cell phone mobile network. Since 2008, customizable OSs allows the user to download applications (apps) like games, GPS, Utilities, and other tools. Any user can also create their own Apps and publish them e.g. to Apple's App Store. The Palm Pre using webOS has functionality over the Internet and can support Internet-based programming languages such as Cascading Style Sheets (CSS), HTML, and JavaScript. The Research in Motion (RIM) BlackBerry is a smart phone with a multimedia player and third-party software installation. The Windows Mobile Professional Smartphones (Pocket PC or Windows Mobile PDA) are like that of a Personal Digital Assistant (PDA) and have touch screen abilities. The Windows Mobile Standard does not have a touch screen but uses a trackball, touchpad, rockers, etc (Wikipedia, 2011).

Mobile technology has changed the way that we develop websites. It has led to the rise of responsive web design, which is a mobile-first approach to designing websites. This has brought about the introduction of popular responsive framework such as "Bootstrap". Wearable technology such as Google Glass, Oculus

Rift and GoPro Cameras is starting to emerge as a serious category within the realm of mobile technology (Rawlins, 2016).

In an electronic environment, learning and using of mobile technologies such as mobile phones/ smart phones, iPhones, PDAs, iPod are especially boon for the people who are very busy with their work, career builder, and job seekers. The development of technology has given a tremendous growth in the application of mobile technology for information seekers. Today everyone is using this handheld device for text messaging, internet access from their mobiles, e-mail and for doing many interactive activities with various features of handsets. According to a recent survey, the number of mobile internet users in India has reached 371 million by June 2016, and is on the track to cross 500 million users by 2017 (Economic Times, 2016). Technological improvements like cell phones, low cost connectivity and faster data transmission are among the important factors that led to the growing use of mobile devices.

2. What is Mobile Technology?

Mobile technology is exactly what the name indicates – technology that is portable; it refers to any device that we can carry with us to perform a wide variety of tasks. It is a technology that allows those tasks to be performed via cellular phone, PDA, laptops, etc. A standard mobile device has gone from being no more than a simple two-way pager to being a cellular phone, a GPS navigation system, a web browser, and instant messenger system, a video gaming system, and much more. It includes the use of a variety of transmission media such as: Radio wave, Microwave, Infra-red, Global Positioning System (GPS) and Bluetooth to allow for the transfer of data via voice, text, video, 2-dimensional barcodes and more (Sharma & Sahoo, 2014).

Examples of Mobile devices includes:-

Laptops, Tablets, Netbooks, Notebook computers

Cell phones and Smart phones

E-book readers

Audio players such as MP3 players

Cameras

Mobile devices can be enabled to use a variety of communications technologies, including:

Wireless fidelity (Wi-Fi) - a type of wireless local area network technology.

Bluetooth - connects mobile devices wirelessly.

'Third generation' (3G), 'Fourth generation' (4G), Global System for Mobile communications (GSM) and **General Packet Radio Service (GPRS)** data services - data networking services for mobile phones.

Dial-up services - data networking services using modems and telephone lines.

Virtual Private Networks (VPN) - secure access to a private network.

3. Advantages of Mobile Technology in Libraries:

The following are the advantages of mobile technology in libraries (Malathy & Kantha, 2013)-

User friendly- Aid

Personalized Service

Ability to Access Information

Time Saving

User Participation

Location Awareness

Limitless Access

Access to Print-disabled users

4. Mobile Phones and Library Services:

The development in ICT has shifted the applications in library from the traditional to hybrid library, then automated library, digital archives stages, Library 2.0 and mobile phone services. Libraries can render new services and provide faster access to its collection with the help of mobile devices (Kumbhar & Pawar, 2014). Mobile technology has come up with the trend "Libraries in hand". Within a very short time, mobile phone devices can access information from the remote sources and can be used as a good alternative for accessing digital libraries. The digital collections can be made accessible through digital library on the mobile phones of users.

Now, as Internet access is increasingly being provided wirelessly by satellite, new Mobile Hotspot technology allows libraries to check out the Internet to their patrons. This takes Internet access outside the library walls. With this small mobile device, they can connect to high-speed satellite Internet wherever they go. The Hotspot has a single button, which makes it easy to use. The button creates a local Wi-Fi signal, and the access is controlled by a password. Patrons can then connect their personal computer, tablet or other device to the Wi-Fi signal and access the library's Web site or any other online resource they choose (Fernandez, 2015).

Libraries of all types must consider what needs to be done to support the technologies their patrons use because increasing number of patrons use mobile technology. Many library users are now also primary mobile users, so a library risks losing this group of users if it does not provide mobile access to its collections and services. Librarians can also be benefitted from using mobile devices when providing outreach and communication with users beyond the library. Presentations and teaching can be facilitated by mobile devices. Productivity apps for note taking, document sharing, and research should become familiar to all librarians, especially in academic settings. The built-in GPS capability along with new mobile technologies such as QR codes should be explored for creative use in libraries (Gleason, 2015).

By embracing the growing capabilities of mobile technology, libraries can serve better to their users. They can promote and expand their existing services by offering mobile access to their websites and online access catalogues; by giving mobile reference services and by providing mobile access to e-books, journals, video, audio books, and multimedia content.

Some of the possible library services which can be provided through mobile technology are listed below (Shrivastav, 2015):-

1. Mobile Library website

2. Mobile Online Public Access Catalogue (MOPAC)

3. Circulation services

4. Reference Enquiry services

5. Current Awareness Service (CAS) and Selective Dissemination of Information Service (SDI)

6. E-mail and SMS notifications

7. Distribution of E-resources through mobile website

8. Library Maps and floor plans

9. Library News, Events and Blogs

10. Library Hours and Library Tours

11. Mobile database - PubMed for Handhelds is a mobile web portal for the National Library of Medicine.

12. Inter Library Loan Service (ILL)

13. List of new Arrivals

14. Books and Journal article's search

15. Mobile apps for library

16. Library instructional programmes through mobile website

17. Subject guide, path-finders, etc.

18. Photo/Video gallery

19. Library Surveys

20. Feedback/Comments/Suggestions

21. Contacting library staff for help

6. Challenges of Mobile Technology in Libraries:

The challenges of mobile technology in libraries are as follows (Kumbhar & Pawar, 2014):-

6.1 Defining content for the Mobile library:

Present mobile devices are limited by the speed to access internet connection, small screens, slow processing and limited storage capabilities. One of the most important barriers is the limited memory of mobile devices. An important factor of a successful Mobile library is how technology or the medium affects the information displayed, defining what amount and what type of information is appropriate.

6.2 Design of the format:

The formation of contents is suitable for a desktop computer may not be suitable for a mobile device because of the limitation of a small screen size. Content for mobile display should be in smaller segments and information needs to be re-organized. Such as the size of the text, images, graphics and tables, and the size and physical location of pop up windows will need to be re-defined.

6.3 Separate the content from the format:

The successful mobile library is that which should work for a broad range of devices. In other words, it should be device independent. This object may be resolved through efforts to broaden the capabilities and flexibility of web browsers which separate the content from the format.

6.4 Display models:

This is an important challenge for library professionals to select display model because display models for various operating systems and browsers vary. We should use a program to recognize whether the device is a portable PC or a mobile device. Afterwards, the system chooses the proper style sheet and display model to specify the sight of the page. Even though the two sets of style sheets and display models result in difficulties in design and maintenance.

6.5 Lack of a standard:

Limitations in existing technologies, present operating systems and web browsers make a challenge for mobile library creators. They presently lack of capability or the flexibility for an application to be displayed properly on all devices. The mobile library developers shouldmaintain a standard to display contents properly on devices.

6.6 Handling of PDF documents:

The most mobile library has links to learning resources in Adobe PDF format. But, there is a problem to PDF support on Blackberry devices. A Blackberry user cannot view a PDF document using his/her web browser. To avoid this problem, documents widely used in the mobile library site are re-organized into HTML for viewing with a Blackberry.

6.7 Handling of multimedia file types:

This is a great challenge for the future development as large and complex learning objects require flash, shockwave, java applets and other plug-ins because the mobile library site has links to a wide variety of audio and video files. There is problem to support audio/video for the model being tested and all of these may not work on the all mobile devices.

7. Conclusion:

Mobile devices and mobile technology have the potential to facilitate the teaching and learning process in a great way. Application of mobile technology in library services is the need of the hour. Mobile technology is the key to keep touch with the modern world. So, libraries and librarians need to cope up with the constantly changing world of mobile technology otherwise they have to face the risk of becoming obsolete in the increasingly mobilized future. Mobile technology can be used to provide innovative services to our users, who may think of libraries as just places for physical books only.

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MODELLING INFORMATION LITERACY PROGRAMMES IN ACADEMIC LIBRARIES OF ASSAM

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Abstract

Information plays a vital role in present day knowledge era. The growth of information in all spheres of knowledge is a matter of threat for information users in searching, locating, retrieving desired information. Information literacy hails in the concept of making aware information users about their need and ensures accessibility of that information. In academic libraries, users deserve proper coordination between their information need and information sources of libraries and library services. Information programme in academic libraries enables them in accessing information from varied information sources available in libraries, as well as from other sources and utilize for their benefit in a judicious way. But discussion about information literacy among the academics and institutionalization of the IL programme in higher education institution is least addressed. This paper lights on the processes to develop a model of information literacy programme in academic libraries.

Keywords: Information, Information Literacy, academic libraries, Curriculum, User Education, Library professionals, Information Technology.

1.0 INTRODUCTION

Along with the advent of information technology in last few decades and its impact on global information world the concept of libraries is evolving around from traditional storehouse of information to modern knowledge hub. Effective utilization of information has utmost importance in today's society by every section of people. The challenges from rapid technological advancements, global competition and explosive growth of information resources, have urged the information users to constantly update their knowledge base and skill set. Information literacy is like foundation step for learning in a digital environment of continuous technological change. The need to equip the users with required skills and competencies is the goal of an Information Literacy (IL) programme. IL enables users to develop the habit of learning, critical thinking and thus can become life-long learners.

2.0 INFORMATION LITERACY

The term was first used by Zurkowsky in 1974 in a proposal submitted to the National Commission on Libraries and Information Science (NCLIS). According to him, 'people trained in the application of information resources to their work can be called as information literates. ALA defines Information

Literacy as the ability of an individual to recognize the need for information and to locate, evaluate and use effectively the needed information. According to United Nations Educational and Cultural Organisation (UNESCO), IL means the set of skills, attitude and knowledge necessary to know when information is needed, how to articulate that information need in searchable terms, search efficiently for the information, retrieve it, interpret it and understand it…, then utilize it to accomplish bottom-line purpose.

According to Information Literacy Policy formulated by University of Sydney Library Information Literacy is an understanding and a set of abilities enabling individuals to recognize when information is needed and have the capacity to locate evaluate, and use effectively the needed information.

We can't consider the libraries, educational institutions, web etc. are only sites for information. Information comes from first hand encounters, graphic records, physical structures and from various socio-cultural contexts. Hence all definitions provide a limited view of IL While talking about information literacy, there may come varied connotations regarding diverse concepts like traditional literacy, computer literacy, technological literacy, environmental literacy, network literacy, digital literacy and even moral literacy.

2.0 BACKGROUND

The concept of Information Literacy is not foreign to a library environment. User education programme has been there in libraries since 1960's to instruct users how to make the best possible use of library resources, services and facilities. There is a significant relationship between user education and information literacy. User education results in information literacy. That is, the training/instruction which users received through user education programme results in their information literacy. User education is the means of making library users information literate. The user education programme should expand its dimensions and instruct users to develop information seeking skills and prepare them to use information effectively in any circumstances. A successful user education programme eventually develops information awareness and information capacity. Information awareness refers to the sensitivity of information and information capacity refers to ability to access information, process information, absorb information and create new information.

Various organization are engaged in formulating IL model at various level and many institutions also engaged in delivering IL programmes in varied forms and formats. Research and Development Division at Educational Testing Service, New Jercey has came to the conclusion with seven preference areas to being information literacy in digital environment. i.e Define, Access, Evaluate, Manage, Integrate, Create and Communicate.

MB Eisenberg(2008) states about the implication of technology to his famous Big6 Skill model of IL process exhaustively and can be discussed as follows -

Steps	Description	In context to Technology
Task definition	Define the problem Identify the Information needed	e-mail, chat, video conferencing, groupware, online forums
Information seeking Strategies	Determine all possible sources Select best sources	Online catalog, information Retrieval, e-resources
Location and access	Locate sources Find information within sources	Online catalogue, electronic indexes, search engine, browsers
Use of information	Engage Extract relevant information	Upload/download, word processing, spreadsheet, screensavers, databases, statistical packages
Synthesis	Organize information from multiple sources Present information	Word processing, desktop publishing, graphics, blogs, wikis, RSS feed
Evaluation	Judge the result Judge the process	e-mail, chat, video conferencing, groupware, online forums

He elaborates every task related to information literacy in context to information technology.

Bruce(2004) categorized information literacy process in the following seven sections in Seven Faces of Information literacy in Higher Educationin1997. These are -

1. Information technology conception : Information Literacy is seen as using information technology for information retrieval and communication

2. Information source Conception : Information Literacy is seen as finding information located in Information sources.

3. Information Process Concept : Information Literacy is seen as executing a process

4. Information Control Conception : Information Literacy is seen as information controlling

5. Knowledge construction Process : Information Literacy is seen as building up a personal knowledge base

6. Knowledge extension conception: Information Literacy is seen as working with knowledge and personal perspectives adopted in such a way that novel insights are gained.

7. Wisdom Conception : Information Literacy is seen as using information for the benefit of others

It is one of the basic conceptual elaborations of information literacy.

The concept of user education is quite interesting and innovative ideas are coming out as the result of various researches conducted globally. ACRL(Association of College Research Libraries) has adopted a framework on Information Literacy in 11th February, 2016 which opens the way for librarians, faculty, and other institutional partners to redesign instruction session, course and even curriculum. The framework encompasses every facet of an Information Literacy programme ranges from identification of need of information to ethical and judicious use of information. It encourages implementing Information Literacy programme in formal education system and encourages librarians to work with faculty, college/university curriculum committee, instructional designers, teaching and learning departments and others to design Information Literacy programme in a holistic way.

Hazarika(2010) discussed a user education programme theoretically and develop a model of user education programme in colleges of Assam which is predominantly a course related instruction programme.

Bhatti(2010) carried out a study on evaluation of user education programme in university libraries of Pakistan and recommends a three tier structure encompassing orientation to the library, basic bibliographic instruction and advanced bibliographic instruction. Anoopa(2011) emphasizes on need of Information Literacy programme in university libraries stating that most of the users are not aware of library tools and practices.

As the subsequent development the College Development Council (CDC) of Dibrugarh University gave a directional notice to the college authorities to incorporate library user instructional classes in college routine from the year 2014.

Digital India Initiatives a flagship programme of the Govt of India started on 2nd July, 2015 with a vision to transform India into a digitally empowered society and knowledge economy. It aims to promote digital literacy along with other objectives. Directorate of Higher Education in Assam issued a circular to all the Govt and Private college to implement Digital Literacy Training under Digital India Initiatives. National Digital Literacy Mission (NDLM) will initiate the programme with a One Day Workshop programme. Such initiatives cannot be undertaken as a alternate to Information Literacy. Information Literacy has a larger significance and has the ability to accelerate one's personal and professional life.

3.0 SCOPE OF THE STUDY

College and Universities in Assam have been imparting education at various disciplines and in varied levels. All the institutions have their own libraries and the libraries are responsible to supplement and complement the teaching and learning processes. Mostly, the system of education is semester based . The proposed model is meant for the newly endowed students in the first semester.

Libraries have long been engaged in training and educating their users in the process of effective library use. Terms such as user education, computer instruction, library instruction, bibliographic instruction have been used to indicate the process of helping users how to use library, how to access and pick information and familiarizing various bibliographic tools.

Information literacy is a generic term to indicate a wholesome process to determine the need of information, access that information, evaluate selected information, use evaluated information in judicious way.

 The procedure for conducting IL programme in present library environment is characterized by the consequences of information technological advancements. Various models and standards of IL among all t have been evolved out because of extensive research carried out at different level. The key role of IL programme lays in the responsibilities in transforming the information society into a knowledge society. There are three essentials contexts for successful IL learning and teaching process. These are—the information process itself, Technology in context, Real needs- either work, educational and personal.

The programme has been designed keeping in mind the information requirements, technological advancements and justified utilization of information.

4.0 THE MODEL

The proposed programme is designed for the undergraduate students in the college libraries in Assam. We witnessed that the present day education system is student centric and resource based(SCRB) learning and in this context a curriculum integrated programme would help the students and they would also not feel any burden along with it. For successful implementation of the programme cooperation among library

FIRST SEMESTER:

Unit	Content	Period/Time	Method	Marks
Unit 1 Information Basics	Concept of Information, Definition of Information, Characteristics of Information, Need of Information, Types of Information, Role of Information, Knowledge Society	5	Class Room Teaching/ Seminar paper	20
Unit 2 Information Providers	Concept of Information Literacy, Definition of Information Literacy, Information Literacy and Higher Education, Continuous Education, Lifelong learning	3		10
Unit 3 Library as a Information Providers	Concept of Library Library Rules and Regulations Library Services Library Resources E-Resources Web Resources Library Cooperation Information Networks, Digital Library	10		20
Unit 4	Definition of Information Technology Components of IT Computer Hardware and Software Storage Devices	5		20
Unit 5	E Mail—Creation of E-mail, Sending and Receiving mails, Internet - Search Engines, Browsing, Book markings Library 2.0- Social Networking Sites RSS feed, Wikis, Blogs, Webinars, Discussion forums	2	Class Room Teaching/ Seminar paper	10
Unit 6	Organisation of Information- Selection of Information, Evaluation of Information, Comparison of Information, Revision of Information Processing of Information- summarization of Information, Organisation of Information, analysis of Information, Draw conclusions and provide recommendation, citation and references Presentation of Information- formats of presentation –Printed , Graphics, Powerpoint, Online hosting.	5		20

4.1 Schedule

As indicated, the above syllabus will be completed in 30 lectures of duration of 1 hour each. The course will be started by the beginning of first semester or session in July or August. After completion of the course students will be provided with grade point (A-E) corresponding to their marks obtained in examination. A grade for the marks 80-100, B for 60-79, C for 44-59,D for 30-44 and E for below 30. Grade point E will be regarded as disqualified and students have to appear the exam next year.

4.2 Resources

A well equipped library with availability of required literature is necessary to supplement the classroom teaching. Teaching faculty should be comprises of librarians, computer science teachers and any other competent teacher.

4.3 Outcome

It is hoped that the programme will encourage students in accessing information and proper utilization of the same. Students will be acquainted with the library tools and techniques and encouraged to get every help of technology in the process of searching, retrieving, evaluating utilizing and presenting information. Information literacy will turn the dependent users to independent information users.

7.0 Conclusion

Information literacy ensures the proper and effective utilization of information resources and enhanced the information use capabilities of users. In the complex digital library environment, the task of information accessing is becoming difficult because of diverse nature of information sources and services. Information literacy is regarded as the basic human rights in a digital environment. But the basic concept has been misunderstood. Information literacy has been used to consider as the development of IT skills. There is an urgent need to implement an IL programme fostering collaboration among information professionals, IT exparts (Computer science professionals) and concerned authorities.

IL has become a global issue and draw due responses from many nations across the world and various organizations, like UNESCO, IFLA, ALA (ACRL), etc. In India, the concept of IL is extensively discussed among learned circles. But the existence of a national standard of IL competency or a policy regarding IL competency is yet to come up. Bodies like UGC should come up with a national IL policy, organizations, like INFLIBNET should come up with a IL competency standard and accreditation agency, like NAAC should come to ensure the implementation of IL programme.

Information literacy is a natural extension of the concept of literacy in present information society. IL programme can be strengthened, by promoting it as a vehicle for enhancing critical enquiry and self directed learning.

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MOBILE LIBRARY SERVICE IN HIGHER EDUCATIONAL INSTITUTIONS: AN INNOVATIVE PRACTICE FOR SENIOR CITIZENS AND DIFFERENTLY ABLED PEOPLE

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Abstract:

Mobile library service is offered to the community who is unable to visit the library, to bring the store house of knowledge and information to the community. The paper presents the mobile library service as an innovative practice and outreach activity to be offered by the higher educational institutions. The library services move through some kind of motorised vehicle or some ways to the doorsteps of the readers instead of users come to the library physically. The paper also illustrates the case study made in the Nazira College Central Library where mobile library service has been introduced for the senior citizens and differently abled people.

Keywords: Innovative Practice, Outreach Activity, Mobile Library, Senior Citizen, Differently Abled, Best Practice, Academic Library, Information Literacy

1. INTRODUCTION

The IFLA Professional Report entitled "Mobile Library Guidelines" mentioned that the library service that does not stay in one place is classed as mobile library. It is motorised vehicle carrying library materials. In general, the mobile library service is offered to the community who is unable to visit the library, to bring the store house of knowledge and information to the community(IFLA, 2010). The service is also an extension activity of the parent organization. The service brings all the fruits of a modern library and implement information literacy programme as well as minimise the digital divide. The mobile library service makes the potential users to actual and habituated one.Mobile library services are essential to the Public Library Service andshould be seen as an integral part of it(IFLA, 2010). Mobile library service in the higher educational institutions may function as an outreach activity to meet the information needs of the nearby community who do not have access to libraries. Colleges are located in many urban and rural areas where services must reach the nearby communities. The libraries of the colleges may go beyond the physical boundaries to the community by way of providing information and knowledge based services. A case study has been made among the users of Mobile Library in Nazira College and the findings of the study have been discussed here.

2. OBJECTIVES OF THE STUDY

The study has been undertaken keeping some objectives to be achieved. The objectives of the study are:

- To understand the mobile library service, its different aspects and its applications;

- To know the educational status of the mobile library users of Nazira College Central Library;

- To examine the interest of the users in reading, writing, reviewing, editing etc.;

- To find out the preferences of reading materials;

- To assess the total number of books and lending period required by the users;

- To realise the best preferred day and time of the service;

- To attain the comments and suggestions to enhance the service etc.

3. METHODOLOGY

Secondary sources were consulted to understand the concept of mobile library service, its history and other implications. Survey method has been adopted to make the study in the selected area. A structured questionnaire was designed and distributed among the mobile library members. Personal interview was also conducted to understand the views and feedbacks of the users. The population of the study covered the mobile library users comprising the senior citizens and differently abled people. Out of 54 total members, the response was received from 51members with a response rate of 94.4%.

4. SCOPE AND COVERAGE OF THE STUDY

The study has been restricted to the people who formally became the member of the Mobile Library by submitting the prescribed Membership Form. The nearby areas of Nazira College of Sivasagar District have been selected for conducting the study. The members comprised of two different groups: Senior citizens and differently abled people.

5. MOBILE LIBRARY: THE CONCEPT AND HISOTRY

The library service that does not stay in one place is classed as mobile library. (IFLA, 2010).Mobile libraries bring all the benefits of a modern library service to people who cannot access one of our larger libraries, or who prefer to use a more local service within their own community(www.leeds.gov.uk). In general, the mobile library service is offered to the community who is unable to visit the library, to bring the store house of knowledge and information to the community.

The mobile libraries provide a library service to some rural areas where there is no static library. There is a selection of books on many subjects, novels, large print books, books for children and talking books. People can borrow other materials, such as DVDs and music CDs on request.(www.somerset.gov.uk)

The mobile library service is dedicated in bringing quality outreach to retirement communities, children, differently abled people etc. who do not have access to library services. The staffs are dedicated in bringing educational and entertaining materials and programming to local senior and other communities, encouraging improved quality of life.(https://www.henricolibrary.org)

A first mobile library in the world was horse-drawn and operated in 1857 in Cumbria County in North West England. It was aimed to increase the lending of its books to enthusiastic local patrons.It was

Figure1: The Perambulating Library in Warrington, England

An early bookmobile in the United States was created in 1904 by the People's Free Library of Chester County, South Carolina, which served rural areas with a mule-drawn wagon carrying wooden boxes of books. Among the Asian countries, in Indonesia, RidwanSururi and his horse, named Luna, started a mobile library called Kudapustaka (meaning "horse library" in Indonesian). The goal was to help improve access to books for villagers in a region that has more than 977,000 illiterate adults. In Thailand, many types of mobile libraries distribute books, IT equipment, and services. Elephant Libraries were used to take books, and IT equipment and services, to remote villages that have no other library service; this project was awarded the UNESCO literacy prize for 2002. A Library Train for Homeless Children was also developed to keep homeless children from crime and exploitation by channelling them to more constructive activities.

In, India, the mobile library service was initiated in the middle nineties and formally Delhi Public Library started the mobile library service in the year 1953 to cater the needs of the people living in the rural areas and new colonies of Delhi City. Library provides services at the doorsteps of the readers through mobile vans. At present Delhi Public Library is operating 4 Mobile Vans in 70 areas in the National Capital Territory of Delhi. 4,275 registered members are availing library services from the Mobile Library Vans. No record has been found in India relating higher educational institution which runs a mobile library. In Assam, there has not been any record of operating mobile library service for the people.

6. MOBILE LIBRARY SERVICE AND HIGHER EDUCATIONAL INSTITUTIONS

Over a century, mobile libraries have been considered as an important tool to spread the knowledge, library services, and meet the growing needs for books among citizens but the higher educational institutions have not put much effort for the establishment of mobile library. The National Assessment and Accreditation Council (NAAC) of India defined the best practices as "Best practice may be innovative and be a philosophy, policy, program, process or practice that solve a problem or create new opportunities and positively impact the whole organisation".Any academic library, by adopting some innovative or best practices can enhance the academic environment and usability of its resources and services at optimum level. Innovative practices are the facets of quality enhancing strategies, services or functions chosen by an organisation at least cost to the highest possible numbers of target groups with available resources in best

possible means for delighting the users.

In a democratic country like India, everyone has the right to education. The information literacy is indispensible part of the country's overall growth and development. To attain these goals, only the government cannot do everything. In this aspect the role of NGOs and other organisations, especially the higher educational institutions can perform a lot in achieving the goals.The modern society has transformed from agriculture based to more industry oriented creating urbanisation which leads towards a complex society. In the present age, people are busy and work hard to realise their dreams. The joint family has been transformed into nuclear or primary family. The family members are seemed to be settled permanently nearby their work station.The rapid use of information communication technologies decreases the get together among the members physically destroying the cohesiveness among the family member, reducing love and affection, respect to the seniors.

The population residing in rural areas is disparate enough that very few librariescould be located in areas accessible by everyone in areasonable amount of time. The resources are too scarce to build permanent libraries to be used by the people. The changing demography affects the demand for fixed libraryservices. There is a desire for communication and educationamong rural populationsrelated to ICTsand education.

A mobile library is a vehicle designed for use as a library. It is designed to hold books on shelves in such a way that when the vehicle is parked they can be accessed by readers. Mobile libraries are often used to provide library services to villages and city suburbs that otherwise do not have access to a local or neighbourhood branch library. They can also service groups or individuals who have difficulty accessing libraries, for example, occupants of retirement homes. As well as regular books, a bookmobile might also carry large print books, audiobooks, other media, IT equipment, and Internet access.

Today, section of the old aged people and differently abled people stay at home in isolation by feeling loneliness.The senior citizen is a very common euphemism for an old age persons usually a retired person or attain the age of 60 years.Differently abled peopleare deprived of the power to perform one or more natural bodily activities. They are also termed as specially abled, challenged, disabled, exceptional, incapacitated, impaired etc.As we know that education is a life –long never ending process which starts with life and end with life. A book may be a friend, philosopher, guide and best means of entertainment as well as a medium of spending in a proper way. It can also supplement and complement the alternative education too. Thus, a mobile library can help tremendously to the target groups.

7. MOBILE LIBRARY SERVICE IN NAZIRA COLLEGE: A CASE STUDY

A case study has been conducted among the senior citizens and differently abled people who are the members of the Nazira College Mobile Library and

Figure 2: Mobile Library Members (Senior Citizens) Receiving the Books

7.1.1 Category of the Readers

Most of the members of mobile library are senior citizens (96%) and only two (4%) are differently abled person.

7.1.2 Gender wise Distribution of the Readers

More than half of the population (58.8%) is male against 41.2% female readers. Most of the readers are married (96%).
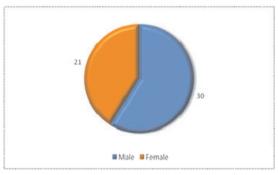
Figure 3: Showing Gender wise Distribution of the Readers

7.1.3 Age Group

From the Table1, it has been revealed that the readers are ranging from age group of 60 to 82 years within the senior citizens and below 50 years with 4 % within the differently abled persons. One third of the readers (33.3 %) are in the age group of 65-70 years followed by the age group of 60-65 years with 27.5%. 9.6% of the readers are within the age group of 70-75 years which is followed by 75-80 years with 9.8% and above 80 years with 5.9% (Figure : 4).

Table 1: Age Group of the Readers

Age Group (in years)	Total Number
Below 50 Years	2
60-65	14
65-70	17
70-75	10
75-80	5
80 and above	3
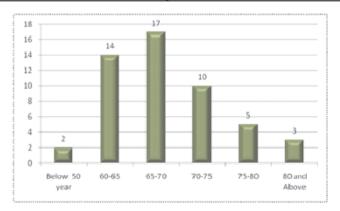
Figure 4: Age Group of the Readers

7.1.4   Previous Occupation of the Readers

It is observed from the Table 2 that more than one third of the readers (37.3%) had previous occupation as teacher, out of which more than half of it was college teacher followed by ONGC employee (21.6%), homemaker with 19.6%, others with 9.8% and cultivator with 4%. Rest of the readers' occupation with 1 % were in the category of the bank employees, doctors, advocates and self-employed.

Table 2: Previous Occupation of the Readers

Sl. No.	Previous Occupation	Total Numbers
1	College Teacher	7
2	Doctor	1
3	Teacher	12
4	Bank Employee	1
5	Advocate	1
6	ONGC Employee	11
7	Cultivator	2
8	Homemaker	10
9	Self Employed	1
10	Other	5
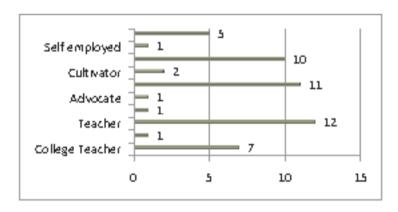
Figure 5: Previous Occupation of the Readers

7.1.5   Educational Status

From the Table 3, it is seen that nearly half of the readers (45%) are Graduates followed by Post Graduates with 15.7%, HS with15.7%, HSLC with 9.8 %, read up to class X with 7.8% and others with 5.9%.

Table 3: Educational Status:

Educational Status	Total Number
Up to Class X	4
HSLC	5
HS	8
Degree	23
Post Graduate	8
Other	3
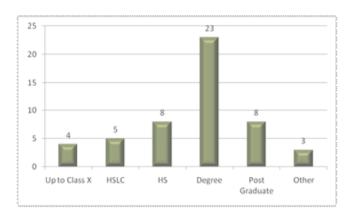
Figure 6: Educational Status of the Readers

7.1.6 Readers' Interest

All the members are interested in reading. Besides reading, more than one third of the readers pay attention in writing (35.3%) , reviewing (23.5%) and editing (21.6%).

Table 4: Readers' Interest

Readers Interest	Reading	Writing	Reviewing	Editing	Other
Responses	51	18	12	11	0
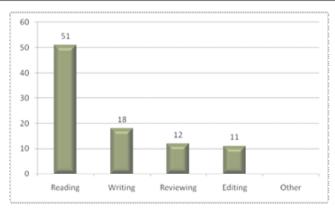
Figure 7: Readers' Interest

7.1.7 Preference of Reading Books

Most of the users prefer to read biography (86.3%) followed by novel with 72.5%, religious books 68.6%, travel books with 62.7% and other books with 45 %.

Table 5: Preference of Reading Books

Preferences of Reading	Biography	Novel	Religious	Travel	Other
Responses	44	37	35	32	23
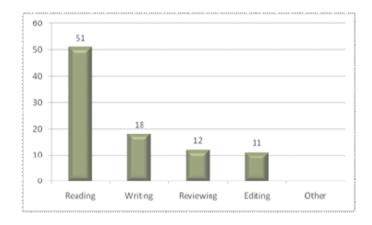
Figure 8: Preference of Reading Books

7.1.8 Preferred Book Lending Period

Most of the members (70.6 %) prefer to lend the books for a month followed by fortnightly with 25.5%. Only a very few members with only 4% required books for study for a week. (Figure 9)

Table 6: Preferred Book Lending Period

Lending Period	Weekly	Fortnightly	Monthly
Responses	2	13	36
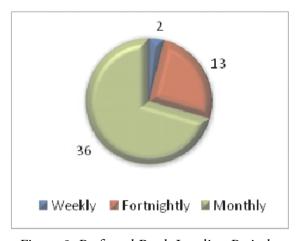
Figure 9: Preferred Book Lending Period

7.1.9 Number of Books Required

Majority of the members (72.5%) required 2-4 numbers of books at a time followed by 1-2 books with 13.7%, 4-6 books with 11.8 %. Only one member Mr.AchintaGoswami, a differently abled person wants 6-8 books at a time.

Table 7: Requirement of Books

Requirement of Books in Number	1-2	2-4	4-6	6-8
Responses	7	37	6	1

Preferred Time	Morning	Afternoon	Evening	Anytime
Responses	3	8	2	38

Majority of the members prefer their time to receive books anytime with 74.5 % followed by afternoon with 15.7 %, morning with 6% and evening with 4%.

Table 8: Best Preferred Time

Preferred Time	Morning	Afternoon	Evening	Anytime
Responses	3	8	2	38
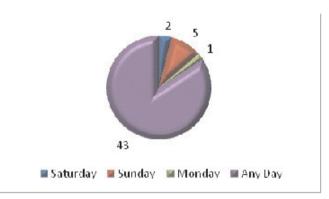
Figure 11: Best Preferred Time

7.1.11 Best Preferred Day

Most of the users (84.3%) prefer to receive books in any day followed by Sunday with (9.8%), Saturday with (4%). Only a member wants his/her interested books on Monday.

Table 9: Best Preferred Day

Preferred Day	Saturday	Sunday	Monday	Any Day
Responses	2	5	1	43
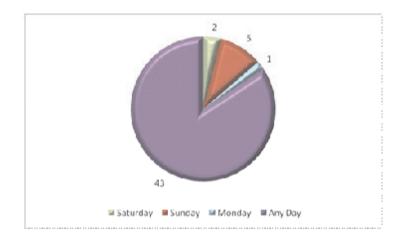
Figure 12: Showing Best Preferred Day

8. PROBLEMS ENCOUNTERED

From the study, the researchers have identified various problems in extending the mobile library service. Some of the major problems associated with the mobile library service are as follows:

Fund: There is no separate fund for the mobile library service which is being run under the strong willingness and team spirit of the library staff of the college.

Conveyance: There is no any special vehicle for carrying the books to the mobile library members till date creating lot of problems in accomplishing the programme.

Manpower: The manpower is very limited as there is no extra staff appointed for the mobile service. The programme is running with only two persons.

Time: The service has been extending in holidays and after the college working hour.

Special Books: There is lack of special books for senior persons, differently abled persons, women, cultivators, health and hygiene, yoga, religious, handbook of important information and services written in vernacular language.

Hindi Books: There are no Hindi books for this service to meet the Hindi readers.

ICT: There is no internet and other ICT based tools and resources for this service.

Plan and Policies: Lack of explicit plan and policies for sustenance of the

programme.

Use of Cell Phone and ICT: Majority of the readers are found incapable of using mobile phone,

computer and e-resources.

Collaboration: There is no any collaboration with any organisation for this programme till date.

Service Point: There is no service points for the programme till date for circulation of books.

Other Resources: Only printed books are the sources of information and recreation.

Rural /Ward Libraries: Lack of functional rural libraries in the area and absence of ward libraries within the municipality area.

9. FEEDBACK MECHANISM

A feedback mechanism has been adopted to understand the views of the mobile library users to serve them better. Some of the feedbacks collected from the mobile library users are quoted below:

• *This is an appreciable social work. Everybody should follow this honest process of the social thinkers: library personnel.*

• *It is very nice service initiated by the Central Library and hope a great success in future and very proud by getting membership of the library to visit regularly*

• *Noble efforts initiated by the Nazira College Central Library and the effort should be continued.*

• *It is an outstanding and exceptional service in the state and hope for success in all spheres.*

• *The effort started by the Central Library will be helpful for the old aged person for spending their loneliness time and to earn different knowledge. The Government may extend financial help for better maintenance.*

• *Mobile library service for senior citizens and differently abled people is an outstanding service for us. I want its continuation and enlarge its scope*

• *We appreciate the positive effort of the library. It has inspired us for reading and spending time in a productive way. Our whole family members are benefited from those books.*

• *It is an exceptional service for us.*

• *Your idea for a mobile library service to senior people is appreciable.*

• *It should be enlarged the scope, really very nice service.*

• *It is a noble effort and I wish you all the best wishes for this endeavours.*

• *I t is an outstanding social work for the country.*

The feedbacks received from the members of the mobile library have given the library staff and college authority a great satisfaction as they could meet the information needs of the local community particularly the senior citizens and differently abed people.

10. RECOMMENDATIONS

Following recommendations have been worked out from the study. The recommendations are mostly applicable to the mobile libraries of higher educational institutions but the lessons can be applied to other organisations also.

1. The responsibility for establishing and developing mobile library service may restwith the parent organisation but the librarian should take the initiative and take the responsibility to carryouthis extra work load.

2. A survey among the population of the organisation'snearby community needs to be conducted to understand the possibility and feasibility of establishing the mobile library.

3. There is an importance of policy and planning for a mobile library. Higher educational institutions like colleges and university must have proper planning and adopt a standard policy to establish the mobile library. They shouldideally be dedicated to provide library services to the people as an extension activity and outreach programme.

4. Emphasis should be given on providing a service to the communityin fulfilling the community needs that can contributeto meet the increased demand.

5. Sufficient fund should be given by the parent body to appoint extra staff, to procure reading materials and to arrange for vehicles. State Government or central Government must have some provision to provide financial assistance for the establishment of mobile libraries.

6. Finance may be obtained from other private sourcesin addition to government funds. Private donors may be requested to contributematerials in kind, or they may help by assisting in operatingcosts. Users may be charged with membership fees or late fees, ifpossible.

7. The collection of books in the mobile library should be relevant with the users' interests.Users' study must be undertaken inorder to identify their current information needs, existing sourcesof information and gaps in access. Library resources must berelevant to the lives of the users, and must meet the literacy,language, professional and technological profile of the communitiesto keep theminterested and involved.Books on housekeeping, cultivation, health and hygiene, yoga, positive attitude etc. are of good choice. Handbook of important information and service written in vernacular language may attract the users and cater interest in reading.Besides printed books, there must be other sources of information and recreation in different formats.

8. Determining strategies and processes to be followedin terms of the schedule of library visits and staffing isa major concern. Based on the distances between target communities the frequency of library visit and time schedule should be determined.

9. There must be some static service points for circulating books and information dissemination.Local community member of a particular region where the mobile library moves may be given the charge of checking out, distributingand returning books. The required training should be given to perform the assigned duties. Localpeople ateach destination may of great help instead of traveling by the library every time. Collaboration with other agencies must be initiated to make the programme a grand success.

10. Publicity to make the community awareis essential formaking sure that users know exactly when and where thelibrary will be on any given day, and what resources areavailable.

11. With the adoption of ICT tools and services, the mobile library can be converted into a Mobile Telecenter where users will notonly read books but also they will have access to Internet and download materials.

12. Existing inactive rural libraries may be made active and new rural libraries and ward libraries may be opened in each ward within the rural/municipality area.

13. Some training programmes for the senior citizens may be organised regularly in the library premise to make aware of the available resources and services of the central library and accessibility.

14. A feedback mechanism must be undertaken regularly to monitor, improvement and overall success of the service.

15. Events likehalf yearly meet of the senior citizens, Librarians' Day, Book Talks etc. may be organised in intervals to attract users.

11. CONCLUSION

The overall objective of a mobile library service has been to promote equity of service provision by enhancing the opportunity of access to library services. A mobile library provides the most flexible of library service, not being restricted to any particular population centre and able to respond to the needs of diversepopulation. Even after having various technical problems encountered during the implementation of the programme, the NaziraCollege Central Library with due cooperation form the authority has been able to meet the challenges. A website has been designed and dedicated for the library to provide updated information about the college library (https://www.naziracollegelibrary.org) where a link is providedexclusively to the mobile library. Among many outreach activities and extension services, mobile library service has been considered one of the best activities to be performed. Other higher educational institutions may take the advantages of mobile library service as an outreach programme for the society by which they can meet the information needs of the senior citizens, differently abled people, homemakers, farmers, children etc. of nearby community.

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MARRIAGE CUSTOM OF THE BODOS OF UDALGURI[1]

Tulan Mochahary

The Bodos of Assam are an important ethnic group having distinctive cultural and linguistic traits. They are one of the largest groups of the Brahmaputra Valley. They are also one of the Indo-Mongoloid stocks to settle in the Brahmaputra Valley. Racially they belong to the Mongoloid stock of the Indo-Mongoloid or Indo-Tibetan group. They have a rich store house of cultural elements including various folklore materials. The rites and rituals relating to their birth, marriage and death represent the series of cultural activities. The religious and agricultural rituals and festivals are indeed fascinating.

This paper aims to focus on the customary practices associated with Bodo marriage. Even though many people know about the cultural heritage of the Bodos, but few of them know about the actual performance of marriage of the Bodos. On other hand modern multi-cultural environment is submerging the traditional ways of life of the Bodos. Therefore it is necessary to protect, preserve and expose the genres of the Bodo culture before its extinction.

However, the paper aims to focus only the performance of marriage excluding its other two stages i.e. pre-marriage and post marriage respectively.

3.0 Methods:

The data mentioned in this paper are collected in a case study by means of observation. The data collection and the observation have been made within the district of Udalguri, BTC, Assam. It is not possible to collect all information by means of mere observation on such a long and gorgeous program of Bodo traditional marriage. Much information about the performance of marriage among the Bodos is yet to be collected for its complete documentation. Being a native speaker it helped me to collect some information effortlessly.

4.0 Proper marriage ceremony:

The proper marriage ceremony starts on the actual day of the marriage. Most of the functions are the same for both the house of the bride and groom. This custom has been prevailing in the Boro society since the time immemorial. The ceremonies or activities in connection with the proper marriage ceremony are involved in several rituals since time immemorial.

4.1 Sâinâsâli:

The construction of a *sâinâsâli* is also an important function of the proper marriage ceremony. *Sâinâsâli* means a spacious open temporary shed. There are some traditional rules and regulations for constructing a *sâinâsâli*. The main posts are called *gâhâi khunthâ* does not exceed five to twelve nos. On the other hand, the supporting bamboo on the posts called *mândâli* also does not exceed five to twelve nos. The

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[1] Udalguri is one of the four districts under Bodoland Territorial Areas Districts in the state of Assam. It has a sizeable Bodo population with a significant variation of customs and traditions.

significance of such posts and supporting bamboo arches are the philosophical symbol of the existence of gods and goddesses.

It is also a custom that the main post especially the middle post is of banana plantain. Before starting the marriage a few consecrated *besor* (mustard seed) is put in the post by the village healer called *ojâ*. The significance of consecrating mustard seed is to drive out evil spirit from the marriage shed in general. Traditionally the temporary marriage shed of the Bodos was made by just spreading plantain leaves i.e. *thâlir bilâi* over the bamboo arches. But now modern tent and decoration is used for the marriage shed.

4.2 Hâbâsâli:

In Boro *hâbâsâli* means the surroundings of the house where the marriage ceremony is to be solemnised. There are no hard and fast rules relating to the beautification of the marriage place. But the decoration mainly depends on economic factors of the family. The minimum traditional decoration is that two virgin plantains, i.e. *thâlir biphâng phângnwi* are planted in front of the door of the main house called *nomâno* and other house of the family. On that day the main *Bâthou* altar has to be neat and clean.

4.3 Temporary Bâthou bindw:

During the day of marriage ceremony the permanent *Bâthou bindw* or *Bâthou* altar needs to be arranged neatly. But planting of the plantain in front of the *Bâthou* altar is strictly prohibited where the marriage ceremony is to be performed. Therefore a temporary *Bâthou bindw* is arranged for the performance of marriage which is decorated aesthetically.

4.4 Dwi gwthâr khâlâmnâi:

This is also an important custom of the Boros. The terms *dwigwthâr khâlâmnâi* means the preparation of holy water. This water is generally prepared on the proper marriage day. For the preparation of this holy water an earthen pot called *dwihu* is filled with general water. Five pieces of *thulungsi* or *basil*, five pieces of *jâthrâsi,* a kind of basil and five pieces of *dubri bilâi* or a kind of bent grass, (duburi ban in Assamese) are put in the pot. Along with these hand full uncooked rice called *mâirong âluâ* is also put in it. Taking all these ingredients the village priest chants the *Bâthou* hymns kneeling down in front of the *Bâthou* altar. Then the water is sprinkled surrounding the marriage shed for its purification. It is sprinkled several times during the marriage function.

4.5 Khwinâ lâinw thângnâi:

The meaning of this ritual is 'going to bring the bride' on the day of marriage. For the function or purpose of this custom a group of elders from the community and family goes to the house of bride. They start their journey at an auspicious time. The party consists of two *Bârlamphâ*, four *Bwirâthi* which are compulsory and other elders of the village. Among the *Bwirâthis* two are unmarried and two are married. The groom's party takes all the necessary commodities with them. Before leaving the groom's house the party bows down before the altar of the *Bâthou* so that they reach their destination without any untoward incident and return without harm. During this time the village priest sprinkles the holy water on them and chants *Bâthou* mantras for their best.

4.6 Hâbâni bibân:

The *bibân* or *bhâr* in Assamese is taken to the house of the bride on marriage day from the groom's sidewhich is compulsory according to the customs of the Bodos. The *bibân* is of three pairs. One is stands for religious purpose called *dwhwrwm bibân*, one is meant for the *mâinâo* or *goddess* of wealth and the third one for the cowherds which is called *lâokhâr bibân*. *Bibân* stands for a kind of responsibility.

The processes of preparing these *bibân* are same as the *gibi bibân* mentioned above. But the *lâokhâr bibân* is something different from these two *bibân* i.e. the *dwhwrwm bibân* and *mâinâo bibân*. The two earthen pitchers are not used for *lâokhâr biban*. For this purpose two net like basket called *kho* in small size made of bamboo chords are used. These two baskets are also tightened on the two poles of a bamboo stick called *bângrâ gon*. The eatable things like uncooked rice called *mâirong*, *âloo* (potato), *songkhri* (salt), *bânlu* (chilies), *hâldwi gundwi* (powder of turmeric) are put in one basket. Another basket is consists of *goi* (betel nuts), *phâthwi* (betel leaves), *sunwi* (lime), *jânâi thâo* (mustard oil) etc. This particular *bibân* is given to the *lâokhâr* (cowherds) belonging to the bride's village by the groom's party on the way to the bride's house. The placing and opening formalities are same as the above mentioned *bibân* which is done in the house of the bride. Sometimes it is also seen that these *bibân* are prepared at one of the houses of bride's village if the groom's party comes from very far place. But normally all the *bibân* are to be prepared at their own house and shoulder it up to the bride's house.

4.7 Role of douri and dousi:

Douri is the village priest and *dousi* is the assistant of *douri*. They have to conduct the marriage function from the beginning to the end. They have to maintain the *Bâthou* altar offering the necessary materials such as lighting the *âlâri bâthi* (earthen lamps), *bibâr* (flowers) and sprinkle of holy water and to get ready for performing the actual marriage ceremony from where the bride is given to the groom's party. Their functions make the marriage ceremony a deep and religious affair.

4.8 The role of bwirâthi and bârlâmphâ:

The role of both *bwirâthi* and *bârlâmphâ* is very important in the Bodo marriage ceremony. After placing and opening of *bibân* at the bride's house on the marriage day the *bwirâthi* is to distribute areca nuts and betel leaves to the gathering. The grooming up of the bride and taking her to groom's house are the main responsibilities of *bwirâthi*. On the other hand the bringing and opening of the *bibân* is the main responsibility of *bârlâmphâ*. As a matter of fact the maintenance of marriage accord on behalf of the groom's party is the sole responsibility of *bârlâmphâ*. The two *bârlâmphâ* needs answer whenever and whatever questions arise against the groom's party. In early days the *bârlâmphâ* went to the bride's house a day before the appointed day of marriage. Now-a-days in some areas of the district like Udalguri the *bârlâmphâ* go to the bride's house in early in the morning of the marriage day. In early days the *bârlâmphâ* remained at the house of bride till the bride's party returned to make sure that they remain a guarantee against any misgivings in the groom's house. The *bârlâmphâs* are the interlocutors of both the parties.

The number of *bwirâthi* in the Bodo marriage ceremony should be four in total. The two unmarried girls or maiden (*sikhlâ*) and two married women (*hâbâ jânâi hinjâo*) are selected for *bwirâthi* for Bodo marriage ceremony according to their social customs. But the widows (*rândi*) are restricted to be a *bwirâthi*. The *bwirâthi* will have to put on a special costume called *dokhnâ thâosi* in Boro. Customarily they should also put on silver bracelets called *âsân muthi* and other ornaments of gold and silver respectively.

4.9 Use of materials for bride & groom:

There are some minimum but compulsory materials for grooming up of the bride. These are as follows –

i) dokhnâ gângse (a woman costume), *ii) jwmgrâ gângse* (a scurf), *iii) goslâ gângse* (a blouse), *iv) muthi âsân jorâse* (a pair of bracelets), *v) âinâ gongse* (a piece of looking glass) *vi) khânjong gongse* (a piece of comb), *vii) sindur themâse* (a packet of vermilion), *viii) phungrâ thâo botholse* (a bottle of body oil), *ix) âthingni gângrâ jorâse* (a pair of sandal).

The ornaments of gold and silver are also put on by the bride whose parents can afford to do so. Therefore there is no imposition and restriction of using these ornaments.

4.10 Houâ gwdânni gânnai:

The dress of the groom is generally called *gâmsâ* and *goslâ*. The *gâmsâ* is home made loin cloth worn around the waist that turns between the legs and buttocks and hangs down to the knees from the loin. On the head the groom puts on a *âronâi* making it an artistic design (a kind of muffler). An *âronâi* is worn around the neck by the groom. The *âronâi* taken by the groom is of green colour having artistic designs of yellow colour on it. A pair of slippers or shoes is also used by the groom according to the social customs of the Bodos which is of recent origin as a result of the influence of modernity. But earlier the Bodos did not use slippers in the marriage ceremony. The friend of the groom called *sonthi* or *sukhi* also use the same cloths in marriage ceremony. If the groom fails to use this kind of attire then the groom's party is imposed reasonable fine by the bride's party on the marriage day.

4.11 Importance of *sonthi* or *sukhi*:

The significance of *sonthi* or *sukhi* is very great among the Bodos. It is a common parlance that during the marriage or on the way of their journey if the groom dies accidentally then the *sonthi* or *sukhi* will have to marry the bride immediately. The company of the *sukhi* with the groom continues till the end of *âthimongol* or *âthimânglâ*. After the completion of this *âthimonglâ* they maintain a deep relationship between them.

4.12 Âlâribâthi:

The arrangement of *âlâribâthi* means lighting the earthen lamp which is also an important custom of the Bodos during the marriage ceremony. The earthen lamp needs to be of a pair. The earthen lamp should be lightened in both the houses of bride and groom respectively. For the preparation of two earthen lamps two newly prepared bamboo sieves called *sândri* are necessary. On each sieve both the lamps are lighted by placing them on a banana leaf known as *lâijou* on each sieve. The banana leaves are placed facing the front towards the east. A bamboo-made hand fan i.e. *gisib* for each and a pair of betel nuts and betel leaves for each are also placed on it. The two sieves are encircled by the polished bark of banana plantain called *lâikhong* so that the lighting lamps burn for a long time. Two or three wholes are made on the bark for air circulation for burning the lamps. The pictures of both the sun and the moon are designed on the barks of the sieves respectively which signify the truth and everlasting in this universe.

4.13 Khwinâ Borâinâi :

This ritual is also an important part relating to the marriage ceremony among the Bodos. It stands for welcoming the bride ceremonially to the altar of marriage ceremony. After adorning the bride with beautiful attire and ornaments the bride is brought to the altar formally by the *bwirâthi*. She is brought with the accompaniment of melodious Bodo musical tunes of *khâm, siphung, jothâ, serzâ* etc. The audience then sing and dance whole-heartedly. The bride has to move three or seven rounds around the altar in anti-clock direction. During this time the bride is preceded by the *bwirâthi* taking the sieve of *âlâribâthi*. Soon after the completion of this process the bride is seated in front of the altar facing eastwards for performing the marriage ceremony.

4.14 Hâbâ dânnâi/hâbâ hwnâi:

This custom or ceremony is called *hâbâ dânnâi* among the Bodos which means the actual marriage ceremony. In this particular ceremony the bride is handed over to the groom ceremonially. This ceremony is

performed at either the house of the bride or the house of the groom. For the performance of this ceremony both the bride and groom are brought to the specified place for marriage ceremony accompanied by the melodious tunes of Bodo traditional music of *khâm* (Bodo drum), *siphung* (flute), *jothâ* (symbol) *serjâ* (Bodo violin), etc. where the *bwirâthi, bârlâmphâ* and the audience enjoy and make merriment by singing and dancing. In this way both the bride and groom are brought together in front of the *Bâthou* altar facing towards the east after moving round the *Bâthou* altar five times in anti clock wise direction. The bride called *khwinâ gwdân* is seated to the left side of the groom. Friends of both the bride and groom sit near the bride and groom. Both the bride's and groom's party and the general audience sit down behind them. Then other formalities of the ceremony start one after another conducted by the *douri* and *dousi* till the end of the marriage function. Earlier the *ojâ* chants mantras or hymns in this ceremony.

4.15 Khwinâ gothâinâi:

This ceremony is one of the most important ceremonies of the marriage ceremony. This custom stands for the handing-over of the bride to the groom. The bride is handing-over to the groom by either her father, brother or one of the relatives or the elderly person of the village.

At this moment the father/ brother/ one of the relatives/ the elderly person of the village takes the right hands of both the bride and groom and places it on top of each other in a symbolic gesture of handing over of the bride to the groom. Soon after this ritual the new couple seeks his/ her blessings by bowing down before him/ her and the *douri*. Meanwhile the edges of the attire called *ji/hi* of both bride and groom are joined as a symbolic sign of their conjugality. Thereafter, the bride vows down to the groom called *khulumnâi* and then the village *douri* implores her to put the garland, i.e. *bibârmâlâ* to the groom and vice-versa. Likewise the *douri* asks the groom to put *sindur* (vermilion) on her forehead called *khâphâl* with his fourth finger. At this moment the *sonthi* or friend of the groom has to stand beside the groom. Then the couple takes *somâi-khirâ* (oath) in front of the *Bâthou* chanting the *Bâthou* mantras/ hymns by following the village *douri*. In this ritual the groom takes the oath first followed by the bride.

4.16 Mâinâo thisonnâi:

The custom called *mâinâo thisonnâi* is also an important aspect of the marriage function of the Bodos which is the last marriage ritual. After completing all the formalities of marriage the bride has to perform this ritual. The term *mâinâo thisonnâi* stands for taking the *laxmi* or goddess of wealth into the main house and granary called *ishing/bâkhri* by the bride.

Two *don* (bamboo basket) filled with paddy (*mâi)* and *mâirong* (rice) are kept in *mâinâo bindw*. This *mâinâo* is to be put into the *bâkhri* (granary) and kitchen (*ishing*) by the bride. Now-a-days the bell-metal bowl *(Khurwi)* is used in place of *don*.

In this ceremony the bride takes the *don* (bamboo basket filled with paddy) on her *khoro* (head) and moves five times around the *Bâthou* altar and puts it in to the granary. At last she takes the *don* of rice (*mâirong*) on her head and does the same. Finally she carries it inside the kitchen (*ishing*) and returns to the *Bâthou* altar. Then she prays to the *Bâthou* by kneeling down in front of the altar. During the ceremony she is accompanied by the *Bwirâthi*. After completing the ritual the bride is taken inside the house and offered meal together with her husband.

4.17 Marriage songs:

The traditional marriage in a Bodo society is an out and out a musical affair. The traditional Bodo marriage is associated with a rich harvest of marriage songs. These songs are sung by during the course of marriage ceremony, a tradition which has been handed down from one generation to other. Some songs

are humorous with some of them having moral lesson for the bride and groom, while some are meant for consoling the bride. They also sing songs as a form of prayer.

Most of the marriage songs are songs of bantering usually sung by the womenfolk during the marriage ceremony. The womenfolk crack jokes at the cost of the groom with the following songs –

nwlw bârini dâobo gwlwndâ
zwnghâ zâwoyâ udwi gwlwndâ

(Like the pot-bellied crane
Of the marshy land
Our son-in-law also
Is pot-bellied.)

hâjw khoroni dwi rârâ
zwngni zâwoyâ âyo gâmsâ
zirâ râ.

(With murmuring sound
The river flows–
Down the Bhutan hills,
Look here,
Our son-in-law has put on
A worn out gamsa (dhuti).

The womenfolk also crack jokes at the poor quality of the liquor (zou) offered on the auspicious occasion of the marriage and sing the following songs –

hâbâ zânglâb zânglâb
sânbâ gwlâoni dinâo
ukhum besâni selâmâlâ
wi houâ gwdân, nwngni jouâlâi
khwithing thing

(Your marriage has taken place
In the season of long days, oh groom,
There is the centipede on the eaves
And your wine is sour, oh young man!)

The womenfolk from the groom side too crack jokes at the bride and sing –
nwlw bârini mwsâ phâkhri
jwnghâ khwinâyâ undu gâduri
undu gâduri

(Spotted tigress of the *nwlw* forest
Our bride is late riser.)

The womenfolk also give moral lessons for the future conjugal life of the bride. With such songs the bride is advised by the singers how to maintain her new family and do her daily domestic chores. The marriage song is sung as –

âthing gâjob hâthâi orjob
âkhâini phâoâ jâyâkhwi
âthingni phâoâ jâyâkhwi
bâijw phâthâlkhw jâhwidw âywi jâhwidw
khwjemâ thobw khudwijwng
mânsiyâ thâyw giyâthijwng
dâgâbswi âywi dâgâbswi
nwmâ nwmphâyâ dâo omâbâdi homnâ horbâi
lâothi gongse, phâgâ dwngse gothâikhâbâi

(Keep your feet steady and
Keep your teeth well covered
The pose of the hand and feet has not been proper
Go and partake of the life in the other world
The brown ant (*khwjemâ*) build its nest with its spittle
Human beings live together with kith and kin
Weep not my daughter, weep not
Your parents have send you like pigs and fowl
Given you a string of rope and a stick.)

The gathering also sings marriage songs in favour of the bride as she wants to be married into a well-to-do family and a stout and handsome eligible groom. Then they sing as follows –

dâokhâ hâbnâi noâolâi
swimâ hâbnâi noâolâi
ângkhw dâbilâi âio ângkhw dâbilâi
mâi bâkhri nâinânwi
mwsou goli nâinânwi
ângkhw bilâihor âio ângkhw bilâihor
âdwi modo nâinânwi
bikhâ phângdâng nâinânwi
ângkhw bilâihor âio ângkhw bilâihor

(Don't marry me to such a house where
The crows and dogs enter
Marry me to that house where
The cows and paddies are found abundantly
Marry me to such a youth who
Is stout and handsome.)

The womenfolk, parents, relatives and friends of the bride try to console her at the time of farewell with the following marriage songs –

bâri khonâni udâsi
o âiwi jingâ dâsi jingâ dâsi
hârsâ houânw horâkhwi
bângâl houânw horâkhwi
boro houâjwnw râijw jânwsw

hordwng âiwi hordwng

(Don't you worry, dear!
Don't you grow sad
You have not been given away in marriage
To a Non-Bodo (Harsa) or other's
We have married you, o dear!
To a good Bodo youth.

Again –
dâgâbswi âiwi dâgâbswi, dâgâbswi
omâ gederâ bâro khumâni
phisâ hinjâoâ mâlâini
dâgâbswi âiwi dâgâbswi
gâblâbw-khublâbw nwmâ nwmphâkhw mwnliâ
nephâl gongârnw horâkhw
boroni âsârjwng boroni bisârjwng
boro houâjwng râijw jânwsw hordwng
âiwi hordwng hordwng

(Don't weep dear, Don't weep!
The fatted pig is for kit and kin
A grown up girl likewise
Is for others
No weeping or solicitation
Can't keep you in your parent's home
You have not been given over
To a Nepali or Bhutia, etc.

Besides these a lots of marriage songs are sung during the traditional marriage of the Bodos to make the occasion sportive and fun.

5.0 Conclusion:

To conclude, it can be said that the impact of the modern world has touched the Bodos also. But the life of the Bodos though have undergone socio-cultural changes due to the ever increasing contact with the outside world, the ethnicity, practices and the ethnological behaviours have become interwoven with the primary concept of life and death. With the passing of time the Bodos of this area are also coming into contact with outside world due to practical expediencies and exigencies of life. The concept of life cycle, socio-religious patterns and culture has undergone variable changes. No doubt some modern elements of sophistication and urbanization have encroached upon their social and cultural lives, but they still live and breathe in their own culture and tradition.

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MANUSCRIPT CONSERVATION AND PRESERVATION IN NORTH EAST INDIA

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Abstract

The paper discusses about the various manuscripts preservation and conservation initiatives in North East India. Digitization has given a new momentum to manuscripts preservation. North East India represents diverse ethnic groups and most of them have their own cultural traditions and customs. In Northeast India there are a number of institutions including Temples, Namghars and Monasteries having a very good collection of manuscripts. The present paper highlights the initiatives of National Mission for Manuscripts, British Library's Endangered Archives Programme and Digital Library of India initiatives for manuscripts preservation in North East India.

Key Words: British Library, Digital Library of India, Digital Preservation, Endangered Archives Programme, National Mission for Manuscripts, North East India, OAI-PMH

1. Introduction:

"Unless action is taken now, much of mankind's documentary heritage may vanish - discarded as no longer of relevance or left to deteriorate beyond recovery." (http://eap.bl.uk). In ancient period people use different materials as information storage medium out of which manuscripts tops the list. India is a country of knowledge and literature, the vast amount of knowledge has their existence as manuscripts written on material like palm leaf, wood, cloth, stone, birch bark, paper etc. India still probably has the largest collection of manuscripts in the world after thousands and thousands of its valuable manuscripts had either been taken out of the country or destroyed during various invasions starting from Alexander who invaded India in 326 B.C. Islamic invader Bakhtiyar Khilji in 1193 A. D. destroyed the Nalanda University library which is believed to house more than 9 million manuscripts. It took three months to completely destroy the huge library. Indian manuscripts are scattered all over the country possessed by individuals, organizations, libraries, museums and religious places and in absence of proper identification and preservation a large number of important manuscripts are decaying year after year due to climate changes, natural calamities and natural deteriorating processes.

In digital era the preservation of manuscripts has taken a new momentum. The initiatives taken up by different university libraries and national level institutions like National Mission for Manuscripts to provide a safe guard to those rare and very important documents from disappearing are worth mentioning. Digital preservation is not only to store the manuscripts digitally but also make it available to its users. Manuscripts are very important and ancient tools of knowledge the resources must be shared among libraries to make it more useful. National Mission for Manuscripts has plans to build National Digital Manuscripts Library. Currently, it possesses a huge 1,85,75,660 digitized images of manuscripts stored in CD/DVDs and Hard Disks. It has also planned to covert these digital images to microfilm form, which is the only accepted standard medium for very long term preservation of archival material approximately 500 years.

The life span of CD/DVDs is only 5 years. (National Mission for Manuscripts Annual Report, 2013-2014). Many of the earlier works on preservation of manuscripts in North East India speaks of efforts made in various institutions and under various projects. But of none of the works mentions all major initiatives in this regard specially the efforts made by British Library's Endangered Archives Programme (EAP) funded by Arcadia. Arcadia supports charities and scholarly institutions that are engaged in preserving cultural heritage and the environment. It also gives grants that promote open access. Since 2002, Arcadia has awarded more than $363 million to projects around the world. (www.arcadiafund.org.uk).

2. Manuscript Preservation Initiatives in North East India:

North East India consisting of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura constitutes about 8% of India's geographical size and its population is approximately 40 million about 3.1% of the total Indian population. *"Northeast India has over 220 ethnic groups and equal number of dialects. The hills states in the region like Arunachal Pradesh, Meghalaya, Mizoram and Nagaland are predominantly inhabited by tribal people with a degree of diversity even within the tribal groups. The region's population results from ancient and continuous flows of migrations from Tibet, Indo-Gangetic India, the Himalayas, present Bangladesh and Myanmar."* (van Driem, 2012). Adivasi, Assamese, Bhutia, Bishnupriya Manipuri, Biate, Bodo , Chakma, Chhetri, Dimasa, Garo, Gurung, Hajong, Hmar, Hrankhwl, Jamatia , Karbi, Khasi, Khampti, Koch, Kom, Kuki, Paite, Vaiphei, Zou, Teddim, Simte, Gangte Lepcha, Lushai, Meitei, Mishing, Mizo, Poumai, Mao, Maram, Tangkhul, Anal, Monsang, Naga, Nepali, Noatia , Paite, Pnar, Purvottar maithili, Rabha, Reang, Rongmei, Singpho, Sylheti, various Tibetan tribes, Tamang, Tiwa, Tripuri, Zeme Naga, Chorei and Limbu are different ethnic groups inhabiting the region. (https://en.wikipedia.org/wiki/Northeast_India).

Various agencies including National Mission for Manuscripts (NMM), Digital Library of India (DLI) and British Library's Endangered Archives Programme (EAP) have funded many projects for locating, documenting, preserving and digitizing manuscripts from North East India.

2.1 National Mission for Manuscripts (NMM) Initiatives: National Mission for Manuscripts (NMM) established in February 2003 under the Ministry of Tourism and Culture, Govt. of India has played a vital role in preservation and conservation of manuscripts in North East India. NMM has created a National Database of Manuscript - Kriti Sampada where 31,23,000 records have been released on its website till 31st March, 2014. (National Mission for Manuscripts Annual Report, 2013-2014) Among the north eastern states, Arunachal Pradesh, Assam, Manipur and Tripura have been successful in implementing projects of NMM. NMM has established 5 Manuscript Resource Centres (MRC) and 5 Manuscript Conservation Centre (MCC) in North East India. To educate people about the importance of manuscripts many workshops, seminars, lectures, awareness programmes, publicity campaigns are being conducted by NMM.

Arunachal Pradesh has a very rich tradition of practicing Buddhism and Buddhist Monasteries have a very rich and rare collection of manuscripts. In Tawang Monastery alone the largest monastery in India has a collection of more than five thousand rare Buddhist manuscripts on religion, philosophy, medicine, Lord Buddha's original preaching's etc. Also there are at least five dozens of old Mahayana monasteries in Arunachal Pradesh where hundreds of Buddhist manuscripts written in Bodic scripts are preserved. (Motebennur, 2009). A Manuscript Conservation Centre (MCC) has been established in 2006 at Tawang Monastery, Tawang by National Mission for Manuscripts (NMM). It has so far given preventive treatment to 200 manuscripts and curative conservation treatment to 31 manuscripts

Assam is very rich in terms of manuscripts scattered in the universities, colleges, temples, monasteries, namghars and individual possessions. Among the manuscripts available in Assam, the Vaishanava

Manuscripts of Majuli Island and manuscripts written under the patronage of Ahom kings need to be specially mentioned. In Assam during the period of Srimanta Sankaradeva in the 15th Century Sanchipat (the bark of Agar Tree) and Tulapat were used to write dramas, poems, Bargeet etc. (Mazumdar, 2009). Asom Kalaguru Kristi Mondir Bodha Samaj, H.O. Karhal Gaon, P.O. Majuli, Assam has become a Manuscript Partner Centre (MPC) of National Mission of Manuscripts due to its large collection of manuscripts. MPCs are required to document their own collections and catalogue them to Manus Granthavali, a Dublin Core Metadata Standards complaint software developed by NMM to create the National Database of Manuscripts - Kriti Sampada. In Assam, National Mission for Manuscripts has established Manuscript Resource Centres (MRC) at Krishna Kanta Handique Library, Gauhati University, Guwahati; B C Gupta Memorial Library, Gurucharan College, Silchar; and Institute of Tai Studies and Research, Moranhat, Sibsagar. The MRC at Krishna Kanta Handique Library, Gauhati University has been functioning since August 2003. The MRC has so far documented 26,021 manuscripts from the 13 districts of Assam. The MRC at Gurucharan College, Silchar has been functioning since October 2005. Till 31st March, 2014, 602 manuscripts in Archaic Bengali script in different subjects of Ayurveda, Tantra/Mantra, Jyotisha, Pujavidhi etc has been documented by it. The MRC at Institute of Tai Studies and Research, Moranhat, Sibsagar has contributed 5980 data to the national database of NMM upto 31st March, 2014. NMM has also established Manuscript Conservation Centres (MCC) at KKH Library, Gauhati University and Gurucharan College to give preventive care and curative conservation treatments to manuscripts. (www. namami.org). In addition NMM has established a temporary field laboratory at the Guwahati based Srimanta Sankaradeva Kalakshetra (SSK) for digitizing the rare manuscripts of Assam, which selected 44,000 manuscripts for digital preservation through a survey in 2008. (Mazumdar, 2009).

In Manipur manuscripts are found in different organizations including public and private possession. The subject coverage of the manuscripts available in Manipur are arts and culture, astrology, charms and mantras, creation, fine arts, earth science, poetry, prediction, prose, religion and philosophy, Meitei scripts, supernatural stories etc. (Mazumdar, 2009). Some scholars, archives and museums have manuscript collections but due to lack of proper restoration process and preservation tools and techniques manuscript are disappearing throughout the state. Some Meithei manuscripts of Manipur have also been translated into Bengali by the scholars (Maltesh and Devi, 2006). In Imphal there is a Manuscript Resource Centre (MRC) and Manuscript Conservation Centre (MCC) funded by the National Mission for Manuscripts. In November 2005, the Manipur State Archives (MSA) and Manuscript Resource Centre (MRC) unearthed 22,212 manuscripts and collections in a National Survey of Manuscripts in Manipur. MRC at Manipur State Archives has contributed 45,413 data to the national database and MCC conserved 29,986 folios of manuscripts upto 31st March, 2014. (www.namami.org).

In Tripura, Tripura University has taken the initiative to preserve hundreds of valuable manuscripts. Manuscripts of Tripura mainly belongs to the Chakma Culture dealing with subjects like the history of ethnic tribes, their culture, herbal medicine practices, music and Hinayana Buddhism. Manuscripts related to Metiei, Burmeese, Mog and other tribal languages are also found in Tripura. National Mission for Manuscripts has established MRC and MCC in Tripura University in the Department of History in 2010 to unearth and take care of manuscripts of Tripura. Many scholars and teachers including an ex vice chancellor of Tripura University has donated their personal collection of manuscripts to the centre. The MCC has conserved 13,761 folios of manuscripts upto 31st March, 2014. The MRC & MCC at Tripura University has also taken initiative to preserve the Princely State Documents, manuscripts, rare books, paintings, coins and most specially the letters of Rabindranath Tagore which is under the custody of Royal Family of Tripura. The Royal Family has accepted proposals to preserve these valuable items. In future,

MRC & MCC and the Royal Family of Tripura plans to jointly organize exhibition of these valuable items at Rajbari premises. (http://www.tripurauniv.in/index.php/manuscript-resource-conservation-centre).

Table 1: Summary of work done by NMM in North East India

(Data compiled from Annual Report of NMM, 2013-2014, NMM website and other sources)

Name of the State	Name of the Institute	Manuscript Resource Centre (MRC)		Manuscript Conservation Centre (MCC)			
		Status	Total Data Contributed till 31st March, 2014	Status	No. of Manuscripts/Folios Conserved in Preventive Way	No. of Manuscripts/Folios Conserved in Curative Way	Total No. of Manuscripts/Folios Conserved till 31st March, 2014
Arunachal Pradesh	Tawang Monastery, Tawang	No	--	Yes	200 Manuscripts	31 Manuscripts	231 Manuscripts
Assam	Krishna Kanta Handique Library, Gauhati University, Guwahati	Yes	26021	Yes	19911 Folios	721 Folios	20632 Folios
	B C Gupta Memorial Library, Gurucharan College, Silchar	Yes	602	Yes	262 Manuscripts	0 Manuscripts	262 Manuscripts
	Institute of Tai Studies and Research, Moranhat, Sibsagar	Yes	5980	No	----	--	----
Manipur	Manipur State Archives, Imphal	Yes	45413	Yes	27553 Folios	2433 Folios	29986 Folios
Tripura	Department of History, Tripura University, Agartala	Yes	800 (approx)	Yes	13071 Folios	690 Folios	13761 Folios

Fig1: Projects of National Mission for Manuscripts in North East India.

2.2 British Library's Endangered Archives Programme (EAP) Initiatives:

Under the British Library's Endangered Archives Programme (EAP) grants are awarded to individual researchers to identify collections that can be preserved for fruitful use. The original archives and the master digital copies are transferred to a safe archival home in their country of origin, while copies are deposited at the British Library for use by scholars worldwide (http://eap.bl.uk). One of the best aspects of EAP is that the scope and content of each collection has been explained in detail. Catalogues can be searched through the British Library's Archives Catalogue at http://searcharchives.bl.uk. The following projects have been funded by The British Library under EAP in North East India:

2.2.1 Archiving texts in Sylhet Nagri Script (EAP071): The objectives of the project are to locate and digitize printed texts and manuscripts written in the Sylhet Nagri script. There is lack of interest in this script due to its obsoleteness and in absence of preservation many materials have already been damaged by moisture and insects. This script was evolved between the fourteenth and the seventeenth century in north eastern Bengal as an alternative to the standard Bengali script which had only 32 letters and no conjuncts. Surveys conducted under this project unearthed many printed texts and manuscripts lying in remote rural masjids, mokams, madrasas and other shrines and also in district libraries and private collections. (http://eap.bl.uk/database/overview_item.a4d?catId=10079;r=18467).

Fig 2: A sample manuscript of Hâlatunnabi (a life of the Prophet) which is a popular text in the Muslim community of the Silchar region from Ābdul Latiph Laskar Collection of Texts in Sylhét Nāgri Script. (Source: EAP071/1)

2.2.2 Locating and identifying Lepcha manuscripts as a first step towards their preservation (EAP281): The main aim of this project was to locate and identify Lepcha manuscripts in Sikkim and its surrounding areas of Darjeeling and Kalimpong. The Lepchas are the indigenous people of Sikkim who have their own script dating back to the 18th century. They have their own language, tradition and culture which have now become endangered due to the losing interest of the younger generation of Lepchas in their own religious traditions and culture. Majority of the young Lepchas do not speak their own language and give preference to Nepali and English languages. Presently, the Lepcha orthography is mainly used in government language textbooks and in journals and magazines privately published by groups of Lepchas who are actively writing stories, poems and songs in serious attempts to keep their language and culture alive. Lepcha manuscripts contain Buddhist texts and their own older religious traditions. (http://eap. bl.uk/database/overview_item.a4d?catId=49299;r=18467).
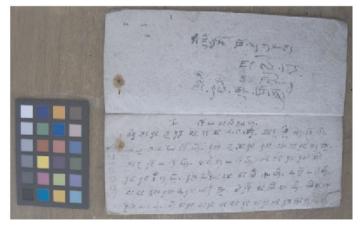
Fig 3: A sample Lepcha manuscript of Astrology from Arthur Foning Collection of Lepcha Manuscripts [1894-1963]. (Source: EAP071/1)

2.2.3 Documenting, conserving and archiving the Tai Ahom manuscripts of Assam (EAP373): Dr Stephen Morey from La Trobe University has been granted this major project worth £17,755 for digitizing and documenting 500 Ahom manuscripts containing 20,000 pages which are the written legacy of North East India's Ahom Kingdom, the longest ruling dynasty and archiving these manuscripts at the British Library, Institute for Tai Studies and Research (Moran, India), Gauhati University (Guwahati, India) and Dibrugarh University (Dibrugarh). The Ahom Kingdom represents the furthest reach of a diverse Tai culture bridging China, Vietnam, Laos, Thailand, and Burma. Usually written on Sasi (Aquillaria Agallocha) tree bark, most Ahom manuscripts date to the 17th and 18th centuries, but discuss and/or copy far older texts. They describe all aspects of traditional Ahom life, and have played an active role in maintaining community identity. (http://eap.bl.uk/database/overview_project.a4d?projID=EAP373;r=41). Ahom as a mother tongue is lost around two centuries ago and now most of the Ahom people can neither read nor interpret Ahom texts. Efforts are being made to revive this lost language by transcription and translation of a number manuscripts; the development of the online Tai Ahom Dictionary; the preparation of a descriptive grammar of Tai Ahom; and the realization of the proposal to include Tai Ahom script in the Unicode. (Morey, 2015)

Fig 4: A sample Ahom manuscript of Deo Buranji from Ajoy Mohan Collection (Source: EAP 373/1)

2.2.4 Locating and surveying early religious and related records in Mizoram, India (EAP454): Mr Joseph Lalzarliana from Mizoram University has undertaken this pilot project worth £7,537 for 3 months to locate and survey for the first time endangered and privately held ecclesiastical documents in Mizoram, India. The team created 10,500 digital images of the rarest and oldest manuscripts, diaries, missionary booklets, church and government records, photographs, and personal letters. DVDs were given to custodians with copies of their own documents and steel storage boxes given to custodians whose documents were in immediate threat from rats. Digital copies have been deposited with Mizoram University Library, The LTL Library, Mizoram State Archives, Presbyterian Synod Archive, Aizawl, and the British Library. (http://eap.bl.uk/database/overview_project.a4d?projID=EAP454;r=41)

Table 2: Summary of work done by British Library's Endangered Archives Programme (EAP) in North East India (Data compiled from www.eap.bl.uk)

Sl. No.	Project Name	Project Code	Project Funding	Project Duration	No. of Collections
1	Archiving texts in Sylhet Nagri Script	EAP071	£10,000	12 months	32
2	Locating and identifying Lepcha manuscripts as a first step towards their preservation	EAP281	£9,346	7 months	5
3	Documenting, conserving and archiving the Tai Ahom manuscripts of Assam	EAP373	£17,755	24 months	55
4	Locating and surveying early religious and related records in Mizoram, India	EAP454	£7,537	3 months	23

2.3 Digital Library of India Initiatives:

Digital Library of India (www.dli.ernet.in, mirror site www.dli.gov.in) is an ambitious project of the Department of Electronics and Information Technology (DeitY), Ministry of Communications & IT, Government of India in collaboration with Carnegie Melon University, USA; Indian Institute of Information Technology, Hyderabad; National Science Foundation; India Institute of Science, Bangalore and 21 participating centres with the primary objective of digitizing all the significant works of mankind. A total of 33 projects in different aspects of digital library has been initiated out of which 3 projects has been earmarked for north eastern states. Total number of books scanned by the different scanning centres as on 27th March, 2016 stands at 5,37,350 with 187.66 million pages approximately (http://dli.ernet.in/static/dli/current_status.html).

Table 3: Summary of work done by Digital Library of India in North East India (Data compiled from www.dli.ernet.in & www.dli.gov.in)

Sl. No.	Name of Project and Implementing Agency	Objectives of the Project	Status of the Project	No. of Books Scanned	No. of Pages Scanned in Millions
1	Digital Archiving for Preservation of Rare Manuscripts and Folios Available with Namgyal Institute of Tibetology – Sikkim by Namgyal Institute of Tibetology – Sikkim with technical support of C-DAC Kolkata	1. Digital Archiving for preservation of rare manuscripts and folios available with Namgyal Institute of Tibetology, Sikkim. 2. Digitization of Hymns reactions	Project completed. Scanned data web enabled http://www.dli.ernet.in and www.dli.gov.in	2	0.001
2	Digital Archiving for preservation of rare manuscripts at various monasteries in Sikkim by NIT Sikkim	Digital Archiving rare manuscripts at various monasteries	Project completed. Scanned data web enabled http://www.dli.ernet.in and www.dli.gov.in	957	1.62
3	Digital Library for North Eastern States (Content Creation, Storage and Access)" by C-DAC, Kolkata	Digitize, Preserve and web enable copy right free books available in North Eastern States.	Project is ongoing. Digitization work has been started at Assam Tripura and Manipur. A digital Library portal was created in Tripura and data is being hosted. http://www.dli.ernet.in	15203	4.99

3. Conclusion:

North East India is rich in cultural heritage and presence of a large number of manuscripts in institutions including Temples, Namghars, Monasteries, Mosques, Churches and individual possessions reflects this heritage. A small state of Sikkim alone is estimated to house more than 200 Monasteries or Gompas where thousands of unexplored Buddhist manuscripts may be present. A unified approach is needed in creating a complete database of manuscripts of North East India. Works done under various projects are available separately from either through their website or on personal visit to a particular library. OAI-PMH protocol for metadata harvesting is needed to create a complete bibliographic database of manuscripts with direct links to the resources. Here the different digital repositories of manuscripts will act as data providers whereas the centralized bibliographic database will act as the service provider. An initiative to launching a manuscript repository will definitely increase the possibilities of manuscript conservation and preservation along with its wide use by the researchers and philosophers and foreign visitors. It will act as a gateway to cultural heritage of North East India. Full description about the scope and content of each manuscript is needed for better understanding of the contents by the researchers as the scripts used to write the manuscripts are either obsolete or not understood by the community people itself.

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"NEED FOR TRANSFORMING LIBRARIES FOR TOMORROW": HOW THE LIBRARIANS SHOULD ADAPT TO THE TEACHING LEARNING PROCESS OF THE 21ST CENTURY

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Introduction

Tomorrow has not come. Predictions about the library of tomorrow or the future are not easy to make, with the rapid changes in science and technology taking place in the world. Libraries are the heart of education and research. Libraries traditionally provide free and democratic access to knowledge. The traditional role of a library as a physical space having books and materials will not exist in the future.   In today's world, the firstplace researchers and users search for information is Google. Technology facilitates an individual to access information with a number of devices,especially with iPadsand the smart phone. Technology has made information more mobile. New technology enablesus to access information from the four corners of the world. Therefore, technology can help people to do things better, but, people have to be competent to use technology effectively, as it has several limitations.

What will tomorrow's library look like? With the rapid changes in technology taking place today, it is impossible to predict the library of tomorrow. But going by the available evidence, libraries of the future will probably be electronic based, focus less on content, but provide space for the community to share knowledge and exchange ideas. The future library will be the focal point for the discovery of new ideas and publishing of reliable information, in a society teeming with unreliable information.

The library clientele and their requirements are changing fast but not so the Libraries or librarians. Therefore"Need for Transforming Libraries for Tomorrow" is a very timely theme and can be divided into severalcategories such as library collections, new technology used, Library staff and clients and their requirements, buildings, infrastructure facilitiesand different types of libraries etc. To narrow down the topic, the author of this article explores the role of the future librarians as network administrators, IT specialists, literature specialists and most probably academic advisors. As an academic advisor, the librarian's role will be elaborated as an educator for tomorrow, or in other words the role of the librarian would be that of one who enables clientsto develop clients'skills to meet the challengesofthe 21st century.   Thus, when playing the role of an educator,the librarian's rolehas to change to the dynamic role of a social mentor, who teaches information skills and vocational skills. Most often the librarians are burdenedwith many duties as regards the traditional responsibilities involved with a library, such as custodian, administrator, manager, Guide, and public relations officer. But the argument is that if the librarians are not cognizant of the latest developments in their field, they will not be able to avoid their mismatch with the society.Ramos (2011)has identified the role of librarians in the 21st century under different categories such as information broker for both print and electronic media, Change agentthat is technology application leader, facilitator,Educator, Innovator, web site designer, Builder, Manager, Database manager, Collaborator, Policy maker, Business manager, and Image maker.Alison (2015)the writer of "Washington Post", identified the top 20 Jobs that are fast becoming Obsolete. Librarianship is one of them. The reason as Alison pointed out is, that today,

all information can be downloaded digitally without the aid of a library or the assistance of a librarian. But there are a lot of counter arguments as well. The library or librarians are not obsolete.(Sherman,2016)

Coffman (2013)published an article titled "The Future for Librarians", in which he raised the following issues:Can we (Librarians) succeed in a digital future, whether all digital or hybrid? What can librarians do if all information is made available digitally?He also states; if libraries become digital information centres then librarians may continue to have a financial role to play, in helping to subsidize access to these large digital collections. Then there will be no point in having large library buildings and a large staff.

Role ofthe librarian

In a different aspect, The author would like to refer to what David Lankesin(2011),wrote in The*Atlas of New Librarianship*- "In the future, the mission of librarians is to improve society by facilitating knowledge creation in their communities." I think the time has come to changethe role of the librarians,inorder to improve their skillsas facilitators in helpingthe students or customers, in their learning, teaching and research. It is a well-established fact that the library and teaching learning process (education) are inter connected. Nobody can dissociate the library from education. (Lankes,2011)

The writerlikes to use the term 21st Century Library skills developments, because the skills under education have been identified as the 21st century skills. The 21st century skills are a set of abilities that students need to develop,to succeed in the information age. While each framework has a slightly different list of critical 21st century skills, all agree on four critical areas for development:

1. Collaboration and teamwork,

2. Creativity and imagination,

3. Critical thinking,

4. Problem solving

Therefore, it is very important to know how the library can help to improve these 21st century skills areas. At the same time the scholars have identified that the above skills are based on foundational skills such as Information Literacy (IL), Media Literacy and Technology Literacy.

There is a correlation between the 21st century skills and the 21st century library developments. Therefore,it is the responsibility of the librarians to teach directly or indirectly, the skills such as Information Literacy, Media Literacy and Technology Literacywhich cover extensively, the proper access of information, evaluation of information, reading and writing techniques, Usage of information, and communication of information.

Teaching Information Literacy (IL) skills

According to ACRL (2016) "Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" ACRL framework for information literacy for higher education specifically mentions the role of the librarians in implementing the framework "The Framework will help librarians contextualize and integrate information literacy for their institutions and will encourage a deeper understanding of what knowledge practices and dispositions an information literate student should develop. The Framework redefines the boundaries of what librarians teach and how they conceptualize the study of information within the curricula of higher education institutions." (ACRL 2016)

The Alexandria Proclamation adopted by the High-Level Colloquium on Information Literacy and

Lifelong Learning in November 2005, defines information literacy to "empower people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals".Horton, (2008) states Information literacy means the set of skills, attitudes and knowledge necessary to know when information is needed to help solve a problem or make a decision, how to articulate that information need in searchable terms and language, then search efficiently for the information, retrieve it, interpret and understand it, organize it, evaluate its credibility and authenticity, assess its relevance, communicate it to others if necessary, then utilize it to accomplish bottom-line purposes; Information Literacy is closely allied to learning to learn, and to critical thinking, both of which may be established, and formal educational goals, but too often are not integrated into curricula, syllabi and lesson plan outlines as discrete, teachable and learnable outcomes; sometimes the terms "Information Competency," or "Information Fluency" or even other terms, are used in different countries, cultures or languages, in preference to the term Information Literacy.

These skills have always been important to the students and thesocietyand to our information-based economy as well. Schoolsand universities in Sri Lanka teach these skills to some extent,but,as evident from our (NILIS) students' research findings it is not adequate. And,the teachers or lecturerscannot teach all the skills by themselves alone. Thisis where the librarian's role becomes very important. Because, librarians know how to locate, evaluate, use, and communicate synthesized information, effectively and efficiently.

In addition to theirso called traditional duties, the librarianscan also support teaching, learning, and researchactivities,in numerous ways. As implied by the definition, the role of the teacher librarian in Sri Lankan schools has been divided into four categories, such as developing the library collection in printed and electronic media, carrying out awareness programmes among the students and teachersabout the collection, and most importantly teaching information literacy skills, and helping teachers to plan the lessons and co-curricular activities and evaluatingthe students' projects in collaboration with the teachers. (Ranaweera&Alahakoon 2016)

The librarian has to play the much respected role of the teacher, lecturer, and mentor, in teaching IL skills.In the 1990's, having realised the importance of the library and the librarians, the Sri Lankan school education system tried to introduce a dynamic concept in librarianship, in combination with the teaching skills—that of the teacher librarian.In Sri Lankan context to teach Information Literacy, the Empowering 08 IL model is being used in the school sector. (Pemadasa and Ranaweera 2016)In the context of Universities and higher education too, the librarians are teachers or lecturers who teach Information Literacy skills to the students.

In the context of future libraries,Inayatullah, (2015)in his keynote speech indicates that there are different futures for the librarians. If Librarians remain in the same job capacity, they are like dinosaurs. Very soon they will be obsolete. No funds will be available to them to maintain the libraries. Therefore, librarians should be critical & creative thinkers who suittomorrow,those who can connect the library clients for the real-time world, by direct brain download. Librarians can become publishers online, with complete credibility. The Library becomes a one stop shop. Eg;_ 3 D printing shop and workshop space at the library. The Library is a family space. In the future world, there will not be 'libraries", everything will be a library. Tomorrow's library can be a green library;we need to convert the stupid library into a smart library. Libraries are helping customers from absorbing content to creating content. Thus, the library or librarians are not obsolete.On the implementation of the UN 2030 Agenda,Seventeen (17) Sustainable Development Goals (SDGs) were identified, "LIBRARIES SUPPORT ALL THE 17 SUSTAINABLE DEVELOPMENT GOALS" (IFLA) How Libraries can support, Promoting universal literacy, including

digital, media, and information literacy and skills, Closing gaps in access to information, and helping government, civil society, and business, Providing a network of delivery sites for government programmes and services, Advancing digital inclusion through access to ICTs; Serving as the heart of the research and academic community, Preserving and providing access to the world's culture and heritage.(IFLA 2015)

Conclusion

It is very clear that all librarians require professional and continuing education to cope with the new trends, and to prevent the profession becoming obsolete. Therefore, continuous professional development for the librarians is essential. Dynamic changes and imagination are necessary for the development of the profession, to face the challenges of the coming tomorrow. Like mobile phones and ATM machines which have been invented to meet the requirements of the society, librarians too should put forward new strategies for the future libraries and librarianship, before the customers turn to otherventures. Librarians need to be educated OR learn by themselveson how to conduct IL programmes, knowledge on curriculum components such as aims, goals and objectives of curriculum, forming the learning outcomes, content or subject matter, teaching strategies,learning styles, assessment and evaluation techniques. Tomorrow libraries and librarians are not in a crisis as some predicted, if transformation takes place in par with the current changes in the world and well in advanced.

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NAAC: THE ANSWER OF BEST PRACTICES IN COLLEGE LIBRARIES

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Abstract:

Education plays a vital role in the development of any nation. Higher education is considered as an important instrument for bringing about social, economic, political and technological progress of any country particularly for a developing country like India. The higher education sector ensures quality of the educational process with the help of accreditation agencies and the libraries are playing a very crucial role in bringing out the vision of Higher Education. Best practices are the vital point where libraries are dealing with to cope up with the changing environment & information needs of the users. This paper will throw light on the guidelines imparted by NAAC to the college Libraries in the purview of best practices. The paper also deals with the different criterion of involvement of libraries in NAAC assessment & areas of libraries where best practices can be adopted. The methodology adopted for the paper is descriptive. The study is important in addition to NAAC guidelines to keep pace with ever changing advancements and needs of users. The objective of the study is to find out the relevance, importance and to identify the different areas of best practices. The paper also highlights the points for impact of NAAC in College Libraries, Role of Library in different criterion of NAAC assessment, Importance of best practices, Guidelines of NAAC in best practices and areas of best practices in Libraries.

Key words: NAAC, Higher Education, Best Practices, College Library

1. INTRODUCTION

Every higher educational institution is today planning to provide quality level education no matter whatever domain it deals. Quality in terms of teaching and learning cannot be accomplished without a quality level library and its quality level services. Educational scenario in Colleges has been transforming from traditional to modern one. Most of the College Libraries of India has got a transforming stage with the involvement of NAAC assessment. The National Assessment and Accreditation council (NAAC) as an autonomous body of the University Grants Commission(UGC),has been entrusted with the responsibility of Assessment and Accreditation of colleges and Universities in India. The prime agenda of NAAC is to assess and accredit institutes of higher learning with the objective of enabling them to work continuously to improve the quality of education by maximizing their resources, opportunities and capabilities. NAAC vision in terms of library assessment is not only to assess it but also to guide it in those domains where the particular library is lagging behind.

There are different sets of best practices provided by the NAAC in their guidelines for Best Practices for the Libraries. Best practices always do not mean a big investment but it needs practice , dedication and its quality output.

2. IMPORTANCE OF THE STUDY

The paper will shed light on the guidelines imparted by NAAC to the college libraries. The study will also identify the areas where best practice can be implemented in the College Libraries, in addition to NAAC guidelines to keep pace with ever-changing advancements and needs.

3. IMPACT OF NAAC IN COLLEGE LIBRARIES

While evaluating the individual constituent of a college, NAAC has realized the importance of the "College Libraries" which were formerly known as the Store house of books and the librarians as the custodian of documents. In the initial stage of its establishment NAAC has accredited different institutions which brought a common deficiency i.e. lack of well equipped library in maximum number of accredited institutions. NAAC provide a report on the evaluated institutions, where NAAC has focused extremely on the pathetic conditions of the College Library which before assessment of NAAC were ignored by most of the college authorities .In the final report, NAAC provides the appreciation on the strength of the colleges as well as suggestion on the weakness of the colleges where college library has been kept in the focal point. With that most of the colleges in India started to develop their libraries by appointing the full- time professionally qualified librarian with other staffs. Moreover, stress on the collection development policy with more emphasis on the e – resources, training of library staff, library automation, working hours, proper and efficient library services, etc. have been identified as the immediate requirement for the development of College library which should be accepted by both the librarian and the College library authority.

4. LIBRARY IN DIFFERENT CRITERION OF NAAC ASSESSMENT

NAAC assess and accredit an institution on the basis of seven crucial criteria:

1. Curricular aspects
2. Teaching-Learning and Education.
3. Research consultancy and Extension.
4. Infrastructure and Learning Resources.
5. Student support and Progression.
6. Governance and leadership.
7. Innovative Practices.

Under each criterion there are a few key aspects which are observed by NAAC while studying an institution. A library participates in every aspect of higher education and has to play an essential role in NAAC process.

Tikam Madhuri (2010), Librarian, H R college of Commerce and Economics, Mumbai have presented the following table which depicts the role of Library in different Criterion

Criterion	Role of Library
Criterion I	▪ Set clear objectives which support college objective
	▪ Develop quantity and quality collection on core and interdisciplinary subjects
	▪ Collect Feedback about Library and its services
Curricular Aspects	▪ Organize proof of Interaction with academic peers and employers

Criterion II Teaching – Learning and Evaluation	- Use of Internet, Computerization, A/v Material, etc.in the Library - Training of technical staff via in-house/external agency - Details of Recruitment of staff & faculty development programmes - Details about Internet, extra activities and prizes won, etc of library staff - Details of Inter Library Loan, external members, etc
Criterion III Research consultancy and extension	- Silence work area - Sufficient number of journals - Quality Subject books - Reference Books - Recommendations of users and action taken over the suggestions - Circulars, Guidelines collected/displayed by the library - Literacy programmes, etc - Consultancy, seminars etc. provided
Criterion IV Infrastructure and learning Resources	- Library Layout - Cleanliness - Optimal use of infrastructure - User friendliness - Time tested Quality Services
Criterion V Student Support and progression	- Quality collection - User friendly services & knowledgeable staff - Orientations, exhibitions - Help messages/guidelines/Lab - Ex- student participation - Feedbacks - Book bank, language lab - Other special services
Criterion VI Governance and Leadership	- Work profiles of library staff - Library Committee Report - Student representatives/volunteers in acquisition and other library activities - Use of Internet, Computerization, A/v materials etc. in the library - Budgeting and auditing procedures of the library - Financial management of the library - Book bank, Literacy program meet - Staff meetings Open Forum, Suggestion box etc. of the library
Criterion VII Innovative practices	- Any special courses conducted by library - Inter library Loan , memberships of other libraries - Specific objectives of the library which supports the institutes overall mission - Innovative programmes - Award won, faculty development programmes.

5. BEST PRACTICE

Oxford Advanced Learners Dictionary describes Best practices as quality of high standard, excellence, highly improved, outstanding, par excellence service. It means way of doing something that is usual or expected way in a particular organization or situation, guidelines for good practices. According to National Board of Accreditation and Assessment (NAAC, 2007) "Best practice may be innovative and be a philosophy, policy, strategy, program, process or practice that solve a problem or create new opportunities and positively impact on organizations. Institutional excellence is the aggregate of the best practices followed in indifferent areas of institutional activities."

5.1 IMPORTANCE OF BEST PRACTICES IN COLLEGE LIBRARIES

Library is a service oriented center. The motto of any service oriented center is to provide the best service to its user within a minimum range of time. And the target of any service orientated organization is user satisfaction. To attract more and more users and to fulfil the user's satisfaction both current and exhaustive the libraries need to adopt certain measures in addition to the existing ones . And there comes the need and importance of best practices. Best practices are important for processes to work correctly. They are simply the best way to do things and have been worked out through trial and error and are found to be the most sensible way to proceed. Best practice can be applied in management and administration of a library, collection and services, extent of use of services, use of technology in libraries.

Best practice is important to verify the SWOT (Strength, weakness, opportunities and threats) analyses in a library system. By adopting best practices we can improve the overall system and services of a library.

Best practices can be adopted in the library for following purpose or situations.

1. Changes of library environment

To cope up in the age of information explosion academic Libraries are on the way of radical changes with the increasing impact of ICT on Higher Education. The role of libraries are changed from custodian of recorded knowledge to the gateways of the knowledge keeper. Today the information needs of the users have changed tremendously and libraries have to play an important role in satisfying their multidimensional needs. In order to balance the situation, the libraries need to formulate certain measures termed as best practices in their overall systems and services. In other words we need to keep aware ourselves with the latest technological development and have to keep a mentality to adopt in the library environment.

2. Changes in Library Services.

With the revolution of ICT, there has been a transformation in the mode of delivering the library services. The areas identified where the library domain has been transformed are

    a.   E Learning management system

    b. Establishment of the content management system

    c.   Virtual based services like SMS alert through the platform of internet.

    d. Outreach programmes for unreachable users.

    e.   Online access to library catalogs and library databases

    f.   Online/offline access to digital resources

    g.   Database searching

    h. Library Promotion and Marketing

    i.   Information Literacy Programs

5.2 GUIDELINES OF NAAC IN BEST PRACTICE

NAAC has identifies the set of best practices in Library and Information Services, with the help of a few case presentations from few selected libraries of the accredited Universities and Colleges.

For college libraries NAAC has developed the following set of best practices:

1. Computerization of library with standard software.

2. Inclusion of sufficient information about the library in the college prospectus.

3. Compiling student / teacher statistics.

4. Displaying newspaper clippings and a clipping file maintained periodically.

5. Career/employment information services.

6. Internet facility to different groups.

7. Information literacy programmes.

8. Suggestion Box

9. Displaying New Arrivals.

10. Instituting Annual Best use Award for students.

11. Organizing Competitions annually.

12. Conduct user survey periodically.

Best practice in simple term known as the practice which paves the way for enhancing the existing function and help in effective implementation or use of the process. Automation of all in – house keeping operations in college libraries with barcoding, user identity and web-OPAC facilities is a best practice in totality of library services. It has to be encouraged for wider adoption of all higher education institutions.

2. CERTAIN AREAS OF BEST PRACTICES

Certain areas are identified where best practices can be planned and implemented.

6.1 Traditional Library Environment:

 a. Library Orientation :- Orientation programme should be conducted at a regular interval not only for the new students of fresh academic session but also for the existing members to create awareness and to attract the users towards the library resources and services and to make them aware of the newly added facilities and services, so that we can convert a normal user to a habituated user of the library.

b. Library Information Brochures:- It acts like an advertisement of the library collection, services, rules & regulation and facilities available inside the library for the users. The brochures can be distributed at the time of admission so that the new students come to know about the basic facilities like book bank, Xeroxing, internet facility etc.

c. Best Library user Award :-

This practice is intended to encourage students to make maximum use of library resources &services. To attract more library users to visit the library and use the resources, the college libraries should felicitate its users namely "Library Best User Award" based on data and the observations of the librarian one best user award is to be given to the user who has made maximum use of the library. It is helpful to increase in frequency of visits to the library.

d. Counseling Center for Competitive Examination :-

Library is the heart of any institute and users are treated as the soul of any library. In academic libraries like College libraries users is the most important aspect. Besides their academic curriculum students are seeking guidance regarding their career and educational development. In this context library and librarian can play a very effective role in guiding them and assist them in choosing the right path for their future. . Library should have very rich collection of competitive examination books. Library should also arrange lecture programme, orientation program for motivating the students to the right direction by inviting expert from the respective fields.

e. Book Bank Facility:-

The economically weaker section of students can avail the book bank facility. Through the book bank they can avail two or more numbers of books for the entire session.

f. Assist in information Retrieval:

Librarian including the library professional staff personally assists the user in searching their valuable information so that their time can be saved, and it is also a tool to attract more and more users towards the library.

g. Use of ITC in Library:

Today, the success of a modern library is increasingly dependent on the most effective utilization and strategic management of new technologies in libraries. A good and proper implementation of ICT in library results into better resource sharing and more effective services to the users.

h. Library usage Statistics:

Library can maintain the gate register to its users for login. Through the gate register the average number of users can be evaluated on weekly basis.

I .Research Support Service:

Library can provide a strong support to the researchers' who are interested in Publishing their research output in Quality based Journals, Books, etc, also guide them on Plagiarism, on writing References, on checking citation, on publishing his/her research papers, on searching the Internet, and the availability of basic Internet E-Resources, etc.

6.2 DIGITAL LIBRARY ENVIRONMENT

a. Computerized Library with software

Information Communication and Technology has become an integral part of all the aspects of library. All activities of the library should be accomplished with the help of computers provided by a user friendly library management software encoded with barcode to both the books as well as library member cards. Many innovative features available in the software should be properly understood and then it should be implemented.

b. Library website and e mail

Libraries can create their own website providing the linkage to the main webpage of the college. The website can act as a interactive service to both the users and the staffs of the library. Provision should be made so that users can easily put their comment and feedback and they can easily meet their queries from outside the library also.

c. Web OPAC

An OPAC is designed to give the user bibliographic details of holdings in the collection of a particular library. Web OPAC should be customized in such a way that user may feel highly attractive to use it. Web OPAC should fulfill the deficiency of a federated searching tool in today's age of highly production of information.

d. Digital Reference Service

For providing this service computer with network connectivity should have alliance between user and the Librarian. Users can submit their queries through online or may directly chat with concerned Library staff using the web 2.0 tools preferably with Mobile Technology. CAS and SDI service should be made available in the online access mode.

e. Table of Contents

A library can constantly adding new material to its collection and maintain monthly list of recently added books. Table of Contents (TOC) alerting services can be implemented when a new book is added to the collection.

f. E-Resources

The library should be a member under N List Programme and the resources available under N List should be properly made available to all the users by providing individual access id. Besides other open access or consortium resources can be pulled.

g. Institutional Repository

An institutional repository is a set of services that a library offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. Library should develop institutional repository of Question paper, Syllabus, Research papers, Institutional scholarly publications.

Besides there can be various area for which Best practices can be adopted as for Content Management, E Learning, Access to online digital repositories, RFID Technology, Web OPAC, SMS E Alert Service, Hosting the Library database in cloud, etc

3. Outcome of Best Practices

There are different parts in a library where best practice can be implemented. Best practice is nothing but re designing and re engineering our existing system for greater involvement and continuous improvement. There are numerous advantages of adopting best practices in College Libraries. Some are listed below:

1. The efficiency of library services can be transformed from non quality to quality level or quality level to Total Quality level.

2. The libraries will not only act as a centre of learning but also it will set an example of Centre for Best Practices.

3. Every Library who follows the best practices will become an expert which will in turn can guide or motivate the other libraries to follow the similar approach.

4. Conclusion:

The Higher education in India has been gradually developing with the help of accreditation agencies like NAAC. Besides Knowledge innovation NAAC insist all the higher educational institutes to provide

best infrastructural environments with maximum stress on the services of the libraries. College libraries has got a new shape where these libraries have left their old practices. College libraries have to create an image of being interesting and happening place to attract the young generation towards them. To keep pace with the challenges every library has to identify and develop their resources and services by their own best practices. The best practices may vary from library to libraries. By adopting best practices a visible outcome is possible in all spheres of the library.

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NETWORKING OF COLLEGE LIBRARIES IN ASSAM: A FEASIBILITY STUDY WITH SPECIAL REFERENCE TO THE COLLEGE LIBRARIES OF GUWAHATI CITY

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Abstract:

Libraries of the present age are finding extremely difficult to cope with the exponential growth of information resources and also to meet the various information needs of the users with their limited stock of reading materials. The escalating cost of documents, information explosion as well as shrinking budget of the library brings the concept of networking. The college libraries are the worst sufferer of not having adequate fund for collection and infrastructure development. To get rid of this problem, networking, and resource sharing of the college libraries is seems to be an alternative solution. Networking of college libraries will help the participating libraries in many ways such as to get a document through Inter Library Loan (ILL), to make cooperative acquisition, to share catalogue, to compile a union catalogue which will help in lending of documents between the participating libraries. This paper is based on a survey carried out by the author with an intention to assess the feasibility factors such as ICT infrastructure, automation, collection as well as status of database of provincialised general degree college libraries of Guwahati which are supposed to require for creation of library network for the purpose of resource sharing among them.

Keywords: College Library, Network, Resource Sharing, ICT, ILL

1. Introduction

The basic purpose of any library is to provide the right information to the right reader at the right time. To meet this goal, libraries have to provide access to information regardless of location of the information stored. Networking plays a key role in providing such library services. National Commission on Libraries and Information Science (NCLIS), USA (1975) defines network as two or more libraries and or other organizations engaged in common pattern of information exchange, through communications for some functional purpose. A network consists of formal agreements whereby materials, information and services provided by a type of library are made available to all potential users. Libraries may have different jurisdictions but must agree to serve one another on the same basis as each serves its own constituents. Computers and telecommunication may be among tools for facilitating communication among them."

Need of resource sharing was realized by libraries a long back. Networking is a concept through which libraries can achieve better sharing of resources, acquisition of library materials and also can provide access to bibliographic information to the users. Inter-library loan is found to be one of the most common practices of resource sharing since long time. Besides inter-library loan, libraries are also engaged in resource sharing in many other areas such as co-operative cataloguing, co-operative classification, etc.

Due to the exponential growth and the increasing cost of information resources, it is difficult for a library to acquire all the documents, which are required by the user of a library. The voluminous growth of published documents in the recent past, increasing cost of information sources, technological advancements

that offer newer methods of information processing, retrieval and dissemination are some of the factors which have made resource sharing a necessity. The Library co-operation is a very old concept and a form of resource sharing. There are large instances of such cooperation among libraries in the library literature (Kaul, 1999).

2. Origin of the Problem

The growth in number and size of documents being published world over as well as in regional level created many problems for libraries. Self-sufficiency in libraries is difficult to achieve. Libraries, cannot dream of acquiring all the literature published worldwide individually, but the users of the library have the right to ask for literature not available in a particular library. Thus libraries have to cooperate to share their resources so that every demand for information is not only satisfied from the library's own resources but also from the sources of other libraries.

College libraries of Assam are not self-sufficient in terms of their collection, manpower, and infrastructure. They are always facing financial constraints for subscribing books and costly foreign journals. Though Govt. of Assam has been providing financial assistant from time to time to the college libraries in Assam for building collection and digital library, these funds are often not properly utilized for the development of the college libraries. Moreover, the financial grant provided by the UGC is not sufficient. In such situations,college libraries are solely depended upon the students' library fee for acquisition of required reading materials and also to develop infrastructure including purchasing of library furniture and equipment within this limited sources of fund. The creation of a library network among the college libraries of Assam would provide solution as through co-operative acquisition and resource sharing they all be benefited and can better serve the demands of the user community.

Many literature of library science of recent past advocate the need to work together by the libraries by creating or participating in a resource sharing network to optimize the use of the resources as due to price escalation and explosion of information in almost every field of study, no library of the present age is able to meet the information needs of its potential users.

The college libraries of Assam are facing the same situation such as:
- Lack of adequate finance
- Lack of adequate collection to meet users' requirement
- Skilled manpower
- Insufficient library staff
- Up-to-date infrastructure

In view of the above mentioned factors, it is assumed that the college libraries of Assam to work together to create a network for sharing of resources for the benefit of all. The present study will assess the existing infrastructure such as use of ICT, Internet, status of automation as well as other feasibility parameters of the college libraries of Guwahati necessary for library network.

3. Significance of the study

Library management software plays a key role for the success of library automation and networking. In order to promote automation activities, the University Grants Commission (UGC) through INFLIBNET Centre has been providing SOUL software to the college libraries of Assam free of cost under Prime Ministers special scheme for the North East. Majority of the college libraries of Assam had acquired SOUL free of cost under this scheme. As a result, the automation activities of the college libraries of Assam are taking place at great pace due to the support provided by the INFLIBNET Centre. Most of the colleges in urban areas like Guwahati have completed the automation activities and started providing fully automated services

to their clients. These libraries are gradually started enjoining the facility of accessing online e-resources from the INFLIBNET Centre, Ahmedabad under N-LIST programme. Online e-resources under N-LIST progragramme are providing free of cost to the college libraries of Assam come under Section 12(B) and 2(F) of UGCAct, 1956 by the INFLIBNET Centre under the Prime Minister's Scheme. More than 102 colleges out of 189 colleges are receiving more than 90,000 e-books and 7,000 e-journals online under N-LIST programme which immensely benefitted the teachers and students of the colleges of Guwahati.

I had undertaken and completed a UGC sponsored minor research project during 2009-2011 on the area of automation of college libraries of Assam which revealed that majority of the college libraries of the urban areas like Guwahatihave converted their holdings in to machine readable form using library software SOUL by adhering the same bibliographic standard for creation of library database. So like DELNET and INFLIBNET the college libraries of Guwahati are in much advantageous positions to create a library network if they desire. As they are using same software, it becomes feasible to compile a union catalogue of the holdings of the all college libraries participating in the Network. The union catalogue will help the participating libraries to know about the availability of documents of the other participating library and may ask for delivery of the document under Inter Library Loan. It will also help the libraries in developing the cooperative acquisition among the libraries specially while purchasing costly reading materials so as to utilize the library budget more effectively. Networking of these libraries would minimize the data entry cost as well as minimize the time of data entry as the participating libraries can copy the cataloguing data from the **web OPAC** and integrate the same in to their own database.

4. Objectives of the study

The objectives of the study are:

i. To find out the existing scenario of automation of college libraries of Guwahati

ii. To assess the existing infrastructure and different feasibility parameters that would assist in creating library network of college libraries of Guwahati

iii. To identify and analyses the specific factors require for library networking and resource sharing

iv. To examine the existing database of the college libraries of Guwahati so as to have a union database of library resources for sharing of resources.

v. To justify the need of a college library network and suggest for experimenting the same for the benefit of the users.

5. Methodology, Scope and Limitation of the study

In order to make the study comprehensive, relevant data on the field of study are collected by adopting following methods:

Primary Sources and Direct Personal Observation

1. Websites of the college libraries under study has been taken as source of information for the study.

2. Survey based on information received through questionnaires distributed to:

a)   The college libraries of Guwahati understudy in order to collect data related to the present functioning highlighting library automation, infrastructure and future plan of the libraries.

3. Interviews, interaction made with librarians, library professionals of the college libraries of Guwahati.

4. Telephonic conversation and personal observation on the existing practices in the college libraries of Guwahati.

Secondary Sources

A major source of information for this study is the published and unpublished literature. Attemptshave been made to cover comprehensively the primary and secondary writings on the subject of study. Web sites

relevant to the study such as web site of the INFLIBNET Centre, Developing Library Network (DELNET); Library of Congress; The British Library; OCLC website etc. are surfed for observation.

There are thirteen (12 governments provincialised general degree colleges and 1 pure govt. college) degree colleges in Guwahati city. The present study covers eleven colleges out of the thirteen colleges and excludes two colleges (i.eK.R.B.Girls' College and Pragjyotish College). These colleges are affiliated to UGC and they receive financial assistance from the UGC and Govt. of Assam for development of library collection and infrastructure. The study is confined only to the ICT infrastructure and automation aspects that would assist for creating library network and excludes the users' survey in the study.

6. Data Analysis and Discussion

6.1. Basic Information about the colleges

Eleven Govt. provincialised general degree colleges of Guwahati have been arranged chronologically by year of establishment in Table 1. The Cotton College, which is the oldest college in the entire North Eastern region, was established in the year 1901. The Cotton College, out of the eleven colleges, is the only college which is accredited by the NAAC with 'A+' grade and recognized by NAAC as centre of excellence. The Govt. of Assam has recently declared Cotton College as Cotton University. Out of the eleven colleges, two colleges are imparting commerce education specifically, three colleges are imparting arts, science and commerce education, four colleges are imparting arts and commerce, two colleges are providing arts and science education, while four colleges are extending Post Graduate education. Cotton College has the maximum enrollment while R.G.Baruah College has the lowest enrollment.

Name and address of the college	Year of estt.	Whether NAAC Re-accredited	Stream(s)	No. of students	Website http://www.
1.Cotton College, Panbazar, Ghy-1	1901	Yes (A+)	Arts, Sc., PG	4000	cottoncollege.org.in
2. Handique Girls' College, Dighali Pukhuri, Ghy – 1	1939	Yes	Arts, Sc., PG	3000	hgcollege.org
3. B.Barooah College, Ghy-7	1943	Yes	Arts, Sc., Comm., PG	3000	bbarooahcollege.co.in
4.Gauhati Commerce College, Chandmari, Ghy – 21	1962	Yes	Comm., BBA, MBA	2500	commercecollege.com
5.Pandu College, Ghy-11	1962	Yes		1800	panducollege.org
6. Guwahati College, Ghy-21	1964	Yes	Arts, Sc., Comm	2020	guwahaticollege.org
7.LCB College, Maligoan, Ghy-11	1971	No	Arts, Sc., Comm.	1200	lcbcollege.org.in
8. Dispur College, Ganeshgur, Ghy-6	1978	Yes	Arts, Sc.	1500	dispurcollege.org
9. R.G.B.College, Ghy – 25	1978	Yes	Arts, Comm.	1100	rgbaruahcollege.org
10.K.C.Das Commerce College Satribari, Ghy-8	1983	No	Arts, Comm	2000	kcdascollege.com
11.S.B.Deorah College, Ghy-7	1984	Yes	Comm., M.Com, BBA	1400	sbdeorahcollege.org.in
			Arts, Comm		

6.2. Library Collection

Table 2 bellow shows the details about the collection (print and non-print) of the college libraries of Guwahati. The Cotton College has the highest number of books with more than 1 lakh collection followed by Handique Girls' College with more than 49,000 collections. On the other hand R.G.Baruah College library has the lowest collection of books followed by Dispur College library. With regards to current periodicals, Pandu College subscribes the maximum 44 numbers of current periodicals followed by Cotton College with 43 periodicals. Out of total 416335 print collections 98.77%occupies books; 0.97% bound periodicals; 0.17% reports and 0.05%current periodicals. No college library has manuscript in the collection. The table reveals that the college libraries of Guwahati are having very less numbers of non-book materials such as CDs, DVDs etc. in their collection. Nine college libraries out of eleven have e-resources access facility under N-LIST.

Name of the college	Print Collection						Total	Non-Print		Total	E-resources	
	Books	CP	BP	R	M	Magazines		CD-DVD	Other		E-books	E-journals
Cotton College	126207	43	3014	622	-	32	129918	426			N-LIST	N-LIST
Handique Girls	49952	19	163	71	-	13	50218	193			N-LIST	N-LIST
B. Barooah	48000	19	210	-	-	18	48247	75			N-LIST	N-LIST
Gauhati Commerce	30986	15	55	-	-	18	31074	70			N-LIST	N-LIST
Pandu College	41982	44	135	-	-	10	42171	176	-	-	N-LIST	N-LIST
Gauhati College	34007	9	25	-	-	7	34048	65	-		N-LIST	N-LIST
LCB College	19800	18	153	15	-	12	19998	133	-		N-LIST	N-LIST
Dispur College	14000	10	45	-	-	10	14065	55	-		-	-
R. G. Barooah	12086	18	-	-	-	7	12111	45	-		-	-
K.C. Das Commerce	18700	12	86	-	-	10	18808	105	7		N-LIST	N-LIST
S.B. Deorah	15500	12	155	-	-	10	15677	75	-		N-LIST	N-LIST
Total	411220 (98.7%)	219	4041	708	0	147	416335					

CP=Current Periodicals; BP=Bound Periodicals; R=Reports; M=Manuscripts

6.3.   Information Technology Infrastructure

6.3.1.   Basic hardware infrastructure

ICT infrastructure is usually considered with respect to its main areas such as hardware, software, and telecommunication. The infrastructure remains the main bottleneck to the development of ICT in libraries. Sufficient infrastructure is very much essential for the successful application of ICT in the libraries. Table 3 bellow shows the hardware infrastructure of provincialised college libraries of Guwahati. The majority of the college libraries of Guwahati have the basic hardware facilities like server, clients, printers, scanners etc. The cotton college library has the maximum number of computers, printers, scanners and photocopiers. All libraries have at least one printer; three (27.27%) libraries do not have any bar code printer; two libraries do not have any general scanner; three (27.27%) libraries do not have bar code scanner and two (18.18%) libraries do not have photocopier machine. Only two (18.18%) libraries (viz. Cotton College and B.Barooah College library) have the campus network facility through which library catalogues and resources can be accessed by the departments spread over the college campus. One library (viz. R.G.Baruah College) does not have the LAN facility while all college libraries under study have the Internet connectivity.

Table 3: Basic hardware infrastructure of provincialised college libraries of Guwahati

College	Computers		Printers				Scanners		Photo copier	OS	LAN facility	Campus Network	LAN	Internet
	Server	Client	Dot Matrix	Ink-jet	Laser	Bar Code	General	Bar Code						
Cotton College	2	13	1	1	1	4	1	4	2	WS 03	Yes	Yes	Yes	Yes
Handique Girls	1	6	2	0	1	1	1	4	0	WS 12	Yes	No	Yes	Yes
B.Barooah College	2	9	1	0	1	0	1	0	1	XP	Yes	Yes	Yes	Yes
Gauhati Commerce	1	6	1	1	1	1	1	1	1	WS 03	Yes	No	Yes	Yes
Pandu College	1	8	1	1	1	1	1	1	1	WS 03	Yes	No	Yes	Yes
Gauhati College	1	5	0	1	1	2	0	1	0	XP	Yes	No	Yes	Yes
L.C.B College	1	8	2	0	1	1	1	3	1	WS 7	Yes	No	Yes	Yes
Dispur College	1	5	1	0	0	0	1	0	1	WS 03	Yes	No	Yes	Yes
R.G.Baruah College	1	4	1	1	1	0	0	0	1	XP	No	No	Yes	Yes
K.C.Das Commerce	1	6	1	0	1	1	1	2	1	WS 03	Yes	No	Yes	Yes
S.B.Deorah College	1	6	1	1	2	1	1	1	1	WS 03	Yes	No	Yes	Yes

With regard to internet connectivity, Table 4 bellow shows that only cotton college library has the leased line connectivity with more than 10 mbps bandwidth. Ten libraries have broadband connectivity of which two colleges have 10mbps bandwidth; five colleges have 5 mbps and three colleges have 1 mbps bandwidth connectivity.

Table 4: Internet Connectivity

College Name	Types of connectivity			Bandwidth		
	Wi-Fi	Broadband	Leased Line	1mbps	5mbps	10 mbps & Above
Cotton	Wi-Fi	–	Yes	--	--	Yes
Handique Girls'	Wi-Fi	Yes	No	--	--	Yes
B. Barooah College	--	Yes	--		Yes	--
Gauhati Comm. College	--	Yes	--	---	Yes	--
Pandu College	Wi-Fi	Yes	--	---		Yes
Gauhati College	--	Yes	--	Yes	--	--
L. C.B College	---	Yes	No	No	Yes	--
Dispur College	--	Yes	--	Yes	--	--
R. G. Baruah College	--	Yes	--	Yes	--	--
K C. Das College	Wi-Fi	Yes	--	--	Yes	--
S. B. Deorah College	Wi-Fi	Yes	--	--	Yes	--

6.4. Status of Automation

Library automation is a general term which usually used to refer to the application of computers and Information Communication Technology (ICT) to replace the manual system to perform the traditional activities such as acquisition, cataloguing, circulation, serial control and administration in the library. Many activities of a library are routine in nature, a few are repetitive. Automation of these activities helps in managing the library's resources in a better way at the same time saving time, money, and manpower. Table 5 bellow shows that college libraries of Guwahati had begun automation programme in 2003. The table also reveals that two college libraries of Guwahati (viz. Pandu College and K.C.Das Commerce College) have completely converted the holdings of the library in to machine readable form. So far a total of 84.64% records of all colleges have converted in to machine readable form.

Table 5: Status of Automation of college libraries under study

Sl No	College name	Year of beginning of automation	No. of titles in the Lib. database	Total collection	% of records in the database	Status of automation			
						Partly	Fully	Initial	Yet to begin
1	Cotton College	2002	116991	1,26,207	92.69		√		
2	Handique Girls'	2008	34309	49,952	68.68	√			
4	B.Barooah	2003	45000	48000	93.75		√		
12	Gauhati Commerce	2005	22500	30986	72.61	√			
14	Pandu College	2003	41982	41982	100		√		
16	Gauhati College	2009	15000	34007	44.1	√			
24	L.C.B College	2009	16500	19800	84.61	√			
27	Dispur College	2006	12000	14000	85.71	√			
28	R.G.Baruah	2004	7500	12086	62.05	√			
34	K.C.Das	2003	18700	18700	100		√		
35	S.B.Deorah	2003	13,500	15,500	87.09	√			
		Total	343982	411220	83.64 %				

6.5. Library Management Software

Library management software plays a key role for the success of library automation. In order to promote automation activities, the University Grants Commission (UGC) through INFLIBNET Centre is providing SOUL software to the college libraries of entire North Eastern region free of cost under Prime Ministers special scheme for the North East. Majority of the college libraries of Guwahati had acquired SOUL free of cost under this scheme and few of them such as Cotton College, B.Barooah College have subscribed it from the INFLIBNET Centre. All college libraries are using the latest version SOUL 2.0 Network Version. No college library of Guwahati is using either SOUL college library version or any other library management package for automation purposes (Table 6).

Name of the college	Library Management Software				
	SOUL1.0	SOUL2.0 (Network)	KOHA	KOHA (Cloud)	Other
Cotton College	--	Yes	--	--	--
Handique Girls	--	Yes	--	--	--
B.Barooah College	--	Yes	--	--	--
Gauhati Commerce	--	Yes	--	--	--
Pandu College	--	Yes	--	Yes	--
Gauhati College	--	Yes	--	--	--
LCB College	--	Yes	--	--	--
Dispur College	--	Yes	--	--	--
R. G. Barooah	--	Yes	--	--	--
K.C. Das Commerce College	--	Yes	--	--	--
S.B.Deorah College	--	Yes	--	--	--

7. Observation on Feasibility of Networking of College Libraries of Guwahati

For developing a workable resource sharing network, a right mindset among the professionals of the participating member libraries is the prerequisite. The following must be ensured before preparing the plan for developing library networks in college libraries.

❖ A common agreement among the participating college libraries

❖ Institutional commitment to accept the measures to be adopted for resource sharing purpose.

❖ Fund and support for resource sharing.

❖ Attitudinal changes in library staff to undertake additional responsibility in resource sharing environment

❖ Training of library staff to understand and appreciate the changed situation.

The successful operation of a library network clearly depends on the good working relationship among participatory libraries and members.

Library networks such as CALIBNET and INFLIBNET in the first phase of networking have chosen only those libraries which have computing background and already started providing computer based services to the users. The participating member libraries of both these networks have first initially started the process of conversion of their existing collection in to machine readable form by adhering certain bibliographic standard as directed. The converted records were later made accessible to the users through OPACs.

The above study made on the college libraries of Guwahati reveals that all the college libraries under study have almost converted more than 84% of their holdings in to machine readable form by adhering the same bibliographic standard as they all using SOUL software for creation of library database. So like CALIBNET and INFLIBNET the college libraries of Guwahati are in much advantageous positions to create a library network if they desire. As they are using same software, it becomes feasible to compile a union catalogue of the holdings of the all college libraries participating in the network. The union catalogue will help the participating libraries to know about the availability of documents of the other participating library and may ask for delivery of the document under Inter Library Loan. It will also help the libraries in developing the cooperative acquisition among the libraries specially while purchasing costly reading materials so as to utilize the library budget more effectively.

Moreover, the college libraries of Guwahati have the advantage of sharing cataloguing among them as they adhere to same standards for creation of library database using SOUL. Networking of these libraries would minimize the data entry cost as well as minimize the time of data entry as the participating libraries can copy the cataloguing data from the web OPAC and integrate the same in to their own database. The study also reveals that the college libraries of Guwahati have good ICT infrastructure with broadband and leased line internet connectivity which would help in copy cataloguing and sharing of resources over Inter Library Loan.

A lot of duplication of purchasing of reference books and printed journals among the college libraries of Guwahati is noticed as all the colleges are following the same syllabus and same recommended books of Gauhati University which in turn make a lot of duplicate data entry by the all libraries. So by creating a network, a lot of duplicate purchasing and duplicate cataloguing can be avoided which can save a lot of time, money and labour.

The existing infrastructure and database of the college libraries of Guwahati have favoured the creation of Library Network with less effort if desire. The only thing is that somebody has to take the initiative in this

regard. There may have difference in opinion that some college libraries have more than 1 lakh collection and some of them have less than fifteen thousand collections which will benefit having the less resources libraries. But for the benefit of all specially the users' community, we should forget all the differences and come together to form a working resource sharing network of college libraries of Guwahati.

8. Suggestions

➢ As individual responsibility has less weightage, some nodal agency preferably the Assam College Librarians Association (ACLA) should come forward for making the networking of college libraries of Guwahati workable in real sense in the first phase of networking of college libraries and gradually this network should spread over the periphery of entire Assam to connect the whole college libraries. Govt. of Assam may be approached to extend financial grant for establishing this network.

➢ The Govt. of Assam has been providing financial assistance to develop a digital library in each colleges of Assam. This will certainly boon the college libraries for digitization and networking if it happens in reality. ACLA should request the Govt. of Assam to properly execute the project of digitization of college libraries involving the experts so that the fund allocated for the purpose are properly utilized and a digital library network would happen in real sense.

➢ The National Informatics Centre (NIC) may be approached to provide the bandwidth required for creation of network as the present internet connectivity of BSNL broadband as most of the college libraries are having, has many connectivity problems.

➢ The DONER Ministry under the planning commission, Govt. of India may also be approached for financial assistance

➢ A network committee should be formed to work out the feasibility and make action plan of College Library Network for Guwahati city.

➢ Proper guidelines should be prepared by the network committee for document delivery service of printed documents.

3. Conclusion

The administration and management of a library resource sharing network is not an easy task. It requires a common agreement and cooperation among the participating libraries. The establishment of college library network of Guwahati city will contribute in pooling, sharing, and optimizing the use of library resources, facilities and services of college libraries of Guwahati.

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NEED OF FREQUENT UPDATING OF LIBRARY & INFORMATION SCIENCE SYLLABUS: A STUDY OF OPEN UNIVERSITIES IN INDIA

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Abstract

It is observed that information and communication technologies (ICTs) are impacting the ways of learning and access of information resources worldwide. New forms of learning materials in the form of e-journals, e-books and e-databases are available round the clock in the libraries if they are connected with the internet. Information is available in the form of free online courseware, MOOCs and other formats. Thus, today's libraries are not untouchable of ICT impact. Therefore, library and information science curriculum needs to be updated according to these changes.

This paper analyzes the course structure for the BLIS/MLIS courses being run by open universities in India by comparing their paper set up. Some suggestions to improve the situations are also given in this paper.

Keywords: BLIS, MLIS, ICT, Library Science Courses, Open Universities.

1. Introduction

Information and communication technology (ICT) that is basically a combination of information technologies and communication technologies (Dhiman, 2003; Dhiman and Rani, 2013) is often used as an extended synonym for information technology (IT), but it is a more specific term that stresses the role of unified communications and the integration of telecommunications consisting of telephone lines and wireless signals; computers as well as necessary software middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information.

ICT has given the birth of new forms of information resources to be subscribed in any library, be they are academic in nature or the special or public libraries. India is one among the few countries, where information and communication technology (ICT)-oriented LIS teaching is being provided. In late 1960s and early 1970s teaching of computer application commenced in Indian library science departments (Asundi and Karisiddappa, 2007). But its effect could be seen with the interference of information and communication technologies for the automation of in-house library services almost in the last decade of 20th century that is further enriched with the invention of internet, epscially the world wide web in 1993 (Berners-Lee et al, 1994).

However, the electronic services and access of e- resources and the maintenance of library websites are two most important aftereffects of ICT on libraries. It is convincing that many libraries have already moved towards digital e-resources which are found to be less expensive and more useful for easy access. This is especially helpful to distant learners who have limited time to access the libraries from outside

by internet access to commonly available electronic resources, mainly CD-ROM, OPACs, E-Journals, E-Books, Electronic Theses & Dissertations (ETDs) and Internet, which are replacing the print media (Sharma, 2009). Library website formation and its maintenance is further another impact of ICT that is challenging to update on regular basis. Vijaykumar and Vijayan (2011) mention that library website helps to recognize the facilities and information sources available in a library. But in most of the library websites, online catalogue is included but online resources are not included at many times.

2. Library Education in India

Library education in India is said to be started with the first formal Library Science Training Course in 1911 when Maharaja Sayyaji Rao Gayakwad, the ruler of the Erstwhile Baroda State, who was great library enthusiast, to organize a system of public libraries in the state invited Mr. Borden who had been a student of Melvil Dewey and C.A. Cutter to arrange and supervise their libraries in the state. Maharaja appointed him as the Director of the State Library Department. Mr. Borden selected a class from the most intelligent of present libraries and with their assistance ultimately founded a school that could graduate expert assistants for the main library and different branch libraries of the state.

However, second training course was started in 1915 at the Punjab University, Lahore (now in Pakistan) by A.D. Dickinson, another American Librarian and a student of Melvil Dewey. Dickinson was appointed by the Punjab University to re-organize and administer the university library and to conduct a course of training considering the modern library methods (Aman and Sharma, 2005). Later, many associations just like Andhra Desa Library Association, Madras Library Association and Bengal Library Association etc. started their short term courses on library science. Although, Dickinson stayed in India for a short time but he set up a trend in librarianship course.

But first regular library course was opened by Ranganathan in 1937 in Madras University, Madras as Diploma in Library Science. University of Delhi started P.G. Diploma in Library Science in 1947 which was later upgraded to Master Degree in Library Science in 1949. Thereafter many Universities came forward to start library and information science courses of different level and the number of institutions and number of courses offered increased gradually. Satija (1993) mentions that since first course in library science to now more than 120 universities including distance education impart LIS education. A total of 105 universities provide Bachelor of Library and Information Science (BLIS) 78 universities provide Master of Library and Information Science (MLIS), 21 are offering two-year integrated courses, 16 universities provide M. Phil in Library and Information Science, 63 universities provide PhD in LIS and 2 universities provide D.Litt. degree in library science. But according to Gupta (n.d.) there are presently about 150 universities/ associations/ institutions/ libraries are offering courses in library and information science at various levels throughout the country.

It is seen that most of the universities in India offer one year Bachelor's degree in library and information science or two year integrated Master's degree in the same discipline. But recently, University of Calcutta, Kolkata has started a three-year degree course in library and information science and also a five –year integrated course leading to M Sc in Library & Information Science.

3. Objectives of Library & Information Science Eduction

Library profession is now a century old profession that has travelled a lot and changed from print medium to non-print medium comprising of non-book material and now online access of the information resources. According to Karisiddappa (2004), the influence of Information and Communication Technology (ICT) on every discourse of human knowledge is an undisputed and is also considered all pervasive. Thus,

the main objectives of LIS profession should be to provide training for building up leadership qualities among the LIS profession, develop knowledge of the latest techniques of information storage, transfer and retrieval to help to acquire necessary skills in handling, accessing and application of electronic resources, tools and media and help to know the latest developments in the field. In short the basic aims of library and information education are (Ganesan, 2013):

- To develop necessary technical skills;

- To develop administrative skills;

- To develop service orientation;

- To develop through knowledge by various sources of information necessary to give the traditional and modern library services, and

- To develop the professional awareness.

Therefore, the curriculum of Library & Information Science (LIS) must be reviewed continuously so the latest trends in the profession could be reflected in it that range from traditional practices in the profession to the digital library, including digitization, change in the practices due to application of information technology and knowledge management techniques etc. Further, the impact of e-resources on libraries with the help of the consortium, e-publications, web 2.0 tools, libraries 2.0, and internet and intranet growth made the revolutionary changes in the profession. Today, learning material is also available in the form of MOOCs, e-pg pathshala and free open courseware etc. So, a paradigm shift is seen in the methodology of learning/reading with the advent of e-resources. Users of higher educational institutions are increasingly looking for electronic information. This all is impacting on the library science and its profession. Hence, there is a need to accommodate all these new issues in the syllabi of the LIS programmes.

4. Open University System and Library Education

Andhra Pradesh Open University was the first Open University that was opened in Andhra Pradesh (now in Telengana) on 26th August 1982 through an Act of Andhra Pradesh State Legislature (APOU Act, 1982). The establishment of this University, the first of its kind in India, heralded an era of affirmative action on the part of the Government for providing opportunities of higher education to all sections of society and catering to the changing individual and social needs. Later, the university was renamed as Dr. B.R. Ambedkar Open University on 7th December 1991 by the APOU Act, 1992 of Government of Andhra Pradesh.

Table 1: List of Open Universities in India

Name of the University	Year of Establishment	Website	Course Name
Dr. Babasaheb Ambedkar Open University (BAOU), Ahmedabad Gujarat	1994	http://baou.edu.in/	BLIS
Dr.B.R. Ambedkar Open University (BRAOU), Hyderabad (Telengana)	1982	www.braou.ac.in/	BLIS/MLIS
Indira Gandhi National Open University (IGNOU), New Delhi	1985	www.ignou.ac.in/	BLIS/MLIS
Karnataka State Open University (KSOU), Mysore (Karnataka)	1996	https://ksoumysore.edu.in	BLIS/MLIS
Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati (Assam)	2005	www.kkhsou.in/	No BLIS/MLIS (but Diploma is there)
Madhya Pradesh Bhoj Open University (MPBOU), Bhopal (Madhya Pradesh)	1991	www.bhojvirtualuniversity.com/	BLIS/MLIS

Nalanda Open University (NOU) Patna (Bihar)	1987	www.nalandaopenuniversity.com	BLIS/MLIS
Netaji Subhas Open University (NSOU), Kolkata	1997	www.wbnsou.ac.in	BLIS/MLIS
Pt. Sundarlal Sharma Open University (PSSOU), Bilaspur (Chhattisgarh)	2005	pssou.ac.in/	BLIS
Tamil Nadu Open University (TNOU), Chennai (Tamil Nadu)	2002	www.tnou.ac.in/	No BLIS/MLIS
UP Rajarshi Tandon Open University (UPRTOU), Allahabad (Uttar Pradesh)	1999	www.uprtou.ac.in	BLIS/MLIS
Uttarakhand Open University, (UOU) Haldwani (Nainital) (Uttarakhand)	2005	uou.ac.in/	No BLIS/MLIS
Vardhaman Mahaveer Open University (VMOU), Kota (Rajasthan)	1987	https://www.vmou.ac.in/	BLIS/MLIS
Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik (Maharashtra)	1989	ycmou.digitaluniversity.ac/	BLIS/MLIS

Dr. B.R. Ambedkar Open University made an important stride forward in offering library and information science with the launch of BLIS course in 1984. Later IGNOU started BLIS in 1989 and MLIS in 1994. Table 1 depicts that out of 14 Universities 11 universities are conducting library courses but there is no BLIS/MLIS courses in Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati (Assam); Tamil Nadu Open University (TNOU), Chennai (Tamil Nadu) and Uttarakhand Open University, (UOU) Haldwani (Nainital) (Uttarakhand). However, Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati (Assam) has recently introduced Diploma in Library Science.

5. Open University Library & Information Science Course Structure

Keeping in view the latest trends of information & communication technology and its impact on library & information science education, a study of BLIS/MLIS course structure is carried out for open universities in India. Most of the information related to the course contents are taken from the information exist over of the respective university website but it is also authenticated from the documented information resources at the places.
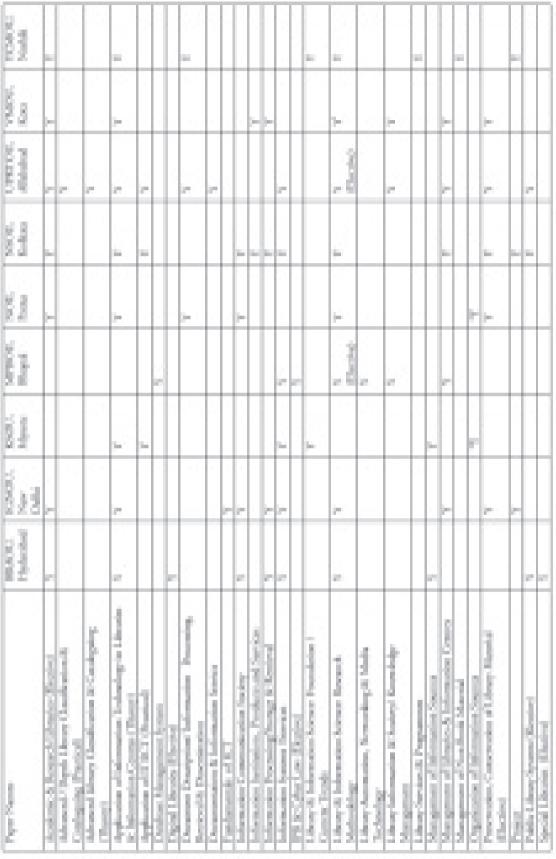
Only BLIS and MLIS course contents are taken into consideration and no other course like that of CLIS or DLIS is taken into the consideration. Table 2 and 3 present an overview of the course structure of Bachelor Degree and Master Degree course respectively.

Table 2: Paper Details of BLIS

* In MP Bhoj University: Single paper on Library Classification: Theory & Practice and Library Cataloguing: Theory & Practice; @ under Information Sources and Services.

Table 3: Paper Details of MLIS

Paper Name	BBAU, 1-Semester Historical	RGNUL, New Delhi	BotU, Mysore	SPPU, Bhopal	VoU, Patna	VoU, Kolkata	UBKV, Sti. Allahabad	VMoU, Kota	VGBU, Nashik
Research & Research Methods									
Information Repack & Consolidation									
Cataloguing: Practical									
Advanced Library Classification & Cataloguing									
Theses									
Application of Information Technology in Libraries									
Informetrics & Scientometrics									
Operations Research									
Online Cataloguing Practical									
Digital Library Systems									
Business Process and Information Knowledge									
Knowledge Description									
Communication & Information Issues									
Digitisation of ILL									
Information Communication Society									
Information Systems, Institutions, Ecological System									
Information Processing Storage & Control									
Information Systems Theory									
Pedagogy of Use of Libraries									
Library & Information Science Foundation 1									
Case Study									
Library & Information Science Research									
Marketing									
Library Automation, Networking & Web									
Technology									
Library Information & History of Knowledge									
Management									
Library Service/Lib Programme									
Management of Information Sources									
Management of Libraries & Information Centres									
Management of Academic Material									
Organisation of Information									
Preservation Conservation of Library Material									
Education									
Total									
Public Library Systems / Research									
Special Libraries / Database									

* Under name of Library Classification/Cataloguing Practical (confirm or separate); also a practical on Organization of Information Sources, 1 with Organization of Knowledge.

6. Findings of the Study

It is very clear from the table 2 and 3 that most of the universities are following traditional course contents which are far behind of latest development. Out of 14 open universities 11 universities except KKHSOU, Guwahati; TNOU, Chennai and UOU, Haldwani are imparting BLIS education and out of 14, 09 universities except that BAOU, Ahemdabad; KKHSOU, Guwahati; PSSOU, Bhilaspur; TNOU, Chennai and UOU, Haldwani are imparting MLIS education in distance mode.

Table 2 depicts that majority of the universities have following papers in common for their BLIS courses:

- Library & Society
- Library Cataloguing: Theory & Practice
- Library Classification : Theory & Practice
- Library Administration/ Library Management
- Reference & Information Sources

However, IGNOU and UPRTOU have revised their syllabus and introduced new papers either as optional or compulsory. IGNOU has introduced following papers in their curriculum.

- Information Communication Society
- Information Processing & Retrieval
- Information Systems /Services
- Application of IT/ICT : Theory & Practical

While two papers on MS office; and Basic Electronic Devices & PC Software are introduced by UPRTOU. All other universities are imparting education through traditional course contents to their BLIS students.

If we see the table 3, it is seen that there is no uniform distribution of course contents among all open universities for MLIS students. Nevertheless, following papers seems to be common with minor changes in all of them:

- Information Communication Society
- Information Processing & Retrieval
- Library Research Methodology
- Management of Information Sources

But MP Bhoj Open University has completely different nomenclature and course contents for its MLIS students. However,

- Academic Libraries
- Public Libraries
- Digital Libraries
- Preservation and Conservation of Library Material are some of the papers which are running as optional papers in various universities.

Thus, the syllabus of most of the open universities is not updated with the present requirement in ICT perspectives.

7. Discussion and Suggestions

Course curriculum / paper structure depicted thorough table 2 and 3 show that although the course contents of BLIS level are quite satisfactory but the situation of MLIS course contents is pity. No doubt IGNOU is the national university and it revises its course contents and curriculum more frequently but UPROU has also revised its syllabus after a long time. IGNOU BLIS syllabus has been revised three times since the inception of the course. But other universities are imparting MLIS education with traditional course curriculum. Hence, there is a need to revise course contents in other universities too just after 2-3 years because information technology changes very fast so to keep up the paces with the latest changes and updates in ICT frequent updation both at BLIS and MLIS levels should be there in course structure and the contents.

There is also a need to formulate a standard syllabus for all the Universities to follow the concept of standardization, which may be helpful for the migration of students and professionals anywhere for seeking the employment. The suggested standard syllabus may be similar to that of the University Grants Commission (UGC), New Delhi. It is seen that all the open universities are developing under the umbrella of IGNOU. So, there should be a network of all the open universities in India and all the course contents should be the same in all of them. This will eliminate the problems of frequent revision of the course contents at large level. Once the course contents and the study material is revised by IGNOU, it will automatically be available for use by other state open universities. Besides, the MOOCs, online course materials may also be used by other state open universities that are available with IGNOU through networking.

There should also be a check on the quality of library & information science education and an accreditation agency for LIS courses in the country should be there at the National level on the pattern of AICTE in case of technical education or NCTE in case of education (Dhiman, 2011). Further, open and distance education courses should be allowed only if the adequate faculty, infrastructure and transparency are in place as suggested by Ganesan (2013).

Besides, a trend of providing two-year master degree is seen in many of the regular universities. It should be discouraged. Further, some universities, for example, the University of Kolkata (WB) is conducting 3-year bachelor level course for just intermediate pass students and also 5-year master degree level integrated course. Because of this, it will be very difficult to retain this profession as a vocational profession and its identity will be lost. Moreover, it is also not clear what will be the future of such graduate level students who earned 3-year bachelor degree in library science. Whether they will be eligible for further admission in other master degree course or not? How their equivalency with that of one year BLIS and MLIS will be compared?

8. Conclusion

It is a fact that the role of librarians just from the custodians of the books is changed and they are treated not mere information retriever and providers but they are the guides and torch bearers of knowledge. So, the course structure or the curriculum of library & information science education in India definitely needs to be based on the traditional library practices but must be updated in the light of modern trends taken place in library functions and its services due to invasion and adaptation of the ICT application. Otherwise, UGC model curriculum Library and information Science (UGC, 2001) may be adopted for providing quality education in this field though that also needs constant revision.

Therefore, library & information science syllabus must be revised after a definite period say for example, 2 or 3 years by incorporating new areas of emerging knowledge at national and international levels and by eliminating irrelevant and obsolete areas.

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ORGANIZATION OF RESOURCES OF TELEVISION CHANNEL LIBRARIES OF ASSAM

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ABSTRACT

Television channel have libraries to store the information which are collected or bought from other news agencies. These type of libraries are known as special library. Storing, Retrieving, Preserving,Conserving ofinformation is these libraries not an easy task in these world of information explosion. Providing information when required in short time is one of the hardest task, so it very essential to understand the used techniques , so that the used process can be further improvised . Televsion channel mostly deals with tapes (DVD, CD, Blue-Ray, Lacieetc), these storage medium need proper preservation and conservation to be in accessible state. Employement in these libraries are increasing with the increase of channels in India. The techniques used in these libraries for storage and retrieval are very different in comparision with other types of libraries. Librarians in these libraries need to cope up with the pace of development of information technology.

1. INTRODUTION

Television (TV) is a great wonder of modern science. It is one of the most important inventions of science, which has absorbed millions of minds. It has an edge over other forms of mass media. Since its development about 80 years ago, it has been influencing our lives. TV helps people develop values and forms ideas about the world around -them. In short, TV-creates communities, TV inspire the mind, TV gives a voice to good causes, TV stimulates the economy, TV reaches consumers and builds brands etc. TV is a reflection of culture and being an Audio Visual (AV) medium brings us into contact with events in an exciting way. TV has become the most powerful means of communication.

Television library is a special kind of library, as its access is to employees only. The Librarian store, process and preserve the raw and edited data for future reference.

Initially, the television media libraries did not face much hurdle in handling the library. But with the passage of time, it became impossible to manage these libraries in absence of 'LIS' qualify professionals and standard 'LIS' system. With the passage of time, the problem became more and more acute.

Organization of TV channel media libraries is not an easy task. Television media libraries hold different kinds of documents, printed, electronic, and digital and various audio visual materials and generally organize them under some system of information retrieval. New developments in telecommunications have influence the method of distribution of information (Saade, 2004). Advancement in Photography, Cinematography, Sound Recording and Reproduction brought out a wide range of documentary media like Photographs, Microfilm, Micro, Gramophone Records, Sound Spools, Audiotapes, Audio Cassettes, CD-ROMS, Multimedia disc etc. The major collections of the TV media libraries are primarily based on

video cassettes.

Automation of Television libraries has resulted in easy and quick retrieval of information.

2.OBJECTIVES OF THE STUDY

1. To find out the organizational structure of the television media

2. To find out the qualification of the librarian and strength of the library

3. To find out the salary structure of the librarian

4. To find out the collection and users of resources of library

5. To find out the way of obtaining raw materials to maintain the resources

6. To find out the problems in organization of resources in the library

3.SCOPE OF THE STUDY

The present study covers the organization of TV channel media in Assam. Government and Private channels in the state which are functional are taken for study. TV media has been maintaining both Book and Tape library but the nature of services of the two libraries are different. Tape library is studied in more depth as Book library is only maintained for reference..

Programmes produced for television are broadly categorized in three categories as News and Current Affairs; Education and Entertainment. The Present study has covered all categories.

There are organizations running more than one television channels. But such organizations arehaving

Sl No.	Name of the organization	Name of the TV Channel
1	Doordarshan	Doordarshan Kendra Guwahati
2	Pride East Entertainments Private Limited	News Live; Rang; Ramdhenu
3	Brahmaputra Tele Production(P) Limited	DY365; Jonack
4	AM Television Private Limited	Prag News; Rengoni
5	Protidin Group	Protidin Time
6	Rockland Media and Communication Private Limited	Assam Talks

4. LITERATURE REVIEW

Literature search is one of the important steps in any research work. In order to get already available information regarding the topic of research, literature search in very essential.

Literature search helped me a lat in carrying out my study on different aspects involved in organization of TV channel libraries of Assam.

There seems to be minimum literature are available on my topic. However, for this study different form of literature viz book, journals, online search have been done.

1. Anil K. Dhimau and Yashocla Rani in 2005 in the book "Learn Information and Reference Sources and Services" discussed about the special library and the types of services provided by it.

2. Krisham Kumar in 2003 in the book "Library Manual" describes about the special library objective,

functions and services. The book also distinct between special libraries and other types of libraries.

3. Shailendra Kumar and Ranjeet Singh Thakur in the research article, "Past, Present and Future of Media librarianship", published in January -April 2005 in Herald of Library Science discusses about the role of TV media librarians and libraries.

4. Shailendar Kumar and Ranjeet Singh Thakur in the research article, "History of television and telecast media libraries in India", published in May – August 2005 in Herald of Library Science noted down about the history of television and television channel libraries emergence in India.

5. Shailendra Kumar and Ranjeet Singh Thakur in 2005 in the paper titled "Dynamic of telecast media libraries in India" published in the proceedings of Association of Parliamentary Librarians of Asia and the Pacific (APLAP), Eight biennial conference, New Delhi discussed about telecast media significantly.

6. Mr. Dhrubajit Das and Mr. Mrinmoy Kumar Das in 2010 in the paper titled "Data Management and Preservation of AV materials in private satellite TV channel library of Assam: A case study" published in the preceding of planner 2010 discussed about private TV channel library of Assam. In this paper the resources used by the TV channel librarian and the way the resources are preserved in noted.

7. David Nicholas and Pan Pandit on a research article, " What happened to libraries in independent television? And what might lie in store for us all", published in 1994 in New Library World highlights the points related to television broadcasting libraries.

8. Sanjoy Kumar Barman (2013) on "Audio visual material and their management and preservation in television media organization: A case study of the library of guwahatidoordarshan Kendra" describes about the organization pattern of television channel libraries with special reference to doordarshan Kendra guwahati.

9. V.S.Subrahmanian in 1998 in the book "Principles of Multimedia Database System" describes about the use of robot in media library.

5.RESEARCH METHODOLOGY

For gathering information related to my topic, following techniques are used:-

- Through a prescribed questionnaire.
- Discussion and face to face interview of the library personnel and media personnel.
- Personnel Methodology.
- Various website have been visited.
- Visit to different libraries in search of relevant materials.

Libraries of the Television channel were visited physically for collecting relevant data. Questionnaire and Face to Face interview with the librarian helped me in getting the data required for achieving my objectives of study.

6.TELEVISION AS A SMART MEANS OF COMMUNICATION

A small TV also known as connected TV or hybrid TV, is a television set or set of box with integrated internet and web 3.0 features. A smart TV is a hybrid of a television and a computer. Besides the traditional function of television sets, these devices also provide access to internet.

The vast majority of modern television has smart capability and its getting increasingly hard to buy a

non-smart model. We can connect a smart TV to the internet carry out web browsing and other function like gamming, shopping, etc. Some devices feature additional interactive organic user interface/natural user interface technologies for navigation control & other human interaction with a smart TV such as second screen companion devices, spatial gestures input and even support facilities like speech recognition. Just as every light creates a shadow, development of TV also has brought forward some serious security problems. Smart TV's are vulnerable to attacks. Some serious security bugs have been discovered and some instances of running malicious code to get unauthorized access have been cited. However, softwares are being developed to counter these problems. Ocean Blue software partnered with Sophos has developed first cloud based antimalware system "Neptune" for countering the security problem faced by the smart TV.

Though at present, TV's seemed to be at the end of its development & sophistication but the "game isn't over yet". Various articles in techno-magazines & newspapers talk about continuous research to take television to a new unimaginable height of development.

7. HISTORY AND EVOLUTION OF TELEVISION CHANNELS IN ASSAM

The history of first state television channel Doordarshan Guwahati can be traced back to the year 1982, until then Assam wasn't able to view any channel. Now DD (NE), a state owned TV channel is telecasting from Doordarshan Kendra in Guwahati, Agartala, Kohima, Imphal, Silchar, Dibrugarh, Tura, Aizwal, Itanagar and Shillong. DD (NE) channel is a composite satellite channel for the Northeastern states of India broadcasting programs in Assamese, Bengali, English and other languages of Northeastern region.

In the year 1990, PPC (NE) was commissioned by Doordarshan to provide a common platform for showing the region through its programmes specially aimed at integrating and interacting among the diverse groups to enhance the bond of togetherness under the umbrella of the Indian nationhood and marching towards view of the NE to the nation. The PPC (NE) commenced for 1 hour daily (1700 HR-1800 HR) from 03/05/1993.

Private satellite channel made an entry into Assam with NETV in 2004. It is a constituent of Positive Television Private Limited based in Guwahati. Enjoying a monopoly position as being starter it took the advantage and spread to different language groups. On a single platform it telecasted news in more than 15 regional languages. The initial success of North East Television led to new channels entering to fill the space. Following the opportunity, 'News Live' and 'DY365' followed by 2008.

Subsequently in the year 2008, Pride East Entertainment Pvt. Ltd., launched its 4 TV channels namely News Live, Rang, Ramdhenu, NE live. In the year 2011, A.M Television Pvt. Ltd. came up with two channels – Rengoni and Prag News. Again, in the year 2013, the 'Pratidin Group' came out with a new news channel namely 'News Time Assam' which was later changed to 'Pratidin Time'.

Following the growing popularity of Assamese News channels, another news channel 'Assam Talks' owned by Rockland Media & Communication Pvt. Ltd. was formed in 2015.

Meanwhile in the same year 2015, NE TV then known as Focus NE was forced to be closed due to financial issues.

In the meanwhile, some other channels like Frontier TV, Prime News came into existence but could not be so popular and gradually diminished from the arena. The closure of these channels brought to light some bitter truths about the distribution process of television process across the region. Prime News stopped operation on October 1, 2013 as it was unable to pay a huge amount of money to the local cable network distribution agencies. Frontier TV, another news channel also faced unofficial closure following a massive financial crisis relatively to the sensational multi-croresharadha scam.

8. SPECIAL LIBRARY: AN OVERVIEW

With the development of industrial, technological and scientific advances the concept of special libraries came to in to existence. The growing need for specialized information further development and research came to play a important role in the expansion of special libraries.

A library that provides specialized information resources on a particular subject, serves a specialized and limited users , and deliver specialized services to the users are known as special library.

A.G.S Josephson, defined that a special library is a library that covers a single subject, or a definite group of related subjects.(Sanjay Kumar Barman, 2013, p.29)

Dr.S.R.Ranganathan prefers to call it the 'Specialist Library.' He defines it by providing emphasis on information as 'to supply detailed information as 'to supply detailed information regarding some subject field- scientific, technological or otherwise.The resources are specialized and the users are specialists'.(Sanjay kumar Barman, 2013, p.29)

Special libraries have been defined by Mount and Massaud as "those information organization sponsored by private companies, government agencies ,non-for-profit organization, or professional associations." (Krishan Kumar,2003, p.69)

Special libraries comprise those libraries which is specialize in particular subject or group of subjects(e.g. Science and Technology libraries, Social science libraries, Medical libraries etc) or particular collection(e.g. Picture libraries, Electronic libraries, Sport libraries etc.) or serve particular community(e.g. libraries for blinds, prisoners, patients etc.)

From the definition we can can know that special library is concerned with special information and it provides services to the special users only. A special library acquires and organizes information in anticipation of demand. Whereas General Library is concerned with general resources and it provides services to every type of users.

8.1.1 Types of Special Library

Special libraries include corporate libraries, hospital libraries, professional associations libraries, law firms libraries, private business firm libraries, museum libraries etc. Some academic institution like IIT libraries, Medical college libraries, Law school libraries are also special libraries as they serve a targeted group of users and also they are funded separately from the rest of the university.

Sl. No.	Type	Typical Characteristics(users served)
1	Medical	Medical facilities, Medical schools, Pharmaceutical companies
2	Legal	Law firms, Corporate legal depts., Law schools, Court librarians, Government agencies
3	Corporate	Corporation Staff and Customers
4	Knowledge Management	Internal staff and customers
5	Government	Legislative offices, Military bases and academics, Intelligences agencies, Prisons, Administration.
6	Museum	Researchers, Staff, Specialists.

8.1.2 Need for a Special Library

Special library is mainly required for the following purposes

- To make available to its users any information they want on a special field;

- to have an organized place for all information materials;

- with this the organization will have a centralized , coordinate and improve access to information.

8.1.3 Objectives of the Special Library

To serve the parent body is the foremost reason for special library existence. The role of each special library is to support the information needs of its users or clients so they can achieve the target and goals of the organization. The main objectives of a special library are:

i)   To support the information need of its parent body

ii) To disseminate updated and significant information in the concerned field, which enables the members of the organization to keep track of the significant development in their field of interest.

iii) To give pinpointed information promptly to the users, saving time of the user.

iv) To provide the desired information to its user on demand and mostly in anticipation

v) To search literature exhaustively and bring it to the notice of parent body before the start of a project to be undertaken by the organization , assuring them to go ahead. This helps in avoiding duplication of efforts.

vi) To give users inspiration and stimulation by means of balanced collection and fine services.

8.2 Television Media Library

Television Media Libraries offer much more than just lending services. Librarians in the Television Media Libraries environment play an active role in the success of the organization. Key service is to provide access to good quality information to the users who are serving for the organization.

Television media libraries offer unique services, providing patrons access to specialized information while supplying an exclusive value proposition to the organization they represent. Performance and the ability to show outcomes across the business are central to the success of today's television media library.

Also, Television Media libraries provides a cost effective, flexible and highly integrated solution that offers advanced research functionality and supports the diverse need of organization. Librarians in this library also provide personalized assistance to end users. Role and Activities of Television Media Librarians keeping on changing with advancement in technology and information services.

Television Media Library shares an increased responsibility for meeting information-on-demand expectations in an often leaner environment. The digital age has transformed the structure and management of television media libraries around the world. With an increased focus on technology and its use in library management, library professionals are having hard time to cop up with the rapid transformation. The digitization of information and information sharing has provided exciting opportunities for libraries, but it has also produced challenges. Change management, navigating varied digital published platforms rights and attracting organizational understanding are some of the challenges being faced by librarians.

Librarians here are always looking at ways they can adopt and explore new opportunities to enhance their service and report on the important information management and research role they play with their organization.

With research and reference service a core focus for these television media libraries, it is crucial that the libraries are equipped with the right tools to both meet and exceed user expectation.

9. DATA ANALYSIS

9.1 Organizational Structure of Television Media Libraries

Many television channels have come up during the last 5-10 years. To help these industry in Assam, many other allied services have come up to help the television media, directly or indirectly, such as advertising agencies, rating agencies et. Organizational structure of a television company library may vary from company to company.

In a television media library, the users can be categorized into four categories as:

i) **Users from Pre-Production**

Reporters/ Correspondents/ Journalists

Producer and Line Producer

Associate Producer/ Assistant Producer

Production Assistant

Director/ Associate Director Stage Manager/ Unit Manager

Engineering Crew e.g.: Camera Operator, Audio Mixer and Video Operator etc.

Set Designer/ Art Director/ set Decorator/ Lighting Designer

ii) **Users from Production**

Studio Manager

Engineering Crew

Sound-Effects Person

Crane Operator

Prop Crew/ Stage Crew/ Light Crew

Talent including Chorus, Extras

iii) **Users from Post-Production**

The Account Executives/ Sales

Scheduler

Shipping

Editor, both On-Line and Off-Line

Graphics and Assistants

Sound Mixer

iv) **Other Users**

CEOs and Chief Managers etc

Agents and Managers

Lawyers

PRO, Publicity and Advertisements Executives

Music Licensing Personnel

Stock Footage Licensing Personnel

Insurance Agents and their Staff

Union and Guild Members

Students/ Trainees/ Research Scholars

Teachers

Outside Agencies

TV channel libraries in Assam usually consist of librarian, assistant librarian and one or two bearer.

9.2 Qualification of Librarians of Television Channel Libraries of Assam

All the television channels is having their own library, but the organization having 2 or 3 channel under the same firm are having only one library to look after the 2 or 3 channel.

Table No :9.2.1 shows all the television channel libraries of Assam.

Table No:- 9.2.1 General Information

Name of the organization	Name of the Television Channel	Government/ Private Channel	Year of Establishment	Name of the Librarian	Qualification
Doordarshan	DDk Guwahati	Government	1985	Nizara Sharma	BLib
Pride East Entertainment Private Limited	News Live, Rang Ramdhenu	Private	21/01/2008	Rosy Chakraborty	MLISc,PGDCA,NET
Brahmaputra Tele Production Private Limited	DY365 ,Jonack	Private	30/10/2008	Ersadur Rahman	MLISc
AM Television Private Limited	Rengoni, Prag News	Private	04/03/2001	Mridusmita Gogoi	Diploma in Mass Communication
Pratidin Group	Pratidin Time	Private	March, 2013	GautamMahanta	MLISc
Rockland Media and Communication Private Limited	Assam Talks	Private	02/05/2015	SamorjitSarma	MLISc

Table No:9.2.1shows that the Doordarshan Kendra Guwahati is the oldest television channel in Guwahati. The table shows the qualification of the librarian serving in each television channel library.

9.3 Library Staff

In all the three types of library of namely public library, academic library and special library, library staff plays on important role in achieving the good of the library.

All the television channel media library differ from one another in their way of working but the goal of each library is same, i.e. serving the parent body.

According to survey it was found out that most television libraries are operating with loss man power since the beginning of the channel emergence. And as the organization in giving no in- service training, the librarian in not able to improve their skills.

Table No:9.3.1 shows the qualification of librarian of working in television channel media library of Assam.

Table No: 9.3.1 Library Staff and their strength

Name of the Television Channel	Qualification and Strength of Staff			
	Having only LIS(BLib or MLISc)	Having LIS and at for skiil	Not having LIS qualification	Total no of staff
DDK Guwahati	1	1	3	5
News Live, Rang, Ramdhenu	2	1	1	4
Dy365 Jonak	1	0	3	4
Prag News, Rengoni	0	0	1	1
Protidin Time	3	0	1	4
Assam Talks	3	0	1	4
Total	10	2	10	22
Percentage	163.36	32.73	163.64	100

*LIS : Library and information Science

MLISC : Master of library and information Science

Blib :Bachlar in library & information Science

Other skills, such on : PGDCA, Mphil, Phd etc.

It was seen that librarian computer and technical proficiency to service in the library. So, a library in even being handle by people from other departments not having library skills. But library handle by LIS qualified professional are functioning smoothly in comparison with librarian handle by unprofessional. Out of total library staff of 100%, is not from LIS background, have Blib or MLISC qualification and more than BLib or MLISc qualification

Pie Diagram on the basis of table no.9.3.1

Fig 9.1.1: Percentage of library staff according to their qualification

9.4. Salary of the Librarians

Approximate salary of the librarian working in different television channel of Assam are shown in the table below

Table no: 9.4.1 Salary of the librarians

Sl No	Name of the channel	Salary (in rupees)
1	DDK Guwahati	50,000
2	News Live, Rang, Ramdhenu	22,000
3	Dy365 Jonak	18,000
4	Prag News, Rengoni	12,000
5	Protidin time	15,000
6	Assam talks	13,000

New channel are expected to come up in these year and with that the salary of librarian working in private channel media library are hoping for better salary structure**9.5 Collections and User of Resources of Library**

Collection of television library in totally different from after libraries. Table No:-9.5.1 indicate the collection of resources available in the TV channel libraries of Assam and also indicates the no. of user utilizing the resources.

Table No.: 9.5.1 Resources of the library

Name of the television channel	Book	Tape and Disk	Lacie	Users
DDK Guwahati	1650	20,000	0	(No date available)
News Live, Prag, Ramdhenu	75	19,222	0	275
DY 365, Jonack	0	20,000	0	300
Rengoni, Prag News	0	10,000	0	20-30
Pratidin Time	0	70,000	3(2 terabyte each)	(No date available)
Assam Talks	150	15,000	4(2 terabyte each)	200

Bar diagram of toper available in television library an basis of table No:-9.5.1
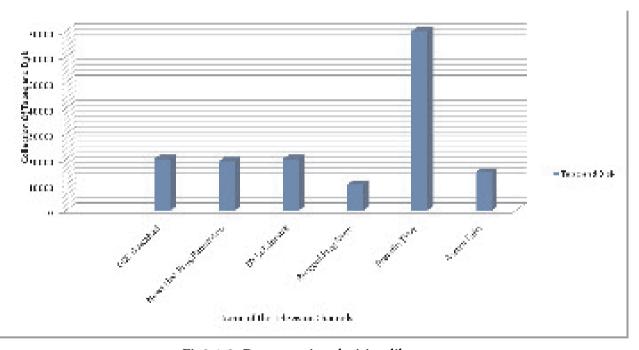

Fig9.1.2: Resources in television library

No library is having the exact data of resources available with them. The data given by thelibrarian is an approximate of the collection. No librarian could give the breakup of the total collection of tapes with them.

Pratidin time library is having the highest no. of resources according to the data provided by the librarian and Prag News library in having the least resources.

9.6 Process of obtaining raw materials to maintain the resources of library.

The Table No.9.6.1describe the way the television channel library receiver the resources

Table No.9.6.1 Process of collection of resources by the library

Sl. No	Name of the organization	Name of the television channel	Directly Purchase	Receive from central store	Any other
1	Doordarshan	DDK Guwahati	X		X
2	Pride East Entertainments Private Limited	News Live, Rang, Ramdhenu	✓	✓	X
3	Pralmanpatra Tele Production Limited	Dy365, Jonak	X	✓	X
4	AM Television Private Limited	Prag News, Rengani	✓	X	X
5	Protidin Group	Protidin Time	✓	X	X
6	Rockland Media and Communication Private	Assam Talk	X	✓	X

9.7 Organization of Resources in Television channel libraries of Assam

All the TV channels libraries use own method and techniques for organizing resources in their libraries. It was observed in the survey that all the libraries are not fully digitized; it was found that DDK is still using registered for maintaining the data of the resources. News Live library is using e- granthalaya software for housekeeping activities which isn't fully capable of maintaining all the digital documents. For that reason, they used Microsoft excel to maintain database of the resources. Few of the private libraries are maintaining Microsoft excel for keeping the details of the information collections which are stored in the CD, DVD, etc.

It was found that the all TV channels libraries are following the same way of collection of information
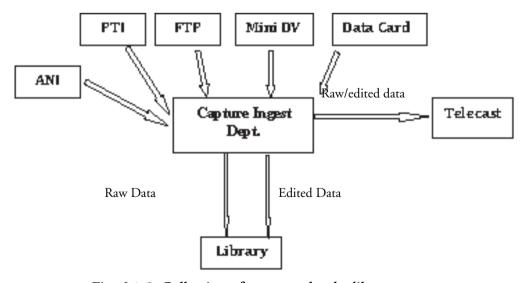

Fig. 6.1.5: Collection of resources by the library

FTP: File Transfer Protocol(FTP) is the commonly used protocol for exchanging files over internet. Digital Satellite News Gathering (DSNG) vehicles are used to gather news and tele-cast live shows through FTP. DSNG is a system that combines Electronic News Gathering (ENG) with Satellite News Gathering (SNG). The first type of ENG systems were extensively used during the dispute over Falkland Islands between England and Argentina in 1982. As time passed and electronic devices become smaller, a whole DSNG system was fitted into a van. DSNG vans are now common; they are extensively used in covering news events

Pic: Digital Satellite News Gathering (DSNG) vehicles

MINI – DV: Some journalists of the news TV channels used mini-DV cassette for recording information. Mini-DV tape can hold about 60 min or 90 min of audiovisual information. Now a days, mini DV is mainly used to store advertisement which are shown during break hour.

DATA – CARD: A data-card is a digital card format of a storage drive for holding files. An individual reporter of a TV channel gathers information through different media which is later send to the Capture Ingest Department by data card.

ANI: The Asian News International (ANI) is an Indian news agency based in New Delhi. They cover information of India as well as foreign countries. Their coverage includes general news, entertainment, life style, business, science, sports, etc. They have a large number of reporters working under them.

It isn't possible for an individual TV channel to gather information throughout the world of its own.

So, the TV channels used to purchase the information from the ANI.

PTI: Press Trust of India (PTI) is a non-profit co-operative news agency in India whose headquarter is in New Delhi. It is the largest news agency in India. So like that of ANI, the TV channels purchase information from PTI.

The information gathered through FTP, Mini- DV, Data card and information purchased from ANI or PTI or from both is collected by the Capture Ingest Department.

Capture Ingest Department: It is a department in the TV channels where high volume of video rushes in a wide range of formats from FTP, Mini-DV, Data card, ANI, PTI, etc are ingested.

The collected information is transcoded to editable formats and correct frame rates. The department also set up Final Cut Pro-projects files, syncing camera footage and audio and organizing projects for editors.From the Capture Ingest Department, the programs are sent for telecast.

Both the raw footage and edited footage are sent to the library from the Capture ingest Department.

Library: The information i.e. raw footage and edited footage received by the library are needed to be organized.

All the libraries have the same way of receiving the information as mentioned above.

DDK GUWAHATI: It is observed that the DDK Guwahati library don't follow any classification practice instead they make labeling by writing in a piece of paper the information like title of the program, producer's name, date of telecast, duration of the program and next when the program's sequel will be telecast and paste it on the tape. This process is done in case of DVC- pro- Mini DV and other tape cassettes.

Pic: Labeling of Tapes in DDK Guwahati

In case of CDs, DVDs, Blue-Ray Disc, etc they use to paste sticker over it. The sticker provides information about the quality of the video format whether it is High Definition (HD) or Standard Definition (SD), the disc is master copy, original copy or duplicate copy. Some other information the sticker provided are shown in the picture below. The space is provided in the sticker to write information about the title of program, producer's name, date of telecast, etc.
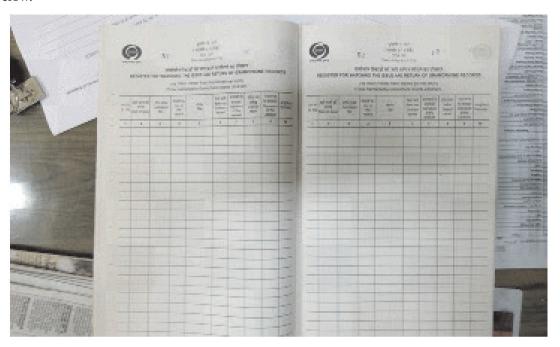

Pic: Stickers used in the Disk

(Source: DDK Guwahati)

After the labeling is done, the information of tape and CD/DVDs are entered in a register. Later, the resources are kept in the shelf.

For circulation processing i.e. issue and return, they maintain register. The format of register is shown below.

Pic: Issue/Returns Register

Private Satellite Television channels' Libraries: The organization of library resources in all the private satellite television channels' channels is almost similar. The way of incoming of information sources has been described above. Different kinds of resources are sent to library in different format like Mini DV, data card and some are online through server. The resources sent through the server from the capture ingest department to the library are copied to CD/DVD/Blue ray disc or other digital storage format. Later it follows the process of organizing the resources in the library. It has been observed that all the libraries are doing classification by using own scheme of classification not like that of book classification through DDC, CC, UDC, etc. The classification is based on the category of information like news, entertainment, etc.

Maximum information is stored in the server and lacie in the library. The tape and disk collected from the capture ingest department are stored by writing the news slug on the CD non-playing surface and making a database of the content on Microsoft excel.

The information stored on server and lacie, for that also librarian are making database on Microsoft excel for easy retrieval.

Images of the slug written above CD and run-order for writing the slug is shown below:

RUN ORDER

Prime Time // April 18 // 6-30 PM

1. Amguri Wild Life Monitoring   Amguri   Ranima
2. Howraghat Murder   Howragher   Netra
3. Bihu Pagla Dance   Ranjita
4. Jok Samvalev   Bhaskar Sarma
5. Run ULFA Money   Utpal   Netra
6. Ulfa Money Reaction   Miliby
7. Priyadarshini Kamakhya   Utpal
8. Kamrup Uttejona   Kamrup   Chandra
9. Jadeja Marriage   Desk   Lut
10. Nagaon Student Protest (H/P)   Nagaon
11. Bureaucrats Foley   Ranjit
12. Bihu Overall   Desk   Paponi
13. Electricity Crisis   Nityan
14. Congress Report   Ramen
15. Pranjit Star Reaction   Ranjita
16. Putin Girl Friend   Desk   Lut
17. Delhi Missing Girl   Delhi   Chandra
18. Kajolgaon Jehad II/U   Kajolgaon   Chandra
19. Nagarbera Rape   Nagarbera   Ranima
20. Olympic Gymnast (H/P)   Desk   Lut
21. BJP Election   Komjroli
22. IRS Salary (-UP)   Ranjit
23. Rani PA Arrest (H/P)   Mangaldei
24. Earthquake   Desk   Shantanu
25. Market Price   Bhusita, Palabi
26.

(Source: Prag News)
Pic: Run Order

(Source: Prag News)
Pic: CD with Slug

For circulation process, a different database is maintained by the librarian in the excel sheet. Image of the excel sheet maintained for circulation is shown below:

(Source: Protidin Time)
Pic: Issue/Return Sheet maintained by Pvt. Channel Libraries

News Live: News Live is using e–granthalaya for circulation purpose and maintaining database for the in the content of documents. But they are also writing the slug above TV, tapes, etc.

Books are maintained by the television channel library for reference purpose, so no library is classifying it and are also not keeping records of it.

By this way, organization of resources is done by the television channel libraries.

9.8 Problem in Organization of Resources in the Television Channel Libraries of Assam

Table No: 9.8.1 show the various problems in organization of the library
Table No.:6.3.6
Problems in organization of the library

Sl. No	Name of the channel	Space problem	Less staff	Needs proper shelling	Qualification Barrier	In service training problem	Fund problem
1	DDK Guwahati	No	No	No	No	Yes	No
2	News Live, Rang, Ramdhenu	Yes	Yes	Yes	No	Yes	Yes
3	Dy365 Jonak	Yes	Yes	Yes	No	Yes	Yes
4	Prag News, Rengoni	Yes	Yes	Yes	Yes	Yes	Yes
5	Protidin Time	Yes	Yes	Yes	No	Yes	No
6	Assam Talks	Yes	Yes	Yes	Yes	Yes	Yes
Total		5	5	5	2	6	4
Average (in percentage)		83.33	83.33	83.33	33.33	100	66.67

Table No: 9.8.1, show clearly all the private channel television library in facing space problem (83.33 %). Table No of staff in library in also less in the private television channel library, these libraries are also lacking in proper shelving. Though same libraries are having qualified professional but due to lack of in-service training. They are not able to cope up with the pace of improvement in libraries worldwide. Fund problem (66.67%) is always a major issue in a private organization and these problem is also seen the libraries. Only DDK Guwahati channel library is having fewer problems in comparison with other libraries.

10. FINDINGS, SUGGESTIONS AND CONCLUSION

10.1 Findings

The findings below are based on the survey:

i.   In the television library, the resources are mainly VHS, Hard Disk, CD, Mini DV, DVC Pro, DVCAM, D -9, Lacie etc.

ii. Maximum television library are having less carpet area than the actual requirement, which is one of the major problem. Due to less space, it is difficult to organize the resource properly.

iii. Resources are arranged according to the type of material and programme category.

iv. Maximum libraries are using server to store and disseminate the resource, so a user is able to access the resource from his own desk by going through the server of the library, saving the time of the user.

v. Except News Live library, no library is using software for housekeeping activities.

vi. No uniformity is maintained by library in respect of classification and cataloguing.

vii. There is no provision for maximum librarian to purchase sufficient numbers of library materials on the budget are very limited for the library and also it found that all the organization do not maintain separate budget for the library.

viii. There is inadequacy of staff in almost all the television library, so the professionals are having hard time in doing the duties single handed. It was also found that are television library is not having professional librarian.

ix. Expect DDK Guwahati, no other television library is storing the resource in well condition. Maximum libraries converted the raw and edited visuals to WMV format, to store the data in a less space, which results in deterioration of the quality of video.

x. From the survey it is found that secrecy and confidentiality are the most important issues in television organization. So, it is very difficult to convince the management for survey in their channel library. But library professional are very helped as they the importance of this type of works.

xi. Though a library is having professional to manage the library but they are not able to cope up with the recent development due to lack of in-service training.

10.2 Suggestions

i) Parent body should put equal interest to the library unit like other unit.

ii) There is an urgent need to appoint the library professional to manage the modern library and provide in- service training to the working professional to cope up with the development.

iii) Increase of fund in necessary in all the private television channel libraries in Assam. So, that the fund can be utilized for better services of the library.

iv) Library administration power should be decentralized upon the librarian.

v) A uniform standard should be adopted in all the television channel libraries of Assam. Like common software should be used by all the libraries for housekeeping activities.

vi) Strength of library staff should be increased in all the libraries.

vii) All the private libraries are facing the problem of space. Proper step should be taken while planning a channel that a library get the required space to function smoothly.

viii) Every television channel library should have an archiving facility of the resource. And the resource should be maintained properly.

ix) Television channel library should move towards cloud computing for storage of resources. It would help in solving the space problem to some extent.

x) In the syllabus of library science, steps for inclusion of media librarianship should be taken.

10.3 Conclusion

'Digital revolution' is seen in libraries but TV channel library is get lacking in grappling up with the major technological development. The way currently TV media library is operating in traditional way, some librarian think there is no need of professional in handling the library. Traditional libraries in incapable to cope with the accelerated growth of information, the TV channel library will be forced to think in terms of transforming these into digital libraries. For that purpose, emphasis should be laid on education of media librarianship.

Digital libraries are coming up fast in the developed countries. In India, this process is going slow. Skills of the library professional handling them must match the market needs. Only then users will be able to exploit the opportunities provided by the digital library and meet the new challenges.The only way to sustain continued access to the resources into preserve them digitally.

The survey on TV channel libraries of Assam revealed the poor working condition of the library. It was found that the most of staff are not using the resources of their own library, instead browse the web to avail the resources. The resources found over web cannot be guaranteed for genuine. The main reason behind the preference of web over library in the uniformity of arrangement of resources in library and it is hard to locate the resources in quick time, which has resulted in the sifting of staff toward web for resources.

In this age of technology to provide efficient library services, the TV channel organization should re- design the existing infrastructure of their libraries. With the rapid development in the field of IT, these libraries can satisfy the users demand by providing appropriate information at the user's cellphone or desk.

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ONLINE ACCESS TO MANUSCRIPT COLLECTION IN ASSAM: A STUDY

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Abstract:

Manuscript is the primary source of information as it holds the original and basic information on different areas of studies. These manuscripts are now preserved in different repositories. Information and Communication Technology (ICT) tools and systems are being used in manuscript repositories to make them more and easily searchable and usable. The facility of online access brings manuscript nearer to the user community. In Assam also a number of manuscripts are preserved in different repositories. The condition of online access of these manuscripts has been identified in this paper.

 Keywords: Manuscript- Assam, Online access, ITSR, Virtual library

1 Introduction

Dissemination of right information to the right reader on right time is one of the basic objectives of library and information science profession. Library and information science involves in the study of information and their proper dissemination. The library and information centers of all capacities aim to satisfy the need of their user community by the existing collection and facilities as well as the services they provide. The library is being transformed from one to another step for the very basic purpose of users' satisfaction.

The manuscripts stored in different repositories are the primary sources of information which are generally meant for the researchers of different subject areas. But most of these manuscripts stored in smaller libraries, archives, and museums, especially in the state like Assam are not accessible in proper way due to various reasons. It is quite difficult to identify a particular manuscript preserved in which repository.

For this, two basic steps are to be followed by repositories which may result in maximum utilization of these valuable resources. These two steps are

i. Proper dissemination of bibliographic information of the manuscripts.

ii. Digitization of manuscripts to make them searchable and accessible online.

Nowadays, application of various tools and technique of information and communication technology (ICT) for this purpose is a common practice.

2 Use of ICT tools for management of manuscript collection

For transforming library, application of information and communication technology in library as well as in manuscript section is inevitable, which can be studied from three basic perspectives.

First, the computer is used in library for preparing the bibliographic database of its entire collection of documents. Application of computer in libraries is now a common feature and different library automation software are also developed for preparing the database of the library. For preparing such database of

manuscript, some special application software are also available which are mainly meant for archival libraries or manuscript repositories. The user can search detailed bibliographic information about a particular manuscript available in a particular repository within a minimum time such software.

The National Mission for Manuscripts (NMM) uses the software 'Manus Granthavali' for preparing bibliographic databases of manuscript collection in the entire country. One of the rich manuscript library *i.e.* Rampur Raza Library has been using 'CollecSys' software since 2004. (Mustaf, 2013)

Digitization is another aspect of computer application in repositories. Digitization means the copying or capturing of manuscript in digital format. Digitization may be done with a digital camera or a scanner. Though the whole process of digitization is a time consuming one, after its completion, the entire manuscript collection becomes easily accessible and one can search them, read them, print them and download and save them in their personal data storage devices within a minimum time. It helps in multiple uses by different users simultaneously. Moreover, it overcomes the restrictions in use of rare manuscripts which are mainly in single copy.

In entire India, digitization process of manuscript collection has also been started in different repositories mainly under the aegis of NMM and the IGNCA. The digitized versions of these manuscripts in CD/ DVD are now available in those repositories. Now for long term preservation, microfilming of digitized manuscript is preferred. The NMM has also started this process.

Online access to manuscripts over a computer network is the third aspect of ICT application in repositories. With the advent of ICT, one can now access the manuscript available in the Kashmir University Library or in the Odisha State Museum sitting in front of his personal computer and in other gadgets like tablet, smart phone, iPad *etc.* The *Nanakshahi* and the DELNET make their manuscript databases available on their computer network for their respective member libraries.

Besides these above mentioned three stages, now the digital library of manuscripts is also developed. Building a digital library of manuscripts can help in providing global access to the collection of a particular library. Different digital library software packages are being used in this purpose. The software DSpace is being used in Banaras Hindu University in their digital library of manuscripts. The Greenstone Digital Library (GSDL) Software package is one of such software used for creating the Malay manuscripts digital library in Malaysia. (Rifin & Zainab, 2007)

Another advance application of ICT in library service is a virtual library. The virtual library means a collection of resources available on one or more computer systems which can be accessed through a single interface or entry point without knowing where particular resources are originally located; here the location is 'virtual' in nature. Virtual library brings the manuscript collection closer to the user community. The user can access the online copy of manuscripts instead of the original copy as most of such original manuscripts are brittle and fragile in physical condition.

The New Library of Alexandria of Egypt also provides such services for their user community. In the Manuscript Center, a touch-screen monitor is there where the visitors can turn different pages of the manuscripts with a simple touch of the finger, and can zoom a particular folio using the touch screen technology as well as sophisticated virtual browser. Besides these, the faculty of virtual visit to the Museum is available there. The website of the Manuscript Museum of the New Library of Alexandria is <http: // manuscriptsmuseum.bibalex.org.>

The Virtual Manuscript Room (VMR) of the University of Birmingham is another example of such virtual reality in the manuscript section of the library. This is a project that aims to bring together digital

resources related to manuscript materials. Now this project is in its first stage and it can be accessed at <http://vmr.bham.ac.uk>.

The 'e-codices' the virtual Manuscript Library of Switzerland, provides free access to all medieval and selected of modern manuscripts of the country. This virtual library gives access to 1233 manuscripts from 51 different collections to the scholars and the general public as well. This project has been stated in 2007 and it is continuously updated and extended. The link of this virtual library is <http://www.e-codices. unifr.ch/en>. (Austenfeld, 2011)

From the utilization point of view, the concept of the hybrid library is more applicable for manuscript collections. The hybrid library indicates that library which possesses both conventional and digital collection and provides access to both of them. In manuscript repositories, the manuscript collection should be in digital form for their access and preservation.

The National Library of Israel has prepared a master plan for the period 2010-16 to develop such type of hybrid library where the Jewish manuscripts is being covered. Detail of the plan is available at <http:// web.nli.org.il/sites/NLI/ English/library/aboutus/renewal /plan/Pages/nli-renewal-plan-Hybrid.aspx >

In this way, ICT tools and techniques are being used for management of the manuscript collection which transform the very traditional concept of manuscript section of a library. Different initiatives have been taken in India as well as in abroad in this direction; but the prime motto of all these applications is same *i.e.* to provide a convenient way of the retrieval as well as access to information to the user.

3 Online access

According to Longman Dictionary one of the meanings of 'Access' is 'to find information, especially on a computer'

The Dictionary of Library and Information Science defines the term 'Access' as 'in information retrieval system (IRS), it is a device or method whereby a document may be found or the approach to any means of storing information.'

Access is the unique and special feature of digitized collections. Digitization makes the collection more accessible as in some conditions access to the physical documents is curtailed due to the risk of damages.

For online access to manuscript, first it should be converted to digital form from its conventional form. As re-typing of the content of manuscripts is not so possible; therefore image capturing using a digital camera or a scanner is the possible way to convert the manuscript to a digital one. Digitalization gives enormous access to a single manuscript to multiple numbers of users simultaneously. Then the digitized version of the manuscripts is to be uploaded on the web or an intranet system. Thus it becomes accessible 24 X 7.

3.1 Advantages of Online access to manuscripts

The collection of manuscripts preserved in a particular library is not only proud of that institution, but the whole nation as well. As these are the primary source of information for the study of literature, art, history, music, philosophy, and theology, these manuscripts should be accessed at large scale for their advanced studies and research. Therefore online access to manuscripts is duly encouraged and is followed in many repositories, especially in many developed and developing countries. Some of the major benefits of access to manuscripts in digital format are:

i.   The manuscript in digital format stored in CD/ DVD ROM or uploaded online is very easily searchable, retrievable and accessible.

ii.   This gives the way of collaboration and resource sharing among various repositories and institutes related to cultural heritage and manuscriptology.

iii. Generally, original manuscripts are not permitted for use. It reduces the handling of original copy and thus it helps in expanding their lifespan.

iv.   Digital format increases their access possibilities and adds some additional values in receiving, storing and sending the same in a very simple way.

v.   It allows sharing via different platforms simultaneously.

vi.   Online Access helps an user to retrieve particular manuscripts using predefined keywords and text based search mechanism.

vii. Worldwide accessibility is another advantage of this system.

viii.   From the security point of view, the manuscript in digital format as well as in online is more secured as it is free from the fear of permanent damages to the manuscripts in original forms.

ix.   Manuscripts stored in religious institutes are not allowed to use due to various religious beliefs and sanctity. The digital surrogate and their online access may solve this issue without worrying those customs and belief.

x.   It gives a new way of revenue earnings to the parent organizations.

xi.   It reduces the time and effort of the users in gaining authentic data on manuscripts.

xii. It provides a user-friendly platform for accessing, retrieving and reading manuscripts online.

xiii.   It provides remote access and keeps original one away from the users.

3.2 Online access to rare manuscripts in Assam

Assam, a North Eastern state of India is a land of manuscripts where manuscripts are worshiped, are thrown to the river due superstition, are kept away from use, are of diverse scripts and languages, *etc*. Still manuscript of Assam is a matter of pride in India as well as the world. These manuscripts are now preserved in different repositories as well as in personal custody too. Some of these repositories are religious institutions and some organizations are social, academics and research based organizations. Besides, the religious institutions, Gauhati University, Kamrup Anusandhan Samiti, Department of Historical & Antiquarian Studies (DHAS), Guwahati, Institute of Tai Studies and Research, State Museum and different district museums, are the major repositories of manuscript collection in Assam. In Assam, digitization of manuscripts in large scale was done mainly by IGNCA and NMM. Under the active guidance and technical support, already a huge amount of manuscripts has already been digitized. A as a part of their project, both the central government funded agencies digitize the rare manuscript available in different repositories of Assam including the *Satra* institution.

The manuscript collection of Assam digitized by the IGNCA is now available in the IGNCA's digital library via intranet. The NMM is a nationwide Mission for digitization of selected manuscripts all over India. Through the Manuscripts Resource Centre (MRC) and Manuscripts Conservation Centre (MCC) established at Gauhati University as well as in Barak Valley and Upper Assam and a laboratory for digitization of manuscripts in collaboration with NRCL at Sankadeva Kalashetra, Guwahati, this agency has already digitized a huge number of manuscripts. The repositories got the digital surrogate of their manuscript collection in DVDs provided by the Mission.

Though a number of manuscripts are digitized, but in case of their online access, Assam is still in infancy stage.

In term of online access to rare manuscripts in Assam, only the following two institutions have been identified.

A) Institute of Tai Studies and Research (ITSR):

As its name indicates, the 'Institute of Tai Studies & Research' (ITSR)   is a research Centre that mainly deals with research and studies in Tai language. It is located at Moran town of Dibrugarh district. This Center has a well maintained library and manuscript resource centre. Here a collection of 246 manuscripts comprising of *sanchipat, tulapat,* cloth *etc* are scientifically preserved.

In 2010, National Mission for Manuscripts established a Manuscript Resource Center at this Institute. It is noteworthy that a number of rare and valuable Tai manuscripts are scattered and unidentified in the villages and Buddhist monasteries of Upper Assam. This Center mainly aims to conserve these manuscripts and retrieve knowledge contained therein. Till March 2014, this Center surveyed and documented more than 5980 manuscripts.

The ITSR has uploaded some of the digitized manuscripts on their website. But only the image files are uploaded without their bibliographic detail. Some of their manuscript collection can be accessed at <http://www.taistudiesmoranhat.org/resource.php >
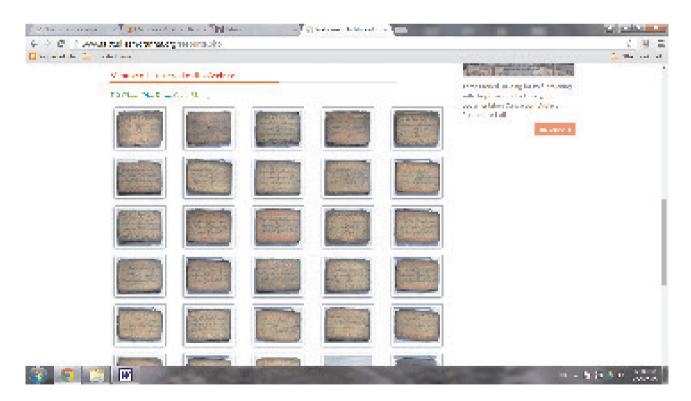

Image 1: Manuscript collection at ITSR (As accessed on 10.06.2017)

B) A Tribute to Sankaradeva:

'A Tribute to Sankaradeva' is a website with the basic objective to introduce the greatest Assamese of all time Mahapurush Srimanta Sankardeva to the entire world. The website of this organization <www.atributetosankaradeva.org> is launched on June , 2008. This website uploads the original works by Srimanta Sankardeva and a number of articles on this personality as well as on Vaisnavism.

One rare manuscript collection of Assam can be accessed from this site. The digitized form of *Kirtan Ghosha* in *sanchipat* written by Srimanta Sankardeva available on this site and each and every folio of this particular valuable manuscript can be accessed clicking on the link <http://www.atributetosankaradeva. org/Rangazan-Kirttana-Ghosha.htm>.
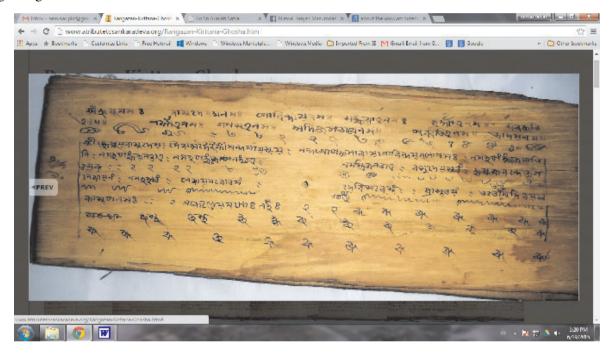
Image 2: Digital version of *Kirtan Ghosha* (As accessed on 10.06.2017)

Till 2017, these two sites can be traced from where one can access the digitized format of manuscripts of Assam. From these two platforms, one can get an overview of the manuscripts Assam especially in term of colour, size, text etc. But no proper bibliographic details are there with these particular manuscripts.

Besides these two, no such mechanism is found in the manuscript repositories of Assam, through which the digitized collection of manuscript along with their bibliographic information can be accessed online.

4. Conclusion

From the above discussion, it can be assumed that the application of ICT tools for management of manuscript collection in Assam is in infancy stage in comparison to the other parts of India and other countries. There is a limited or no scope to search and browse manuscripts preserved in a particular repository of Assam. Therefore a proposal should be taken to build an exclusive and comprehensive database of all these manuscripts available in Assam and as well as other states of NE India. The Department of Library and Information Science, Gauhati University with the support higher technical institute like CIT, Kokrajhar can take initiative in this regard.

The repositories which have their manuscript in digital format can upload the same on their institutional website. If any restriction is there on uploading all of those collections, some selected folio as sample may be uploaded.

If such initiatives have been taken, after identifying a particular manuscript on a particular website, the user/ researcher will automatically come to the particular repository where that manuscript is physically preserved. Because in some cases, medium, their physical status, colour and illustration, *etc.* may be more important for the researchers especially in case of illustrated manuscripts rather than their content matter.

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OPEN ACCESS REPOSITORIES IN INDIA: PRESENT STATUS AND FUTURE DIRECTION

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Abstract

The paper provides an overview of open access repository (OAR) movement as a Green path to open access (OA) through out the World with reference to India. The main objective of the paper is to give a broad look at the current state of deployment of OARs in India and to discuss problems and prospects of Indian OARs along with its several key features. The paper also highlights some of the key initiatives at national level taken by Indian agencies in order to promote the repository movement throughout the country.

Keywords: *open access, open access repository, digital library, self archiving policy*

1. Introduction

The open access to knowledge movement in 1990 has brought many changes in library environment. As a result, the traditional publishing system has changed and shifted to scholarly communication system. New open access publishing models are being developed and two open access model viz. OAA – Open Access Archive (popularly known as green path) and OAJ – Open Access Journal (popularly known as gold path) have become popular throughout the world (Fig. 1). OAA has emerged as a new OA publishing tool to the academic world that supports free on-line access to public funded research results. The BOAI (2002) declaration also recommended these two popular roads by which we can achieve OA. The objective of the paper is to provide an overview of the current state of open access repositories (OARs) movement in India and highlights on some of the key events responsible for the development of repository movement in the country.
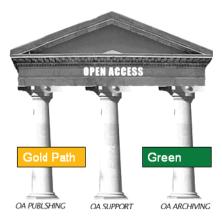

Fig. 1: Two Roads of Open Access

2. Open Access and Open Access Repository

The concept '*Open Access*' is relatively new one and has become popular among academic community in 90s with the advent of Internet and WWW (World Wide Web). It is related to free access to read, download, copy, distribute, print, search, or link to the full texts of these articles (Bacchaw, 2012). It is expressed by Peter Suber (Suber, 2010) in his Open Access Overview: "*Open access literature is digital, online, free of charge, and free of most copyright and licensing restrictions*". Bailey (2005) defines Open Access as follow:

"free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose without financial, legal or technical barriers other than those inseparable from gaining access to the Internet itself".

The history open access repositories (IDRs) is relatively short and the movement started mainly in some developed countries like USA, UK, Germany and other developed countries. The movement became popular after the publication of three declarations at international level which are popularly known as 3Bs (BOAI, 2002; Bethesda Statement; 2003; Berlin Declaration, 2003). All these declarations support free online access to public funded knowledge objects. Though, the first repository 'arXiv' was established in 1991 by Paul Ginsparg, a physicist at Los Alamos National Laboratories, with the objective of allowing scientists to share e-prints in Physics, Mathematics, Computer Science etc (Roy, 2015). It was basically a subject repository and their collection is based on two or more major subjects. In a 2002 SPARC position paper, Crow (2002a) defined an institutional repository (IR) as

"a digital archive of the intellectual product created by the faculty, research staff, and students o f a n institution and made accessible to end users both within and outside of the institution, with few if any barriers to access".

The following are the list of key events in the history of OARs at national and international level-

1991:   Launch of the arXiv Physics repository.

1999:   Sante Fe Convention which resulted in the agreement upon a framework for interoperable archives, now known as the Open Archives Initiative (OAI).

2000   Conference on 'Advances in Information Access and Science Communication' organised at M S Swaminathan Research Foundation

2001:   Launch of Eprints by the University of Southampton.

2002:   Launch of DSpace by Massachusetts Institute of Technology.

2002   First Open Access Repository ePrints@IISc was established by the Indian Institute of Science (IISc)

2002:   Publication of Ryam Crow's SPARC Position paper entitled: The Case for Institutional Repositories: A SPARC Position Paper.

2005   UGC (Submission of Metadata and Full-text of Doctoral Theses in Electronic Format) Regulations

2007   NKC recommends Open Educational Resources and Open Access
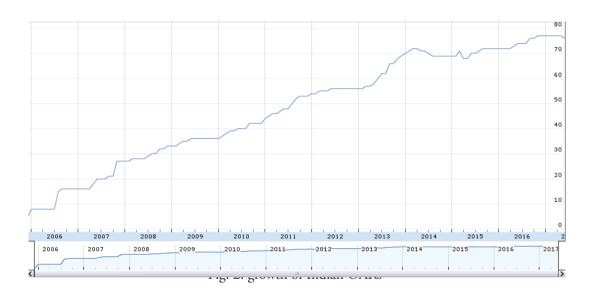
2011   CSIR Open Access Mandate was launched

2011 Shodhganga: A Reservoir of Indian Theses was launched by the INFLIBNET Centre

3. India and Open Access Repositories (OARs) Movement

The development of OARs in the Indian context started in 2002 after the successful implementation of the e-prints repository at the Indian Institute of Science, IISc, Bangalore. As per OpenDOAR database (http://www.opendoar.org/), 3346 repositories have been registered all over the world. Europe stands 1st position having 1514 (45.2%) OARs. Asia having 674 (20.1%) repositories ranks 2nd position and North America stands 3rd position having 609 (18.2%).

In 2004, there were only four (4) IRs in India and now India have 80 (Fig. 2) with an average increase of six (6) new repositories per year (OpenDOAR, 2017). Now different institutions have established OARs using open source software to disseminate research outputs of their institutions. The number of Indian repositories registered in OpenDOAR database is 80 and ranks 10th position in the world after Poland having 90 repositories. In Asia, India ranks 2nd position after Japan ranks 1st position.

Fig. 2. growth of Indian IRs

4. Analytical study of selected IRs under study

This part compares all OARs in respect of contents type, number of objects, languages covered and policy documentations etc.

4.1 Content

Generally repositories hold objects like articles, theses, multimedia, unpublished documents, published papers etc. There is no exception in case of Indian repositories. Though only a few repositories hold special items like multimedia, datasets, patents.

4.2 Number of Objects

Only a few repositories have strong collections whereas majorities have uploaded minimum number of objects. Though, these data (e.g. size of collections or total records) are quite problematical and are difficult to assess accurately. Sometimes repositories listed in OpenDOAR, ROAR or ROARMAP databases show something different from its own website. It is quite clear that there are a very small number of large repositories and a large number of small repositories (in terms of total collections).

4.3 Multilingualism

India has 418 languages of which 407 are living and 11 are extinct (Maitra, 2002) and 5% people can read and write English (Technology Development for Indian Languages Group, 2003). Here lies the importance of devising multilingual information retrieval system and this Indic script-based IRR system is capable of handling non-English knowledge objects and enables users to access such scholarly resources in their own native language.

4.4 Self Archiving Policies

The importance of open access (OA) self archiving policies for the successful deployment of repository have been discussed in different context by many authors (Mark Ware Consulting, 2004; Barton & Waters, 2004–2005). Peter Millington made a study of OpenDOAR database and reported that about two thirds of OARs did not have publicly stated policies (Millington, 2006). But, most of the repositories do not have policy regarding content, collection, multilingualism etc. Even several issues with in the said policies are missing. Only a few organizations (basically CSIR organizations) have OA self archiving mandates.

5. Major Findings

From the above study of Indian digital repositories, the following are the key findings mentioned below - cumulative growth of repositories per year is very low; repositories are 'Multidisciplinary ' in nature; number of objects uploaded is very low; not all documents are full-text; all repositories do not have OAI-PMH base URL and not working properly; few repositories have not mentioned number of records uploaded; covers mainly English documents; no information regarding year of registration and repository type; most of the OARs do not have any policy document.

6. Key Recommendations

The following points may be suggested in the line of global recommendations to populating OAR in Indian context –

ˈ Advocacy and promotional work has been found to be an encouraging factor for adopting OAR programs;

ˈ Mandatory archiving policy may be helpful in acquiring objects;

ˈ Formulate self archiving policies in the line of global recommendation may be helpful in smooth functioning of OARs;

ˈ Awareness of the concepts 'OAR' including programs, techniques, and technologies seems to have an impact on the successful adoption of OAR programs;

ˈ Application of open source software (OSS), open technologies, open standards; and

ˈ Institutions' infrastructure in terms of human resource, networking facilities, fund etc.

7. Conclusion

OARs growth in India is quite satisfactory in compare with other Asian countries. But findings suggest that there are several issues need to be considered before establishing OARs. Recommendation are required to be followed properly in order to develop a 'Best Practice Guidelines' for designing institute-oriented OAR and making it popular among the masses. If the strategies are implemented at national level and policies are formulated in a calm and orderly way, Indian's repositories are expected to be a successful platform for scholarly publication.

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"PERSONAL LIBRARY COLLECTION OF EMINENT SCHOLARS OF SILCHAR TOWN: A SURVEY"

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ABSTRACT

This research examines the personal library collection of Eminent Scholars of Silchar Town. The study mainly reveals that the significant Scholars of Silchar Town hold a variety of good collections i.e. books, journals, Magazine, Newspaper, CD-ROM, and DVD on their house. Most of the Scholars have print collection than non-print collection. The study shows that there is a need to organize the personal collection of the readers in a systematic manner. The study also discovers the source from where they build up their collection and how they maintain it. Nevertheless, this study can add to the very small pool of data on personal collections and perhaps can give some insight into the topic at hand.

Keywords: Eminent Scholar, Private Library, Silchar, Personal collection.

INTRODUCTION

A personal library is a library under the care of personal ownership, as compared to that of a public institution, and is usually only established for the use of a small number of people, or even a particular person. Some people sell their personal libraries to establish institutions such as the Library of Congress, or, as is frequently the case, donate them there to after death, through a will. Personal collection is a collected works of both published and unpublished works owned by a variety of workers. To a certain extent a few of these collections are so well developed and maintained that they found their way into the literature. These personal collections include the material collected by Eminent Scholars who are important, respectful people and known to have a good command in their respective profession. How does their personal collection grow and how do they organize, maintain and preserve this collection are the interests of this study.

OBJECTIVES OF THE STUDY

· To identify personal library collection of eminent scholars of Silchar Town;

· To find out how these eminent scholars organize their personal collection;

· To find out how these eminent scholars maintain their collection;

· To find out the source from where they build up their collection;

LITERATURE REVIEW

A very limited amount of literature review are available in the form of library and information science journal articles and completed research works reported in the library literature are also scanned. There is not much record of work done on the arrangement and use of personal collections, although there exists some evidence of past studies having been conducted in this direction. Some of the reviews that are related to the topic and would be of great help for the researcher to develop the tools, techniques and structure to carry out the present study are presented below:-

Laughlin, (1985) has discussed that the Kyle Laughlin Photograph Collection contains over 800 historical photographs collected or taken by Kyle Laughlin and donated to the University of Idaho Library. The images span the years 1931 to 1979 and depict Idaho scenery and historical sites, as well as images of Laughlin's travels, family and friends. In December 1979, Warren Owens, the Dean of Instructional Services and Director of both the Latah County Public Library and the University of Idaho Library, reported that the University Library received "one of the most significant and impressive gifts in history," Laughlin's personal library of Western Americana.

Lundstrom, (2013) has discussed about the Arthur Hailey collection which was formally opened at the Harry C. Moore library (HCML) of the college of the Bahamas. The collection was over 800 items which comprises of personal copies of the author's commercial publications as well as mementos from his study at Lyford Cay home in the Bahamas. These resources along with the manuscript collection donated to the Thomas Fisher Rare Book library, University of Toronto can offer scholars with materials to hold up research about this bestselling author.

Gogoi, (1971) in her book "The Thai Khamtis" has discussed about a collection of articles on the Thai khamti tribe of Arunachal Pradesh by various scholars. In this comprehensive work she has selected such writings which throw light on the history, ethnology, language, culture, myths, and trade practices of the Khamtis. This is the first ever comprehensive compilation in the English language on the Thai Khamti society.

Thabah, (2013) said that Politicians and Bureaucrats finish up with a book collections. Some may collect books as they love reading. But due to their public and honored position almost all of them are bestowed with variety of gifts that mostly times include books, which then go to form their private book collection. This study finds out through a questionnaire, the problems related to the private book collections of Politicians and Bureaucrats in Shillong, Meghalaya. The survey shows that majority Shillong Politicians and Bureacrats do have personal collections, sometimes read what is available on their shelves and do not follow any classification to organize their collection.

Dutta, (1987) in her paper outlines the findings of a study organized with 66 Indian scientists using questionnaire and personal interview methods with regard to how they arrange their personal scientific collections. It was established that behind personal notes, published articles and books, majority of the respondents (53% to 90%) did not have any other thing in their personal collection.
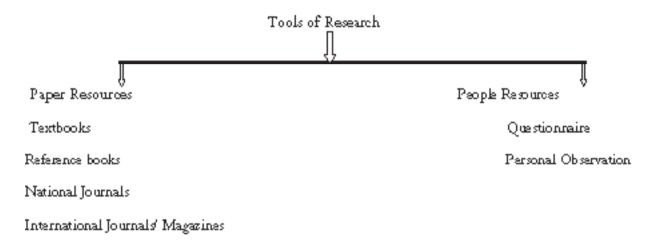
Srivastava, (1973) in his book "Among the Wanchos" has emphasized on an empirical study based on data collected from 38 Wancho villages over a period of two years. In this monograph he has described the geographical setting of their villages, their social, political, economic, and religious institutions.

Mukherjee, (1898) has discussed about the Ashutosh Mukherjees 87,500 collections which were donated to the National Library of India and these collections are kept in separate Hall of National Library which contains variety of rare and valuable books, maps, drawings etc.

METHODOLOGY AND DESIGN

Sampling Technique used for the study is random sampling technique. Though there are many scholars in different region of Silchar Town, out of these 100 eminent scholars were selected for the present study.

The present study has been designed to identify the research problem about personal library collection of eminent scholars of Silchar Town. As Silchar Town covers a vast area comprising of many wards viz. Ambicapatty, Public School Road, Sadharghat, Rangirkhari, Durgakona (especially Assam University) were taken into consideration for the present study. The data has been collected from the different eminent scholars from those areas under the study by administering through questionnaire.

Tools of Research

Paper Resources

Textbooks

Reference books

National Journals

International Journals/ Magazines

People Resources

Questionnaire

Personal Observation

Data Analysis and Interpretation

In order to achieve the objectives of the study, a survey has been conducted through a questionnaire circulated randomly among 100 respondents including Assistant Professor, Associate Professor, Professor, Freelance Writer, Retired Teacher (School/College/University), Media Professionals, Poet/ Writer.

The data collected were analyzed and inferences were made based on standard statistical techniques. All the results have been presented in the form of graphs.

RESPONSES RECEIVED FROM THE RESPONDENTS
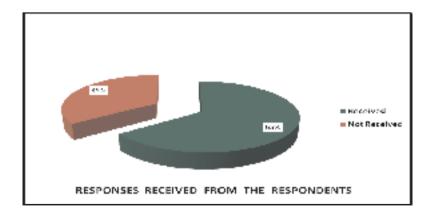
Figure 1: Responses Received from the Respondents. (N=65)

The above graph shows the response rate. A total 100 questionnaires were distributed to the respondents, out of which 65 questionnaires were dully filled by the respondents and were received back. The overall response is 65% i.e. N= 65.
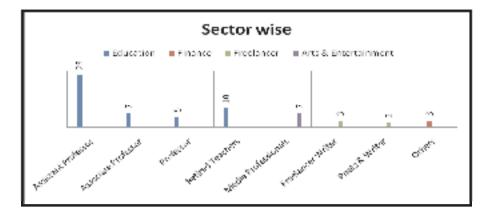
Figure 2: Sector and Designation wise distribution of the Respondents. (N=65)

From the graph, it can be understood that the major part of (79.62%) Scholars belongs to Education sector in which (43.03%) Scholars belongs to the Assistant Professor, (10.8%) belongs to the Associate Professor, (7.7%) belongs to the Professor, (15.4%) belongs to the Retired Teacher (School/College/University); and thereby it is followed by (10.77%) Scholars belongs to Arts & Entertainment sector in which all of them belongs to Media professionals; (7.69%) Scholars belongs to Freelancer sector in which (4.6%) belongs to Freelancer writer, (3.08%) belongs to Poets & writers; and lastly, (4.62%) Scholars belongs to Finance sector in which all of them belongs to different sections of finance department.
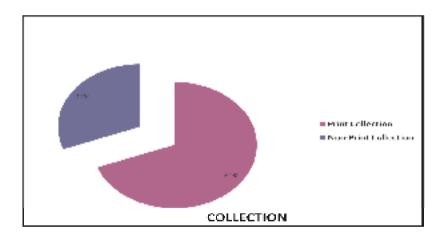
Figure 4: Total Collection held by Eminent Scholars (N=65)

Scholars were asked the total collection they have in their home. In the above graph it is observed that the greater part of (69%) collection belongs to the Print collection whereas (31%) belongs to the Non- Print collection.
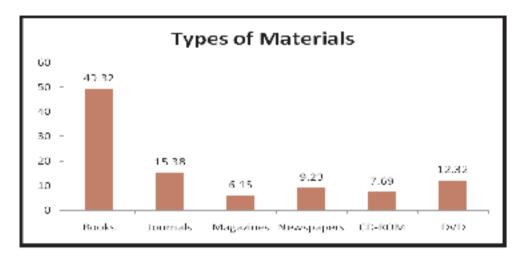
Figure 5: Type of Materials Collected by the Respondents. (N=65)

Here from Figure 5 it can be interpreted that the type of materials collected by the Scholars such as Books with (49.23%) is ranked as first position; Journals with (15.38%) is ranked as second position; DVD with (12.32%) is ranked as third position; Newspapers with (9.23%) is ranked as fourth position; CD-ROM with (7.69%) is ranked as fifth position and lastly, Magazines with (6.15%) is ranked as sixth position.
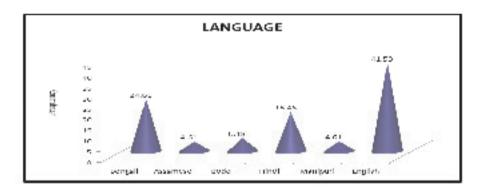
Figure 6: Preferred Language of Collection. (N=65)

The above Figure shows that the popular of (41.53%) Scholars preferred the English language, and hence it is followed by (24.61%) preferred the Bengali language, (18.46%) preferred the Hindi language, (6.18%) preferred the Bodo language, (4.61%) preferred the Assamese language and similarly, (4.61%) preferred the Manipuri language also.
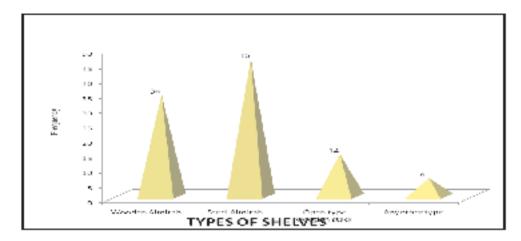
Figure 7: Types of Shelves used for Library. (N=65)

From the graph it shows that the main part of (46%) Scholars use Steel almirah and therefore it is followed by (34%) use wooden almirah, (14%) use Open type wooden stack and lastly, (6%) use any other type.
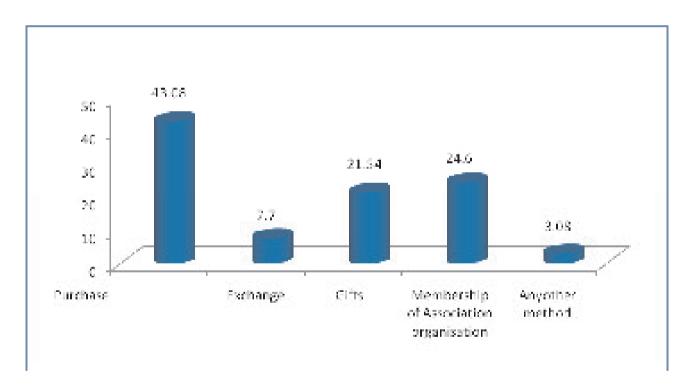
Figure 8: Modes of Acquisition of Reading Materials. (N=65)

The above graph shows the procedure of acquiring personal collections by the scholars through Purchase (43.08%) and is ranked as first position; through Membership of Association/Organization (24.60%) and is ranked second position; through Gifts (21.54%) and is ranked as third position; through Exchange (7.70%) and is ranked as fourth position; and finally, through Any other method (3.08%) and is ranked as fifth position.
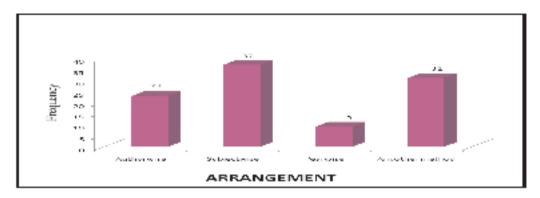
Figure 9: Methods of Arrangement of Personal collection. (N=65)

We wanted to see how the Scholars organize their collection. So the chart reflects that (23%) of Scholars arrange their collections Author wise, (37%) arrange their collections Subject wise, (9%) arrange their collections Year wise, (31%) arrange their collections in any other method. A major part of Scholars i.e. (37%) arrange their collections Subject wise.
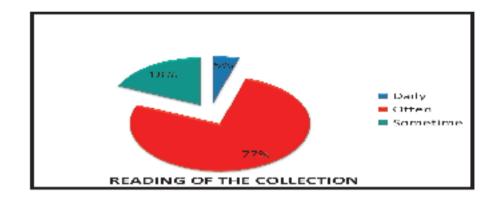
Figure 10: Reading of the Collection. (N=65)

The figure shows that the most of (76.92%) Scholars read often their collection, (18.46%) of Scholars read sometimes and lastly, (4.62%) of Scholars read daily.
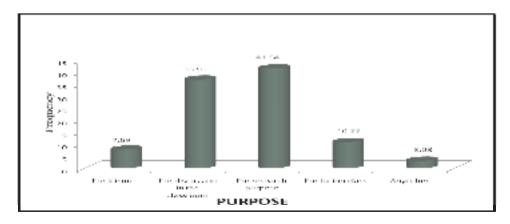
Figure 11: Purpose of Reading. (N=65)

The diagram shows that the mass of (41.54%) Scholars read for Research purpose, and accordingly it is followed by (36.92%) read for Discussion in the classroom, (10.77%) read for Tuition class, (7.69%) read for Leisure and lastly, (3.08%) read for any other purpose.
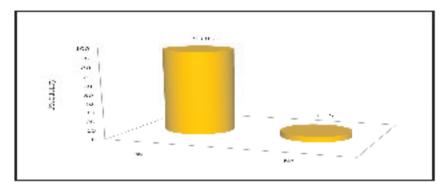
Figure 12: Donation of Library Collection. (N=65)

From the graph it is found that the main part of (93.85%) Scholars wants to donate their collection to (School/ College/University) library whereas (6.15%) of Scholars don't wants to donate their collection to (School/ College/University).
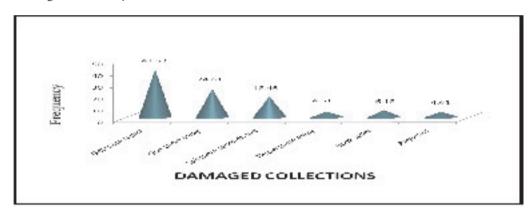
Figure 13: What do you do with your Damaged Collections? (N=65)

From the diagram, the findings that we got were that (41.53%) of Scholars repair their damaged collections, (24.61%) give them away, (18.46%) Sell them secondhand, (6.18%) give them to Book seller, (4.61%) throw them away and similarly, (4.61%) by any other means.
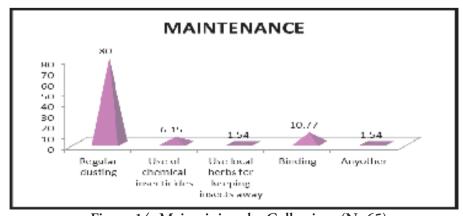
Figure 14: Maintaining the Collection. (N=65)

The above graph shows that the main part of (80%) Scholars maintain the collection by regular dusting, (10.77%) Scholars maintain by Binding, (6.15%) Scholars maintain by use of chemical Insecticides, (1.54%) Scholars maintain by Use local herbs for keeping insects away and similarly, (1.54%) Scholars maintain by any other method.

MAJOR FINDINGS:

♦ A total number of 100 questionnaires were distributed to the respondents, out of which 65 questionnaires were dully filled up by the respondents and were received back. The overall response is 65% i.e. N= 65.

♦ The majority of (69%) collection of the respondents include the Print collection than the Non-Print collection. Some of the respondent's don't keep count of their collections also.

♦ From the study it is observed that the type of materials mostly collected by the respondents are ranked as:-

- Books (49.23%) in first position

- Journals (15.38%) in second position

- DVD (12.32%) in third position

- Newspapers (9.23%) in fourth position

- CD-ROM (7.69%) in fifth position and finally,

- Magazines (6.15%) in sixth position.

♦ The Popular of respondents (41.53%) prefer to read in English. At the same time a very small number of respondents also prefer to read in the Assamese and Manipuri Language.

♦ From the analysis it is seen that about (46%) respondents use Steel almirah, (34%) of respondents use Wooden almirah, (14%) respondents use Open type wooden stack whereas very few (6%) respondents use any other type.

♦ From the graph it is examined that the procedure of acquiring personal collections by the respondents are ranked as:-

- Purchase (43.08%) in first position,

- Membership of Association/Organization (24.60%) in second position,

- Gifts (21.54%) in third position,

- Exchange (7.70%) in fourth position and lastly,

- Any other method (3.08%) in fifth position.

♦ It is seen that very few Scholars follow any system for arranging their collections. Here in Figure 10, it is found that majority of respondents arrange their collection Subject-wise (37%). The reason given for organizing collections Subject-wise is it is the easiest way of arranging within a short period as there is lack of time. Neither do they use any classification scheme for arranging their collections.

♦ A few of the respondents read daily (4.62%). Some read sometimes (18.46%) while the rest read often (76.92%) only. The reason for this is again lack of time but still in some way they manage a short time

for reading sometimes.

♦ Most of the respondents 93.85% wants to donate their collection to (School/College/University) library.

♦ Scholars get the damaged collections repaired (41.53%). Some give them away (24.61%), others sell them to secondhand (18.46%).

♦ Most of the Scholars maintain their collection by regular dusting.

SUGGESTIONS AND RECOMMENDATIONS

On the basis of the response and opinion given by the respondents following suggestions have been made, which will help the Scholars effectively manage their collections:

✦ They love to read and suggests young friends to develop with the habits of reading;

They consider library as a treasure of knowledge and information which should be preserved in a better way so that future generation can take the benefit of it to the fullest extent.;

Institutions/Schools should create reading interest among students of tender age. This will help in personal collection building, usage of documents;

Preservation can be achieved by digitizing existing collection;

For better preservation, regular taking care is needed so that insects and like other cannot damage the collections. Binding is also needed for some old collections;

Books are always best friends of people. Having a very good collection of books in our personal library means we are having best friends at our home;

Most of the Scholars are interested in collection of recent books/publications. But collection of rare books are very much required in the present day context, so that we shall be aware of our cultural heritage;

Larger floor space of the house is a precondition;

We should use our collections in a better way and keep them nicely. Every people have their own style;

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PROBLEMS AND PROSPECTS OF INSTITUTIONAL REPOSITORIES BY COLLEGES OF GUWAHATI CITY

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Abstract: In this digital era the institutional repositories are giving a catalytic force to the information services for the library users. The institutional repositories give a great effect to preservation of materials in digital format and resource sharing among the different libraries. If it proceeds in proper way then institutional repositories can change the scenario of the existing library service. In my study I am trying to find out the positive aspects of the institutional repositories by the different college library and trying to find out the problems of institutional repositories. My study will help in future to overcome the different problems of institutional repositories to give a better modern library service. Assam government is also giving financial assistant to the college libraries for institutional repositories. But still the project is success. My study will help government also to solve the problems and help to set up proper institutional repositories. My study will cover most of the renowned colleges of Guwahati city.

Keywords: - College Library, Digital Preservation, Institutional Repository

1. Introduction:-

Due to the massive change n information technology the library systems and services are also changed. Due to the explosion of information sources and the scarcity of space for the document, the library system got a new solution in terms of institutional repository. With the help of information repository we can preserve our document in digital format and also serve to the users in digital way. In each college have some unique documents which are using by the student in maximum numbers eg the college magazine, question papers, assignments, projects, lectures from experts, etc. this type of documents can be digitalize and serve for the users. If one college can update these documents in their web site the other college students also can access that information. Thus we can share the resources very easily. Hence we can say that institutional repository is giving the catalytic force to the digital preservation, information dissemination and resource sharing etc.

Now a day maximum academic institution generates information. But this information is used within that institution. Due to the institutional repository system this kind of information may be used by other user from outside the institution. The academic institution all over the world is experiencing the necessity of managing their education research and resources in a more effective and opens way. The repository system undergoes imports-exports identify, store, preserve, recover and export a set of digital objects, usually from a web portal. Academic libraries are currently at the interaction of three momentous changes in the world of scholarly communication. These are dramatic increase in the number of journal that are now available on the internet, the development of internet technology which has permitted and encouraged the democratization of knowledge and the means to make knowledge widely and cheaply available. The library in a sense, can now transform itself into a publishing and archival institution by

creating mechanism whereby information could be collected, organized, preserved and broadly disseminated outside the confines of the traditional publication format. One surest way by which the library could be this is through institutional repository.

1.1 Information repository:-

In the simplest sense of the term, an institutional repository is an electric archive of the scientific and scholarly output of an institution, stored in digital format, where search and recovery are allowed for its subsequent national or international use.

The institutional repositories are a means of scientific communication but it cannot be understood as a publication channel. It must be understood as a complement to the process of scientific publication formalized with peer review. The intellectual collection include the research output (article, theses, communication etc.) teaching learning materials, and administrative documents as well as these documents generated by the institution, all in various formats like texts, presentations, audio-visual records and e-learning objects.

An institutional repositories consists of formally organized and managed collection of digital content generated by faculty, staff, and students at an institution. Now a day's repository means many different technologies that support the storage and distribution of digital content, including:-

- Collection based digital repositories managed by library professionals, either stand-alone or aggregated.

- Course management system and associated file stores.

- Collection of research data and reports managed by academic departments.

- Student academic portfolio system

- Institutional file storage system. Etc

An institutional repository will be capable of indexing and serving a wide range of static and moving images, and will be seamlessly visible from course management systems, integrated library systems administrative work flow systems, and via-public portals.

2. Prospects of Institutional Repositories:-

Institutional Repositories gives a new dimension to the modern library service. It's playing a vital role in providing raw information to the library users in research field.

i)   Centralization and storage of all types of institutional output, including unpublished literature.

ii)   Storage and access to wide range of materials. Many authors lack time, resources or expertise to ensure preservation of their scholarly work. Research items get a permanent URL compared to personal or departmental web site.

iii) It can supports in learning teaching method by linking with the virtual teaching environment and library catalogues.

iv)   Due to institutional repositories the authors are able to receive and respond to commentary on pre-prints.

v)   Because of institutional repositories an institution can standardization of the records. They can compile the individual online dossiers linked to the full text of articles becomes possible.

vi)   Due to institutional repositories an institution has ability to keep track of and analyses research performance.

vii) Institutional repositories help the student by breaking down the publisher cost and permission barriers.

viii) Institutional repositories help the authors of particular information to know the value of his document by counting hit off on the information and helps in citation analysis.

ix) Institutional repositories open up the out puts of the particular institution to the world.

x)   Due to institutional repositories maximize the visibility and impact of the resources.

3. Objective of the study:-

After taking historical steps from Prime Minister of India, towards digital India, the institutional repositories have got its own value. To develop this IIT kharagpur, has managed a project of NDL (National Digital Library). To full fill this project they trying to connect all institutions under one umbrella. Institutions are having a good no of information sources without publication. Due to the institution repository this information gets its user.

To full fill goals of institutional repositories the government has providing fund to the colleges also. But still this is not properly done. It is not seen in all institution. My aim of the study is to find out the problem and tries to put some solution. So that an institution can overcome the problems and can take advantage of institutional repositories.

- To find out the current position os institutional repositories in colleges of Guwahati city.

- To find out the different reason of not full filling the institutional repositories among the college libraries of Guwahati city.

- To find out some solution to overcome the problem with institutional repositories.

4. Coverage Area-

Guwahati is an educational hub for entire north east region. It has all kind of academic institution in all field including universities. In my study I have taken almost all degree colleges including engineering and medical college locate in Guwahati city. My study will cover one private University also.

5. Data Collection From:-

Sl No	Name of the Institution	Year of Establishment	Total Books Collection(Approx)	Journal Collection	e-journal collection
1	Cotton College	1901	1,50,000	32	N-List
2	B Barooah College	1943	50,000	27	N-List
3	Pragjyotish College	1954	60,000	35	N-List
4	K C Das Commerce College	1983	15,000	21	N-List
5	Guwahati College	1964	35,000	20	N-List
6	R G Baruah College	1978	12,000	20	N-List
7	S B Deorah College	1984	15,500	17	N-List
8	L C B College	1971	20,000	28	N-List
9	North Guwahati College	1962	21,000	38	N-List
10	Handique Girls College	1949	50,000	31	N-List
11	Gauhati Commerce College	1962	30,000	24	N-List
12	Arjya Bidyapith College	1958	50,000	27	N-List
13	Assam Engineering College	1955	62,000	10	IEEE
14	Guwahati Medical College	1961	27,000	130	IMC, ICMR
15	Royal Global University	2009	23,000	28	DELNET

6. Data Analysis:-

6.1 IR Done by:-

From my study it found that some of the college is already started institutional repository by using d- space software. And some of the college is still progressing toward institutional repositories. The detail shown bellow in the tabular form:-

Table 2:- Status of the institutional repository by the colleges

Sl No	Name of the Institution	I R Done	I R Doing	Not Yet
1	Cotton College			√
2	B Barooah College			√
3	Pragjyotish College			√
4	K C Das Commerce College	√		
5	Guwahati College		√	
6	R G Baruah College			√
7	S B Deorah College		√	
8	L C B College		√	
9	North Guwahati College		√	
10	Handique Girls College		√	
11	Gauhati Commerce College			√
12	Arjya Bidyapith College	√		
13	Assam Engineering College			√
14	Guwahati Medical College		√	
15	Royal Global University			√
	Total	2 (13.33%)	6 (40%)	7 (46.67%)
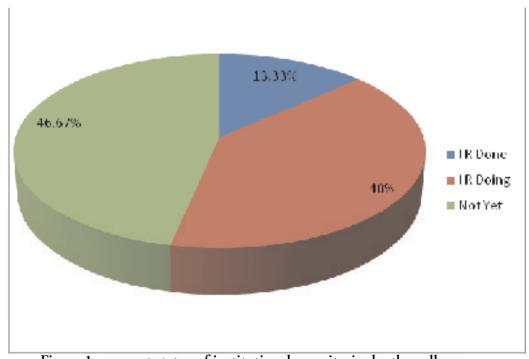
Figure 1:- current status of institutional repositories by the colleges

6.2 Digitalized Documents:-

For institutional repositories the libraries are digitalize some documents. Most of the libraries are digitalizing the documents which are mostly demanded by the users and not available in digital form. This kind of practice helps in preservation as well as information dissemination too.

Table 3:- Record of documents for repository.

Sl No	Name of the Institution	Rare Books	College Magazine	Question Paper	Faculties seminar paper	Study Materials	In House Publication	Other materials
1	K C Das Commerce College			√	√	√	√	
2	Guwahati College			√	√		√	
3	S B Deorah College			√	√		√	
4	L C B College			√	√		√	
5	North Guwahati College			√	√		√	
6	Handique Girls College			√	√		√	
7	Arjya Bidyapith College	√	√	√		√	√	
8	Guwahati Medical College	√		√	√	√	√	√
	Total	2	1	8	7	3	8	1
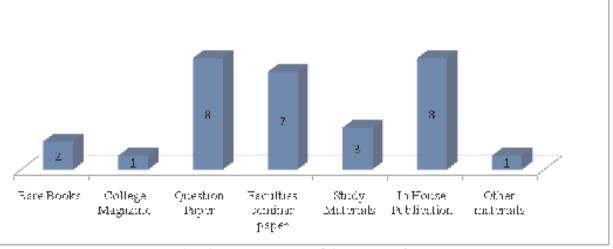
Figure 2:- graphical representation of documents for repository

From this graphic presentation it clear that all college is digitalizes their in-house publication and the old question papers. From the student point of view the old question paper are really maximum using documents. The demand of the old question papers is very high. Many times a library cannot full fill the requirement of question paper. If it is serve in digital format the library can provide information to each and every students. The colleges are having lot of important publication but those are not properly known to the students. But once it store in digital format it will easy to disseminate. Again one more important document comes from colleges that are the seminar papers written by the faculty members of the colleges. These papers are limited within the subject experts only. But if it published in digital form then it can be circulate among the students easily.

6.3 Problems in Institutional Repositories:-

Lack of technical staff: - During my study it has been found that almost all libraries facing problem with lack of technical staff. For proper functioning of institutional repository more than one technically qualified person required but maximum libraries are having only one supporting staff. Thus the librarians are facing lots of problems to execute the institutional repositories.

The details of staff structure of the colleges are given below:-

Table 4:- Records of staff detail

Sl No	Name of the Institution	No of technical staff (Including Librarian)	No of non-technical staff	Total staff
1	Cotton College	6	6	12
2	B Barooah College	2	4	6
3	Pragjyotish College	2	6	8
4	K C Das Commerce College	2	2	4
5	Guwahati College	1	2	3
6	R G Baruah College	1	1	2
7	S B Deorah College	1	2	3
8	L C B College	1	5	6
9	North Guwahati College	1	2	3
10	Handique Girls College	3	3	6
11	Gauhati Commerce College	2	4	6
12	Arjya Bidyapith College	2	2	4
13	Assam Engineering College	2	5	7
14	Guwahati Medical College	2	8	10
15	Royal Global University	3	1	4

6.4 Other problems: -

In my study some important problems has been found. Almost all librarians are facing problem with technical staff, but still they are having other important problem faced in proceed to institutional repositories. These are shown in table given below:-

Table 5:- Detail of problem faced by the institutions

	Problems	No of respondent
1	Lack of trained staff	15
2	Lack of interest of parent institution	09
3	Lake of interest from Libraries	01
4	Poor connection of internet	08
5	Lack of infrastructure in library	12
6	Lack of Fund	08
7	Due to policy regarding Copyright Act	13
8	Other reason	02
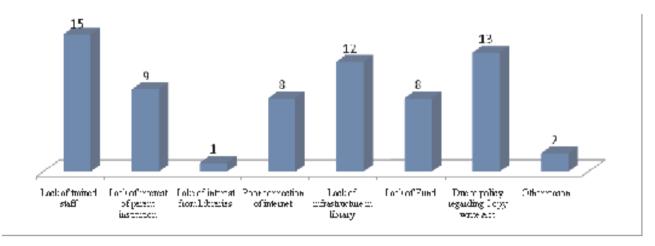
Figure 3:- Presentation of problems faced by the institutions

From my study it has been clear that due to some reason the institutional repositories are not properly working in the colleges of Guwahati. After problem with the technical staff the Next major problem is faced by the colleges with the policies on copyright act. Then the colleges face a problem with the lack of infrastructure in the library. Now government of Assam is working on it by providing fund for develop library infrastructure. Thus there are lots of problems faced by the college to run institutional repositories in college libraries.

7. Findings:-

After doing the study among the colleges of Guwahati city I have found some interesting facts related to the institutional repositories system. These are given bellow

1. Average numbers of college are now proceeds on institutional repositories.
2. All the colleges are using D-space for the institutional repositories.
3. Maximum numbers of colleges are digitalizing their in-house publication and old question papers.
4. The colleges are using institutional repositories as digital preservation of documents also.
5. The main problems of institutional repositories are found the lack of technical staff in the college libraries.
6. The poor internet connectivity is also one of the difficulties faced by the college libraries of Guwahati city.
7. The less infrastructure is also main problem in institutional repositories by the college libraries.
8. There is no proper policy for institutional repositories in respect of copyright act.
9. The good will from the parent organization is also one of the important factor to success the institutional repositories of college libraries of Assam.

8. Suggestion:-

After my study I have found some common problem faced by the colleges of Guwahati city for institutional repositories. By taking some positive steps we can overcome the problems and set up or can run smoothly the institutional repositories by college libraries of Guwahati. To solve these problems the governments of Assam should appoint more technical staff for the college libraries. Government provides funds to the college libraries but there are no observations on the spending of money. Government may make sure that all the money has properly used by the college or not. There is no clear cut policy on copyright act for the institutional repositories. So government should take some policy for which the digitalization of document makes easy for the libraries. Again the connectivity of internet should improve for which the

libraries can give better service to the user. At last the librarians should have some positive attitude towards full fill the institutional repositories by any means. Then only the institutional repositories by the colleges will success.

3. Conclusion:-

Institutional repositories are now an important part of library service. Due to the institutional repositories we can provide two major function of library, one is digital preservation another is information dissemination. Some problems are there to full fill the aim of institutional repositories by the college but those can be solve by combine efforts of form all sides. The government, the parent organization, the library professionals should work together to give better from the institutional repositories by the college libraries. Once institutional repositories work in proper direction with full value then it will give lots of benefits to the society. It is the best avenues which academic and research institutions utilise to make their research output widely available and accessible to interested users throughout the world. Unfortunately, academic and research institutions in developing countries are still struggling to overcome the many challenging issues in an attempt to make their research outputs openly accessible through open access institutional repositories. Due to the use of information technology the institutional repositories will get a new direction for better service.

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PROSPECT OF APPLICATION OF SOCIAL MEDIA TOOLS IN THE DISTRICT LIBRARY, GUWAHATI, KAMRUP: A USERS' STUDY

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Abstract

Public libraries are considered as people's university. It encompasses all as users irrespective of age, caste, community, gender, race, religion etc. Thus, a huge responsibility is always there on their shoulder to satisfy the large and diverse user community with modern technologies in this ICT era. ICT has given the advantage to the public libraries to get closer to their user community. Social media is one of the examples; application of social media in public libraries in western countries has been proved a tremendous effect in offering library services efficiently. It becomes similar to reference librarian now-a-days.

This paper is trying to focus on scope and prospect of use of social media in public library from users' point of view. Social media may help to build the relationship closer and stronger between library staff and user community. This study has been conducted among users of district libraries with taking some popularly used social media channels as example.

Keywords: ICT; social media; public library; district library

1. Introduction:

Today, Information and communication technology (ICT) has opened a door to the virtual world in front of us. Holding the hand of ICT, social media has been occupied a crucial place in people's life in such a way that it becomes part and parcel of our life. Almost all private and public departments have welcomed and taking advantages of social media in rendering their services. Now, we can get any update/information of our interest instantly just by liking a page, being a member of group or following an account on social media.

In this era of information explosion and ICT, Public library system in Assam is still in infant stage to adopt the new technologies in offering their services to the users. People become more aware/active now-a-days about what is happening around especially in the online world. Thus public libraries should take this advantage of virtual world in reaching their patrons. Since it consists of all categories of users, use of social media in our public libraries will help to reach the unreached more effectively and can plays an indispensable role towards a better society by bringing our youth back to the public library.

2. Objective of the study:

The main objective of this study is to know the possibility of application of social media tools in District Library, Kamrup. Large numbers of people of our society have been using smart phones and they are of course familiar to the social media tools. Now it is the time for public libraries how they can take this advantage in reaching and manage their users more easily and efficiently in this digital environment.

The study has been prepared with keeping in mind the following main objectives –

2.1 To explore the users' attitude towards the use of social media in district library.

2.2 To provide possible implication of social media for better library services.

2.3 To study the importance of social media to reach the public library patrons.

3. Area of the study:

The study only covers the users of District Library, Guwahati, Kamrup, Assam. It only considers the views and opinions of user community of district library regarding application of social media in District Library.

Also it only takes five social media tools which are used popularly these days. They are – Facebook, YouTube, Twitter, Instagram and Google+.

Social media tools with their description and date of launched

Table 1

Name	Description	Date of lunched	Active users as on 2016
Facebook	General, photos, videos, blogs, apps	February, 2004	1,650 million
YouTube	Video sharing	February, 2005. Owned by Google on November 2006	1 billion
Twitter	General, micro-blogging, RSS, updates	July, 2006	320 million
Instagram	Photo and video sharing	October, 2010. Acquired by Facebook in April, 2012	400 million
Google+	General	June, 2011	111 million

4. Methodology:

It is a survey based study done among users of District Library, Kamrup, Assam located near Dighali Pukhuri. More than fifty users visit the library daily.

Basically, questionnaire method has been used to collect the data for this study. As the study focused only on users, fifty questionnaires in two days were distributed among the different ages of users and later filled in questionnaires were collected from them one by one. In addition to that following are the sources that have been adopted for collecting data –

4.1 Consultation with senior library professional and staff of District Library.

4.2 Consulted some books and journals

4.3 Internet searching.

5. About District Library, Kamrup, Assam

In Assam, the British ruler was responsible for the establishment of public libraries at the district head quarters such as Victoria Hall at Dhubri, Holiday Hall at Nagaon, Curzon Hall at Guwahati etc. But the actual development of public library services in Assam started after independence with the acceptance by the State Government under the scheme entitled 'Improvement of Library Service' sponsored by Govt. of India under First Five Year Plan (1951-1956). Under this scheme, a State Central Library in Shillong, the then capital of Assam was established with Seven District Libraries at Guwahati, Nagaon, Jorhat, Dibrugarh, Tezpur, Dhubri and Silchar. Late Kumudeswar Barthakur, was an inspiring figure in the growth and development of library services in Assam. He was the main leader of public library movement in Assam. Under his leadership different libraries were established in different places of rural area of Assam.

The District Library, Guwahati was established in the year 1955-56 by the State Government. Initially it was started at Curzon Hall. Later in the year 1959 it was moved to its present place. In 1984, Govt. of Assam has created a separate Directorate for library services for the improvement of library services throughout Assam. At present the District Library and the office of the Directorate of Library Services are functioning from the same building near Dighali Pukhuri, Guwahati.

6. What is social media - definition:

According to Oxford Dictionary, social media is "websites and applications that enable users to create and share content or to participate in social networking."

Dictionary.com states social media as "websites and other online means of communication that are used by large groups of people to share information and to develop social and professional contacts"

Social media are computer-mediated tools that allow people, companies and other organizations to create, share, or exchange information, career interests, ideas, and pictures/videos in virtual communities and networks. The variety of stand-alone and built-in social media services currently available introduces challenges of definition; however, Wikipedia gives following some common features:

6.1 Social media are Web 2.0 Internet-based applications

6.2 User-generated content (UGC) such as text, digital photo or digital video posts are the lifeblood of the social media organism

6.3 Users create their own profiles for the website or app, which is designed and maintained by the social media organization and

6.4 Social media facilitate the development of online social networks by connecting a user's profile with those of other individuals and/or groups.

Thus, social media can be referred to as the way of communications among people in which they can create, share, and exchange information and ideas in virtual communities and networks. It is such a broad term that covers a large range of websites.

7. Social media and public libraries:

Social networking helps librarian to share information with patrons in the easiest way in digital environment. Librarian can use social media channels/tools in three broad activities in library and information services such as information communication, knowledge distribution and knowledge organization.

7.1 **Facebook:** popular social media site frequently used by students. Facebook is also very librarian friendly. Group communication among users can be possible in Facebook. A Facebook Page of a public library will always keep up to date about the library activities. Indian Library Association (ILA) and other academic libraries of Assam have Facebook Pages. There are also Facebook groups like DLISc Gauhati University, LIS Links India etc.

7.2 **YouTube:** library videos, tutorials, events and other videos can be uploaded to YouTube so that the user communities of public library services can be effectively promote and webcast through YouTube.

7.3 **Twitter:** can use Twitter, a micro blogging application, to keep staff and patrons updated on daily activities, like frequently updated collections, new arrivals and current content services of public library. In developed countries, almost all public libraries are very active on twitter. They keep their patrons update by regular tweeting.

7.4 **Instagram:** where a public library can share photos and videos of different activities instantly. Users can get in touch to all activities simply by following it. Users can also share experiences by uploading photos/videos.

7.5 **Google+:** Google+ can help to have circles among users of same interests. Public library can make an open community in Google+ to reach their users more easily. Assam Library Association (ALA), Central

Library, Tezpur University, IDOL Library has circles in Google+.

5. Analysis of the study:

The following figure clearly shows that most of the users of District Library fall between the age group of 26 to 45 years. Of this age group, a person may do their research work, job or other business activity after completing their formal higher studies. Their main purpose to visit the library is reading newspapers, different books of their interest etc.
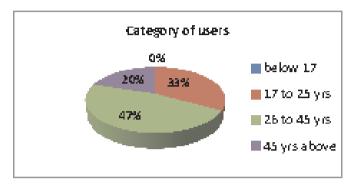
Fig.1

Thirty three percent of users are from 17 to 25 years age group. Mainly college/university students will fall into this category of user. Twenty percent covers the user category of 45 above years. There is no user of below 17 years. This category of users belongs to mainly school children. District library should take proper steps to bring these users to the library by building their children collections rich and up-to-date. Also by organizing different extension services/activities like exhibitions, talk show, quiz, exclusively for children will motivate these users to come into the library.

It was inquired from the respondents that what the purpose of social media usage should be in public libraries. Participants of the study strongly agreed that social media should be used for upgrade the library services and to build discussion groups and collaborative work. They were agreed that it should be used for to spread news and service alerts, to provide quick updates to online users and to push library news and press release among online users.
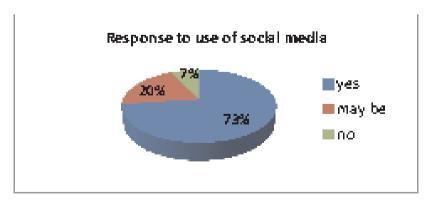
Fig. 2

It is seen in the Fig. 2 that maximum users i.e. seventy three percent of users would like to introduce the application of social media tools in District library. They agreed that social media will help to bring the user towards library more closely and directly. Only seven percent of users do not want it. On the other hand twenty percent of users have no idea whether social media tool should apply in the District Library or not.
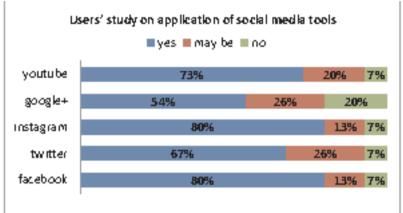
Fig.3

Users are very much optimistic on application of social media tools in the District Library for fast and direct release of information. Fig. 3 shows that eighty percent users want a facebook page, instagram photo/video of District library so that they do not miss a single update and can get any information instantly. More than seventy percent users find it useful to watch videos of different activities organized by District Library on youtube. Again, more than sixty percent users would love to get twitter feeds of any news on District Library. On the other hand, above fifty percentage users like to have in a circle of District Library's google+ account.

Thus it is clear that there is good opportunity to introduce social media tools in delivering library services in the District Library. It is also very necessary to the public libraries in Assam to adopt modern technologies to acquire more and more users so that they can achieve their very goal.

9. Suggestions:
Following are some reasonable recommendation for improved use of social media in public libraries so that it can approach its users instantly and more easily.

9.1 Keeping in view the importance of social media for rendering library services, internet service must be provided in the library in order to utilize social media tools.

9.2 District library should develop its full-fledged web site/webpage.

9.3 In competitive environment public libraries should employ social media to communicate the library objective and mission.

9.4 It is recommended that public libraries should provide their patrons with tools for accessing social media by developing social media page on library web site.

9.5 Facebook is much popular among teens; it is recommended that all public libraries should develop their Facebook page. It would keep the library fresh in teen's minds.

9.6 Public library staff must be educated and trained in using social media tools for providing library services.

9.7 Library associations and LIS institutions should play their role in popularizing the use of social media among LIS professionals.

9.8 Future research should be conducted to investigate the use of different social media among students and general public.

2. Conclusion:

In conclusion, it is observed that use of social media tools in the public libraries can bring the users more closely into the library. Now-a-days, people feel more comfortable stuff which is instantly accessible. They need everything instantly. Therefore, public library should build the environment by own because now library should approach to users first. Social media tools are the best for this purpose and librarian is the social administrator.

This paper has simply tried to examine the concept of social media and its invaluable importance of utilizing it in library services to both the librarians and the users. Social media can be a good platform for public library system in Assam to gather new users. It can be a great opportunity for the public library staff to make use of it in the libraries and compel people to come to the public library instead of shopping mall, park, restaurant etc. Social media has greater affect on youth and youth are the future of our society, of our country. As a social organization, public libraries play a vital role towards the social responsibilities. By using social media tools in rendering library services, it can encourage and create reading habits among the users especially of our youth and lead them to the right path to be a good human being.

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PRESENT SCENARIO OF PUBLIC LIBRARY AND APPLICATION OF ICT IN BTAD AREAS

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ABSTRACT:

This study has been carried out to know the present position of the public library in BTAD areas. We have covered four districts under the Bodoland Territorial Council. Public library is the local gateway of knowledge, hence in BTAD areas how it's taken an important role to disseminate the information for user. In this study, we have prepared a well structured questionnaire to collecting the data from the various libraries. In this study, we cover all the district library of BTAD area for finding out the changing situation of the library viz, Bodoland Central Library and the 4 District Library of the 4 District- Kokrajhar, Chirang, Baksa and Udalguri. The sub divisional and rural Libraries were left from the survey. From the study we are able to show clear cut position of the development of public library in BTAD areas. How much govt have given interest to develop the public library in BTAD areas.

Keywords: Public library, ICT application, Development/public library.

1.INTRODUCTION:

Library is the only effective repository of our culture heritages. It has been referred as "the mind of society". Public library is a social agency by providing and servicing man's graphic records for enlarging the mind and dispelling ignorance and prejudice.

Library is a social institution with the advancement of civilized literate society. The library has acquired a key position as the indispensable institution for equipping the people both literate and illiterate with necessary accumulated knowledge.

The public library, the local gateway to knowledge, provides a basic condition for lifelong learning, independent decision-making and cultural development of the individual and social group.

A public library is the place where each and every member of a society is served by informational documents of their needs. The library has been considered as "Temple of knowledge". However democracy gave birth to modern public library. It is the backbone of national harmony intended to serve the information and educational needs of adults, children, women, blind, sick and handicapped in brief of all without any discrimination of cast and creed.

2. OBJECTIVE OF THE STUDY:-

a) To find out the total library system in BTAD area including organizational pattern, qualities and quantities of the library.

b) To find out historical development of books, journal along with the development of the library in the BTAD area.

c) To find out major impediments in having comprehensive library network in the area.

d) To find out the changing trend of public library in BTAD area.

e) Providing opportunities for the creative development.

F) To find out the application of ICT in public library in BTAD area

3. METHODOLOGY:-

The methodology and technique for conducting the survey is Literature Search Method, discussion with professional and Questionnaire Method. It was prepared on the basis of guidance and surveyed to different librarian in charge .On the basis of data and information collected the analysis were made under different headings.

It is hoped that the present study will through light in understanding the total public library system in BTAD, its services and role to the community.

4. LITERATURE SEARCH:-

Literature search is an important area to carry out any research work successful. Different types of documents ranging from periodical publications of different organization to books by various authors have been searched. It is also important in order to be aware of finding of different aspects involved.

5. PUBLIC LIBRARY IN BTAD AREA:-

Library services in the Bodoland Territorial Areas District (BTAD) is all set to cover maximum areas in both rural and urban areas so as to raise the standard of reading habit and to bring books to the doors of scores of people. In the present juncture of militancy, alcoholism, poverty and superstitious belief among a large section of society, the need of library services is the need of the hour for developing reading culture for their transformation.

There are many public library established in BTAD area. These libraries were playing the important role in gathering, storing and disseminating information. A public library is available for use to all who are capable of using it. This feature makes it different from other libraries. They are:-

Tabel 1: List public library

SL No.	Name of the library	Address
1	Bodoland Central Library	Dimalgaon, BTAD, Kokrajhar pin- 783370 Assam.
2	District Library, Kokrajhar	Dimalgaon, BTAD, Kokrajhar Pin- 783370 Assam.
3	District Library, Chirang	Kajalgaon BTAD, Chirang Pin- 783385 Assam
4	District Library, Baksha	Musalpur, BTAD, Baksa
5	District Library, Udalguri	Ambikagiri Path, Ward 1, BTAD, Udalguri Assam
6	SDL, Gossaigaon.	Gossaigaon, BTAD, Kokrajhar Assam.
7	MRL, Kokrajhar	Daudani Club, Debargaon, BTAD, Kokrajhar.
8	SDL, Tamulpur.	Tamulpur, BTAD, Baksa
9	MRL , patkijuli	P O. Patkijuli, BTAD, Baksa
10	Model Rural Library, Chirang	Hasrobari PO- Ballamguri BTAD, Chirang
11	MRL, Borobazar	Borobazr, PO. Dolakati, Rowta, BTAD, Udalguri.

SDL: Sub Division Library; MRL: Modal Rural Library

Among the library I have got respond Questionnaire from 1Central library and '4' District Library and rest of the library i couldn't found any respond. .

6. Timing of the library:

The timing of the above all given libraries is Mon- Friday :10am to 5pm ;Sunday all the library remain closed.

7. No of Staff in the library:-

In a library the Staff, the book and the readers made up the fundamental trinity of a library. The success of a library depends upon the people who are responsible for the effective use of the good collection.

SL No	Name of the Library	Professionals	Semi Professionals	Non Professionals
1	BCL, Library	2	0	3
2	DL,kokrajhar	2	0	2
3	DL, Chirang	1	0	3
4	DL, Baksa	1	0	4
5	DL,Udalguri	1	0	6

Table 3:Staff position of Public library in BTAD

From the above staff table it has been seen that there is no semi professionals' staff accept kokrajhar District library. As district library the professional staffs is very low. Every library has required professional staff.

8. System of Access:-

Closed access of library means the user were not allowed to go direct to the stack. Open access means the user are allowed to go directly to stack and search according to his will.

Serial No.	Name of the Library	Closed	Open
1	Bodoland Central Library		√
2	District Library, Kokrajhar		√
3	District Library, Chirang		√
4	District Library, Baksa		√
5	District Library, Udalguri		√

Table 4 Access system

From the above chart the Bodoland central library and the 4 district library have Open access

9.Automation Status:

Library automation means the use of IT in managing the whole library system. All the works were done through computer, not manually.

Serial no.	Name of the Library	Automated	Semi automated	Non automated
1	Bodoland Central Library			√
2	District library, Kokrajhar			√
3	District Library, Chirang			√
4	District Library, Baksa			√
5	District Library, Udalguri			√

Table 5 Library automation status

From the above chart we came to know that all the library were non automated. All the works were done manually.

10.Classification schemes:-

Classification schemes are used by the library to arrange the documents into manageable form. Different library used different classification schemes.

Table 6: Status of Classification scheme

Serial No.	Name of the Library	DDC	CC	UDC	Non
1	Bodoland Central library	√			
2	District Library, Kokrajhar	√			
3	District Library, Chirang	√			
4	District Library, Baksa	√			
5	District Library, Udalguri				√

Form the above Chart Bodoland Central library, District Library (Kokrajhar), District Library(Chirang), Districts Library(Baksa) were using DDC classification schemes.

11. Library accommodation:-

Library building is a place where different types and forms of documents are stored. It is also called warehouse for books, a workshop for reader, business home for staff.

Serial No.	Name of the library	Separate Building	Combine Building
1	Bodoland Central library	√	
2	District Library, kokrajhar	√	
3	District Library, Chirang		√
4	District Library, Baksa		√
5	District Library, Udalguri		√

Table 7:Library accommodation status

From the above chart we came to know that all these above libraries do not have their separate library. a land has been grant for the library, but there is lack of proper separate building

12.Sections in the library:-

There were different sections present in the library. All he section serves different services, Children section is meant for children. It present, colorful book, comics, drawing books, puzzles etc. Reference section gives reference services. It presents Encyclopedia, gazetteers, Dictionary etc. In a same way manuscript section has all collection of manuscript, periodicals section has journals, magazines etc

Serial No.	Name of the library	Children Section	Reference section	Manuscript section	Periodicals section	Back volume section
1	Bodoland Central library	√	√		√	
2	District Library, kokrajhar		√		√	
3	District Library, Chirang	√	√		√	
4	District Library, Baksa		√		√	
5	District Library, Udalguri	√	√		√	

Table 8 Status of library section

From the above chart Bodoland Central Library has Children section, Reference section and Periodicals section. Kokrajhar District Library has Reference section, periodicals section and back volume section. Chirang District Library has Children section, Reference section and Periodicals section. Baksa District Library has Reference section and Periodical section. In Udalguri District Library Children Section, reference section and Periodical section.

13.Library collection:-

Library Collections means the documents print and non print materials present in the library. Without library collection library is just a four wall building. A good library collection helps in proper education and retrieval system of information.

13.1 Books collection:-

Serial No.	Name of the library	Total no of Books
1	Bodoland Central library	39657
2	DL, kokrajhar	69021
3	District Library, Chirang	3529
4	District Library, Baksa	3350
5	District Library, Udalguri	6000

Table 9: Books collection status

From the above analysis we can say that Bodoland central Library has 3965. In Kokrajhar District Library there is 69201.In Chirang District library there is 3529. In Baksa district library there is 3350.In Udalguri District library there is 6000.

13.2 Journals, Newspaper collection:-

Serial no.	Name of the Library	Journals	Newspaper
1	Bodoland Central library	6	4
2	District Library, Kokrajhar	5	4
3	District Library, Chirang	4	4
4	District Library, Baksa	5	5
5	District Library, Udalguri	7	4

Table 10: Journals and newspaper collection status

From the above chart we came to know that Bodoland Central Library subscribe to 6 journals and 4 newspapers. Kokrajhar District Library subscribe to 5 journals and 4 newspapers. Chirang District library subscribe to 4 journal and 4 newspapers. Baksa District Library subscribe to 5 journals and 5 newspapers. And Udalguri District Library subscribe to 7 journals and 4 newspapers.

14. Total no. of Library user Per day:-

Without user the library is just a ware house or a store house of the documents. There were different types of user who need different documents for different purpose.

Serial No.	Name of the Library	No. of user per day
1	Bodoland Central library	25 persons
2	District Library, Kokrajhar	39 persons
3	District Library, Chirang	18 persons
4	District Library, Baksa	30 persons
5	District Library, Udalguri	10 persons

Table 11: Library user status

From the above chart it is stated that in Bodoland central library the total no. of user per-day were 25.

In Kokrajhar district library the total no. of user per-day were 39. In Chirang district library the total no. of user per-day were 18. In Baksa district library the total no. of user per-day were 30. And in Udalguri district library the total no. of the user per-day were 10.

16. Catalogue card present in the library:-

Serial No.	Name of the Library	Yes	No
1	Bodoland Central library		√
2	District Library, Kokrajhar		√
3	District Library, Chirang	√	
4	District Library, Baksa		√
5	District Library, Udalguri		√

Table 13:Catalogue status of the library

In the above chart we came to know that, Chirang district library has only Proper Catalogue card. Other 4 library has no catalogue card.

17.Library software:-

Library software is needed for maintenance and housekeeping of the different section of the library. In the libraries of BTAD area there is no library software used till date.

18. Services of the library:-

Library is considered an essential part of the community served by it. A library plays an important role in the community by providing variety of services.

Serial No.	Name of the library	References services	Internet services	Reprography services	Mobile library services
1	BCL, library	√	----	√	√
2	DL, Kokrajhar	√	----	√	√
3	DL,, Chirang	√	----	√	√
4	DL, Baksa	√	----	---	----
5	DL, Udalguri	√	----	---	----

Table 14: Library services status

From the above chart the Services that present in the library are shown. Bodoland central library provides reference and mobile library services.Kokrajhar district library provides reference services and mobile library services. Chirang district library provides reference services, reprography services and mobile library services. Baksa district library provides only reference service and Udalguri district library also provide reference services.

19. Sources of earning of the library:

In a library system, some library was run by government, some by non government organization like private institution, NGO's.

Serial no.	Name of the library	Government	Non Government
1	Bodoland Central library	√	
2	District Library, Kokrajhar	√	
3	District Library, Chirang	√	
4	District Library, Baksa	√	
5	District Library, Udalguri	√	

Table 15: library earning sources status

From the above chart it is clear that the sources of earning of the library are government.

20. Library Budget, with session:-

The library budget is prepared centrally in the Bodoland Central Library. No independent budget is allotted to the public library of BTAD area. The CHD, Bodoland central library prepared the budget for the required documents and the needed documents were transferred to the library according to their respective demands.

This Budget is for library planning purpose and Fixed Pay salary.

21. Housekeeping by computer:-

Library housekeeping is essential for maintaining and preserving the collection, whether they are rare documents or a new book. Maintaining a clean environment in the library is good for patron as well as

Serial no.	Name of the Library	Yes	No
1	Bodoland Central library	√	
2	District Library, Kokrajhar	√	
3	District Library, Chirang		√
4	District Library, Baksa		√
5	District Library, Udalguri		√

Table 17:Use of computer status for housekeeping operation

From the above chart it is stated that in Bodoland central library housekeeping is done through computer. The rest of the library's housekeeping is not done through computer.

22.No. of Computer for the Users:

Serial No.	Name of the Library	No. of computers
1	Bodoland Central library	2
2	District Library, Kokrajhar	2
3	District Library, Chirang	2
4	District Library, Baksa	0
5	District Library, Udalguri	3

From the above chart it is stated that Bodoland central library has 15 computers for the user but these computer is not in services, Kokrajhar District library has no computer for the user. Chirang District library has 2 computers for the user, but there is no internet connectivity in the computer. Baksa district library has no computer. And Udalguri District Library has 3 computers for the user.

23. ROLE OF BTC IN DEVELOPMENT OF LIBRARY:-

The CHD cum assistant Director of Library Services has formulated various schemes for uplifting the services by upgrading the existing sub-divisional libraries and rural libraries in each gaon panchayat, by purchase of books, construction of library buildings, installation of internet connection, etc.The expansion project of library services was taken up under plan and two district libraries, two sub-divisional libraries, one children library, one reference and research library, one science technology library and 24 rural libraries are to be set up in BTAD.Under the 12th Finance Central Government scheme the rural library will be put into operation from this current month to create revolution in library services by reaching the remotest areas where most of the people were deprived of accessing books for their reading.The construction work of four rural libraries with attached auditorium each in all the four districts are also in full swing under the scheme. Meanwhile, the auditorium will be opened for public meeting, drama, theatre and other functions which will be locally organized with a nominal rent for revenue collection.

The Bodoland Territorial Council's department of library services has launched a mobile rural library to cater to the grassroots level and build up a sound network. It has also set up a central library in Kokrajhar town. The mobile library flagged off by BTC chief Hagrama Mohilary at Debargaon locality of the town amid a huge gathering of students, teachers and local residents and also inaugurated the Bodoland Central Library at the Directorate of Library Service Office there. The mobile library will travel to the remote areas of the four districts of the Bodoland Territorial Areas District (BTAD) with over 200 books, which will be issued for a 45-day period. The central library is equipped with Internet facilities to cater to readers, comprising students, research scholars, et al. The BTC chief urged students to make the best use of the facilities and inculcate the reading habit.

The libraries, including the central library and four rural library buildings, have been constructed with assistance from the 12th Finance Commission. The model rural libraries at Patkijuli (Baksa), Ballamguri (Chirang) and Boro Bazar (Udalguri) were established. Singha Ram Boro, BTC executive member and the in-charge of the library service department, said there was a need to develop the library infrastructure to raise the standard of reading habits in the rural and urban areas. "We are hopeful that the mobile library will help the rural populace inculcate good reading habits," he said. "We also hope that the central library will help students and research scholars,"

24.LIMITATION IN DEVELOPMENT OF THE LIBRARY:-

The goal of the BTC is the rapid economic, educational, agricultural and socio-culture development of the region and protection and promotion of the ethnic identity. Various schemes were formulated for the development of library services and improving reading habits of the local people. But it has faced certain limitation in conducting the services.

Certain limitations are:-

a) Political clash among different communities.

b) No enough help from the State government and Central government.

c) No Proper accommodation for the library building.

d) Lack of IT infrastructure in the Library.

e) Lack of enough fund.

25. SUGGESTION:-

The public library aims to impart formal and non formal education to all the section of the society. It impart education to the people for shaping themselves to be self governing, well informed, generous, tolerant, good parliamentarian. It is a community based center for Information Culture and communication mechanism through which all human relation are developed and exist in space and time.

The public library should cater to the needs of all the section of the people of the society with equality for which the book are centralized.

- Public library can maintain peace and harmony through establishing dynamic services as per universe of reader demand.

- The public library should be restructuring in this changing society for the purpose that government could give potential and sincere attention to rethink the issues.

- Since the world is changing in the 21st century, the library is also going to be changed. With the Proliferation of IT , the library services of the BTAD area should also be modernized with the new technology.

- A library is cultural as well information policy for the upliftment of the society. Each library should open culture and information center attached to it for access.

- Recognizing the great majority of the population is still rural in BTAD area. There is a need to provide information and library services to the rural areas and need of address to the rural community.

- Government should give pioneer status to new publisher who are willing to produce books reflecting the culture in the local languages of BTAD area.

- The no. of library should be increased and improved the library system with the goal reaching.

- Library legislation has to be enacted in BTAD area. This will be an obligatory function of the BTC and state government to established more rural and sub divisional libraries to cover different region of the area.

- Last but not the least, all the public library in BTAD area are running the services in rented house. A proper library building is needed with required necessities.

26.CONCLUSION:-

Public library serves general public comprising children, housewives, businessmen, professionals, student, teacher etc. the public library is mainly used for recreation, information and education. Various person of the society coming to public library are in need of different services.

Public library in BTAD area is serving the people to find out the needs and interest of the user community. Local peoples like teacher, student, children, old age, research scholars etc were the user of that public library. Public library tries to cater the need of the society and its people for an healthy entertainment, for the use of their leisure time.

There must be legislation based network of urban and rural library system in order to create a knowledge based society in BTAD area.

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PERSONAL LIBRARIES OF LEGAL PRACTITIONERS IN GUWAHATI: A STUDY

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Abstract: *Legal Practitioners end up with a book collection. They collect books out of sheer love of reading and for preparing their court cases. They collect variety of law books which then go on to form their private library. This study tried to find out the issue connected with the private libraries of Legal Practitioners in Guwahati, Assam, India. The result, though sketchy, show among other things, that most Guwahati Legal Practitioners do possess personal libraries, do always read and prepare their cases what is on their shelves; but do not really follow any system in organizing their collection.*

Keywords: Personal Library, Legal Practitioners, Law, Collection Development

1. Introduction

Personal library is that library maintained by one particular individual in his own way. Maximum literate people have the habit of collecting book since their early age. The role of personal library in the development of reading habit is a significant one because the reading habit of a person starts at the early stage at their home.

Legal studies in law have been one of the important disciplines from ancient times. Jurisprudence plays a great role in administration of justice in the society. The English proverb "Ignorance of Law is no excuse", is wisely implemented through the whole world. So, a little knowledge about a legal system is a common thing for a layman to live a proper life. Due to the increasing opportunities in the legal profession many graduates are coming for legal education. As a result, there has been mushroom growth of personal law libraries throughout the country.

2. Objectives of the Study

Following are the objectives of the present study

i. To identify the personal libraries of legal practitioners in Guwahati

ii. To study the collection and organization of personal libraries of legal practitioners in Guwahati.

iii. To suggest some methods for organizing, managing and information retrieval of their collection.

3. Significance of the Study

The study is an initiative to bring the status of personal libraries of the legal practitioners in front of the LIS (Library & Information Science) domain. The study helps the legal practitioners to know how their libraries are managed. Moreover, the study has also through light on different difficulties faced by the Legal Practitioners for information retrieval.

4. Methodology

The methodology used for the present study is questionnaire-based survey and through personal interview with the legal practitioners of Guwahati. To collect the necessary information seventy (70) questionnaires were prepared and distributed among the legal practitioners in Guwahati city.

5. Analysis and Interpretation of Data

For the present study the researcher has surveyed seventy (70) private libraries of legal practitioners of Guwahati and collected the information through a structured questionnaire and the collected data are tabulated and analyzed.

Table: 1: Category of Court of the Legal Practitioners

Category of Court	No. of Responses	%
CJM Court	26	37.14
District Court	34	48.57
High court	66	94.28
Any Other Court	21	30.00

Interpretation: From the above table it is seen that maximum number of Legal Practitioners i.e. 94.28 % where found to practice in Guwahati High Court. Whereas only 30% of the Legal Practitioners where found to practice in Other Courts such as Supreme Court, Central Administrative Tribunal, Motor Accidental Tribunal, Debt Recovery Tribunal, CBI Court.

Table: 2:   Cases Handled by the Legal Practitioners

Category of Cases	No. of Responses	%
Civil Case	50	71.42
Criminal Case	63	90.00
Consumer Case	28	40.00
Reference Case	13	18.57
Arbitration Case	25	35.71
Administrative Case	22	31.42
Revenue Case	27	38.57
Company Case	19	27.14
Writ Petition	49	70.00

Interpretation: The above table shows that 90% of the Legal Practitioners in Guwahati are found to handle Criminal Case. 71.42% of the Legal Practitioners are found to deal with Civil Case, whereas only 18.57% of the Legal Practitioners are found to handle Reference Cases.

Table: 3: Total Collection

Collection Type	No. of Collection			
	500-1000	1000-5000	5000-15000	15000+
Books	32	27	05	06
Indian Journals	31	22	09	08
Foreign Journals	-	-	-	-

Interpretation: Analysis shows that 32 (45.71%) of the Legal practitioners have total collection of books in between 500-1000, whereas only 05 (7.14%) of the Legal Practitioners have total collection of books in between 5000-15000. Again 31 (44.28%) of the Legal Practitioners have total collection of Indian journals in between 500- 1000, whereas only 08 (11.42%) of the Legal practitioners have a total collection of Indian journals more than fifteen thousand.

Table: 4: Collections of Indian Journals

Name of journals	Availability	%
Administrative Tribunal Case	04	05.71
All India Reporter	54	77.14
Consumer Protection Reporter	02	02.85
Corporate Law Adviser	02	02.85
Commonwealth Human Rights Law Digest	-	-
Criminal Law Journal	18	25.71
Guwahati Law Report	62	88.57
Indian Social-Legal Journal	01	01.42
Journal of Indian Law Institute	-	-
Parliament Digest	05	07.14
Supreme Court Cases	56	80.00
Supreme Court Reports	42	60.00
The Guwahati Law Times	58	82.85
Vidhi Bharti	-	-

Interpretation: Analysis shows that maximum numbers of Legal Practitioners in Guwahati are found to use Guwahati Law Report i.e. 88.57% in their library. 82.85% are found to use The Guwahati Law Times in their library. 80% of the Legal Practitioners are found to use Supreme Court Cases.

Table: 5: Mode of Collection

Acquiring of the Collection	No. of Responses	%
Purchase	68	97.14
Exchange	02	2.85
Gift	01	1.42
Membership of Organization	03	4.28
Any Other Methods	-	-

Interpretation: Five options were framed under this in order to know how Legal Practitioners acquire books. The above table shows that majority (97.14%) of the Legal Practitioners acquire books through purchase; 2.85% of the Legal Practitioners acquire the books through exchange; 1.42% acquire through gift whereas 4.28% responded they acquire the books through membership of organization.

Table: 6: Places of Acquisition

Place	No. of Responses	%
Local Shops	68	97.14
Book Fairs	38	54.28
Online	19	27.14
Any Other	06	8.57

Interpretation: From the above table it is seen that 97.14% of Legal Practitioners buy books from Local Shops; 54.28% of the Legal Practitioners buy books from Book fairs, 27.14% of the Legal Practitioners also buy from online book stores and 08.57% of the Legal Practitioners buy books from different places whenever they have time.

Table: 7: Separate Room for Library

Separate room	No. of Response	%
Yes	22	31.42
No	48	68.57

Interpretation: Analysis shows that 31.42% of Legal Practitioners have a separate room for book collection. Whereas 68.57% of the respondents does not have separate room for keeping books

Table: 8: Types of Shelves used for Library

Type of Shelves	No. of Responses	%
Wooden	28	40.00
Steel	12	17.14
Both	30	42.85

Interpretation: Analysis shows that 40% of the respondents use wooden shelves. 17.14% of the Legal Practitioners use steel shelves for keeping their books whereas 42.85% of the Legal Practitioners responded that they use both wooden and steel shelves for keeping their books.

Table: 9: Arrangement of the Case Files / Records

Arrangement	No. of 'Responses	%
Court Dairy	49	70.00
Serial Number Wise	60	85.71
Court Name	55	78.57
Name of the Parties	54	77.14
Name of the Advocate	43	61.42

Interpretation: Analysis shows that 70% of the Legal Practitioners arrange their records in Court Dairy, whereas 85.71% of the Legal Practitioners put Serial Number for arranging their records.78.57% of the Legal Practitioners provide Court Name in their records. 77.14% of the Legal Practitioners write name of the Parties in their case files and 61.42% of the Legal Practitioners write the name of the Advocate for arranging their records.

Table: 10: Access of Information

Information	No. of Responses	%
Manually	56	80.00
Through Computer	14	20.00

Interpretation: From the above table it is seen that 80% of the Legal Practitioners are found to access their information manually, whereas 20% of the Legal Practitioners are found to access their information through computer.

Table: 11:   Resource Sharing

Resource sharing	No. of Responses	%
Yes	20	28.57
No	50	71.42

Interpretation: The above table shows that 28.57% of the Legal Practitioners share their personal collection with other through mutual agreement while 71.42% Legal Practitioners do not share their personal collection with others.

Table: 12: Damaged Books

Action on Damaged Books	No. of responses	%
Get Them Repaired	51	72.85
Gave Them Away	03	4.28
Sell Them Second hand	-	-
Throw Them away	04	5.71
Preserve Them	43	61.42
Any Other	01	1.42

Interpretation: Analysis shows that, 72.85% of the Legal Practitioners repair books that are damaged. 04.28% of the Legal Practitioners gave the damaged books away. 05.71% of the Legal Practitioners throw the damaged books away. 61.42% of the Legal Practitioners are found to preserve the damaged books and 01.42% of the Legal Practitioners deal in other ways with the damaged books.

1. Suggestions

· The importance of library for the legal practitioners is very high, so the legal practitioners can adopt certain computerization tools for maintaining index file such as author wise, title wise, etc, but it will be helpful for them if they use Open Source Software's like E-granthalaya, Koha, etc for their library management.

· The legal practitioners can have separate room for their library collection.

· The legal practitioners can follow some preservation techniques for maintaining their collection such as use of naphthalene, use of neem leaf.

· Since it is the personal library which is meant for the legal practitioners, therefore they can maintain some quality standard in relation to furniture.

· It is not possible for the legal practitioners to buy all types of documents. So, a Common Catalogue of the legal practitioner's library will give an opportunity to share their resources. For that they should develop certain mutual understanding strategy.

2. Conclusion

Majority of the personal libraries of the legal practitioners in Guwahati have a good collection of legal resources mainly in printed form. But the major drawbacks of the personal libraries of legal practitioners are their proper organization of the resources. All of them are using their own system of document arrangement. Though most of the legal practitioners are not so serious about the organization of library in a scientific

way due to lack of proper library management, but still a section of legal practitioners are found to be really interested in modernizing their services within their personal libraries and eager to reorganize their libraries including adoption of Information and Communication Technology (ICT). The personal libraries of legal practitioners in Guwahati are appeared not fit to accept modern challenges of law literature and information service. There is enough scope for modernization of personal library of the legal practitioners in Guwahati so that they can be benefited by sharing the resources of their libraries.

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PRESERVING DOCUMENTS IN DIGITAL ENVIRONMENT WITH A STUDY ON CENTRAL LIBRARY, TEZPUR UNIVERSITY

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Abstract: Digital environment is a place made through the use of one or more computers. In digital environment, the resource of the library is converting from analog to digital form or collected digital document. Documents present in libraries lost their permanency in the effect of various physical, biological and chemical factors and are prone to decay if proper care and handling have not been taken regularly. Preservation primarily consists of protecting the items from all kinds of human and natural enemies placing them in some safe place. This paper deals with the preservation of library documents available in digital environment, digital preservation and advantages of digital preservation. A study has been made in the Central Library of Tezpur University in the preservation aspects.

1. Introduction

Digital environment is a place made through the use of one or more computers. In libraries digital environment is a concept as today's libraries routinely provide information and services in digital form. Digital information resources are highly volatile, their content is changeable, and their boundaries are unclear. But in addition to the volatility of its individual components, the digital environment is the subject of rapid change. New technologies and formats come along and make older one obsolete and unusable. In digital environment, the resource of the library is converting from analog to digital form or collected digital document.

The primary functions of the libraries, irrespective of their types are: to collect, to organize, to disseminate and to preserve documents of various types. Documents present in libraries lost their permanency in the effect of various physical, biological and chemical factors and are prone to decay if proper care and handling have not been taken regularly. Preservation primarily consists of protecting the items from all kinds of human and natural enemies placing them in some safe containers. Preservation in the age of digitization implies for preservation practice of the digitization of books and other library documents. Today preservation works within an environment of digital technologies, organizations, digital content and tools to find out and use digital information. The information environment is now borderless. Most web pages are not stand alone publications. They form part of a chain of linked information resources, that are stored on separate servers scattered around the web. Digital resources resist the attempt to package them neatly within defined boundaries. Along with physical collections, libraries now deal with virtual collection composed of links to external information resources. The digital environment makes it possible for libraries to create virtual collections of information for our users. The contents of those collections may be stored through web.

Digital preservation includes a wide range of activities like, storage to transformation methods of keeping digital material alive into future and controlling the environment and conditioning to maintain

an object as nearly the original as possible in an unchanging state. Digital preservation aims to ensure the longevity of electronic documents. Digital preservation concerns two types of documents like born digital documents and digitally created documents. Born digital documents include electronic records and digitally created documents include the documents transform from analog to digital form through some reproductive means like scanning

2. Digital documents

Digital resources refer to any resource, which is in digitized form i.e. which can be read and scanned by means of electronic media. Digital documents of libraries can be divided into two types— one is born digital documents and other is converted to digital documents.

Born digital: -Documents which are created or generated in digital form are called born digital. Born digital documents are available in the following form—— E-Databases, Software, Movies, Audio& Video, E-Books, E-Periodicals, Art photographs and other born digital materials. Websites, forums, wikis etc are example of media originated in the networked world, so they are born digital; they are created in a digital environment.

Converted to digital: - Documents those are converted from printed to digital objects are known as converted to digital document. Converted to digital document means the documents which are analog material text, they are converted to digital form for preservation. E-Books, E-Periodical, online- newspaper, web comics, internet disseminated TV shows and other digitized materials etc are examples of converted digital material.

3. Preservation requirements

Digital preservation or digital archiving is to ensure the long term access to the digital documents. The digital preservation is more complex as one has to take care of many aspects of the documents such as physical preservation, content preservation, presentation format, functionality, authenticity, preserve context etc. The digital technology as well as other technologies like internet, Web technologies are continuously changing due to up gradating of software and hardware proliferation of standards and protocols for file formats and network interfaces, storage media and devices etc. therefore following aspects should be taken care to overcome techno obsolesce. [Anil Dhiman and Yasoda Rani (2004). Library Management: A manual for effective management. New Delhi: Ess Ess Publication, pp.370-376] stated the following aspects required for digital preservation.
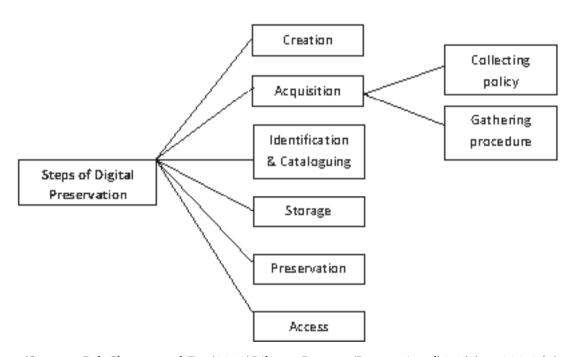
(i) Integrity of object: -   The boundaries of digital objects are less clear, especially if they are compound objects created by assembling different media or by linking to resources from around a network.

(ii) Physical Preservation: - Physical preservation includes the computer files and the binary digits which are the basis of a digital object.

(iii) Content Preservation: - Maintaining the ability to access the content at its lowest level, such as ASCII text, without the embellishments of font variations and layout features.

(iv) Presentation Format: - In many types of digital documents like SGML, XML, PDF etc. cifications are separate from the content. To retain the original look of a document, these layout specifications must also be preserved.

(v) Functionality: - Digital objects contain multimedia components exist in hyper text format.

(vi) Authenticity: - Activities to guard authenticity include securing digital objects against unauthorized

changes and monitoring digital objects through multiple copying cycles to ensure that each copy is an acceptable one.

(vii)Preserve context: - Preserving digital objects may mean weaning them from some technical dependencies, changing the mode of distribution and linkages to other digital objects.

Digital preservation is preserving the digital medium that holds the digital information by storing it in the correct environment and following agreed storage and handling procedures; copying the digital information into newer, fresher media before the old media deteriorates. It includes everything from electronic publications from on CD-ROM to online database and collections of experimental data in digital format maintains the ability to display, retrieve and use digital collections in the face of rapidly changing technological and organizational infrastructures elements. Increasing quantities of information sources are stored in such a manner that they are rapidly accessible to users i.e. in CD's, on internet/WWW etc.

Digital preservation applies to documents that are either born digital and stored online or on CDROM, diskettes, DVD, or other physical carriers. Digital documents whether born digital or converted to digital form are threatened by technology obsolescence and physical deterioration.

(Source- Pal, Sharma and De (2012)Library Progress(International)3 2(2)pp 233-242)

(i) Creation: - Creation of digital information is the act of producing the information by human author and publishes through satellite via internet.

(ii) Acquisition: - Collection policy and gathering procedures are the two main aspects of acquisition. Most of the digital materials could be archived from the internet, so guidelines are needed to tailor the general practices. Gathering the relevant internet based information by hand selected and automatic.

(iii) Identification and Cataloguing: - Identification and Cataloguing allow the archiving organization to manage the digital objects over time. Cataloguing and identification practices are related to what is being archived and the resources available for managing and archive.

(iv) Storage: - Storage is treated as a secondary nature in digital archiving, but storage media and formats have changed with legacy information perhaps lost forever. To control the changing storage media is migration to new storage system.

(v) Preservation: - Preservation is the aspect or archival management that preserves the content as well as the look and feel of the digital object.

(VI) Access- Successful practices must have the capacity to access easily and must have rights management and security requirements over the long-term.

5. Digital preservation

The digital technology as well as other technologies such as internet and web technologies are continuously changing due to up gradations of software and hardware, proliferation of standards and protocols for file formats, network interfaces, storage media and devices etc. As a result, technological obsolescence occurs. So, usability and functionality should be studied properly. To ensure long term access, continuous reviewing of digital resources should be done and obsolete information and invalid websites should be weeding out. Digital preservation involves copying the digital information into newer media before the old media become so obsolete that the data cannot be accessed.

Migration: - Migration means transferring of data to newer system environments. It covers a range of activities to periodically copy, convert or transfer digital information from a medium to a newer one. It can be conversion of resources from one format to another. E.g. conversion of Microsoft word to PDF or operating system / HP based to Sun based system or one language to another as C to JAVA. It is aimed at the digital object itself; change the object in such a way that software and hardware developments will not affect its availability. It involves change in the configuration of the underlying data, without change in their intellectual content. To achieve an effective data migration procedure, data on the old system is mapped to the new system providing a design for data extraction and data loading. After loading into the new system, results are subjected to data verification to determine whether data was accurately translated, is complete, supports processes in the new system.

(a) Digital media migration: - Life of digital media is generally less than few years. So innovations in the technology have produced high capacity digital media, they are replaced by better ones within a few years.

(b) Refreshing Digital Media: - Refreshing digital media is the creation of perfect replica of original document without changing the format or a single bit of the content onto CD-ROMs and DVDs. Refreshing focuses on the changing of one physical storage media to avoid the physical decay or the obsolescence of that medium.

(c) Migration to other digital media: - Migration to other digital media means data are copied onto media of different kinds like from a tape to a DVD.

(d) Migration to non-digital media: - Copying digital information to non-digital media is one of the most common and widely used strategies for long-term preservation.

(e) Migration to another format: - A transformation that converts data from one format to another format tries to preserve logical structure, security, formatting and other properties of the original document.

Emulation: - Emulation is the process of recreation of the hardware and software environment required to access a resource and of bringing digital objects back to life in their original environment on top of a different computer environment. It aims to reproduce the functionality of original hardware as closely as possible. It keeps the source digital object in its original data format but recreates some or all of the processes enabling the performance secrets on current computers. Emulation aims to preserve the original look feel can be preserved as possible. Emulation tries to avoid the problem of technological obsolescence of hardware and software by developing techniques for imitating obsolete systems on future generation's computers. Emulate applications, emulate operating systems, emulate hardware platforms or emulate combination of all are the options of emulation.

Main advantages of emulation are that it guarantees the authenticity of digital documents as bit stream of original document will never be modified and different types of document formats supports without conversion to new or any other formats.

Refreshing: - Refreshing is the transfer of data between two types of the same storage medium. It is a preventive care to control aging and decay that make storage medium unreliable. Refreshing is a preventive care to control aging and decay that make storage medium unreliable. The document to be copied may be analogue or digital.eg. Transferring an MP3 from a hard drive to CD. Refreshing is necessary because the determination of physical medium. It emphasizes on changes or alteration of data as copying a group of files from CDROM to DVDs.

Replication: - Creating duplicate copies of data on one or more systems is called replication. This strategy involves preserving an original application program, operating system software, and hardware platform. Data that exists as a single copy in only one location is highly more risky to software and hardware failure, intentional or accidental alteration and environmental disaster like fire, flooding etc. Digital data is likely to survive if it is replicated in several locations.

6. Advantages

Today is the day of information explosion. The needs of users are changing and they want readymade information. Increasing quantities of information sources are stored in readily accessible storage media like CD's, internet/WWW etc. But over a period of time, these types of storage media can also get damaged. So, proper preservation of digitized information is very much essential. Recent innovation in information and networking technology, digital preservation has the following advantages briefly-

(i) Materials can be made available to users at any time.

(ii) Different approaches for searching possible

(iii) Helps in preserving the look and feel of original record.

(iv) Global access to information.

7. Storage media for preservation of digital documents

There are various storage media for preservation of digital documents, out of which magnetic media, optical media and networking media are major media. Magnetic media includes floppy disk, tape systems, hard drives etc. They all rely on magnetic particles in the recording substrate that change direction in the presence of magnetic field. Types of storage media for preservation of digital documents can be stated following ways:-

(i) Microform Media- (a) Microfilming (b) Microfiche

(ii) Magnetic media (a) Hard disk (b) Floppy Disk (c) Cartridge Tape Disk

(iii) Optical Media - CD/DVD

(iv)Networking Media — Internet is a cheap and economical media for preservation of information for longer and worldwide use .There are three important ways, namely Bulletin Board Website, Portal being used for preservation and Dissemination of information worldwide for networking media.

8. Care and preservation of digital storage media

Media deterioration is one of the main aspects of preservation challenge. The first product in optical storage of information is CD-ROM.CD-RW, DVD-ROM; DVD-RW etc are example of digital storage media. CDs and DVDs have become popular formats for the recording and storing of all types of digital content. To keep the medium of storage in a condition as near as to the original is the main challenge of preservation.The life expectancy of optical discs depends on many factors; some may be controlled by the user or others not.

Factors affected life expectancy of disks include the following-

- Type
- Manufacturing quality
- Condition of the disc before recording
- Quality of the disc recording
- Handling and maintenance
- Environmental conditions

CDs or DVDs are of three different types like ROM, R/W and DVDs. All of them use different data layer and these data layers are degraded and the discs are deteriorate. Environmental factors can affect the rate of disc degradation. Physical mishandling of the disc is usually the cause of polycarbonate layer damage. The polycarbonate may also flex or bend if stored for a long period of time in a non vertical position.

Appropriate temperature, safe handling, and right furniture for storage, use and reuse with compatible machines, careful handling in transportation, are some of the important factors to be taken into consideration while storing the magnetic media. In case of CD-ROMS, factors like irreversible loss of formatting and data are to be taken care for library safe storage.

The following table shows the recommended storage parameter from different sources.

(**Source:** Jyoti Misra (2010) Conservation and Preservation techniques: A hand book for librarians, Lucknow: New Royal Book Co.pp166)

Source	Media	Temperature	Maximum Temp. Gradient	Relative Humidity (RH)	Maximum RH Gradient
ISO TC 171/SC Jan. 2002	CD-R CD-ROM	+5° c-20°C (41° F-68° F)	4°C/hr (7°F/hr)	30%-50%	10%/hr
National Archives of Australia, April 1999	CDs	18°C-20°C (64°F-68°F)		45%-50%	10%/24hrs
National Library of Canada 1996	CDs	15°C-20°C (15°F-68°F)	2°C/24hrs (0°F/24hrs)	25%-45%	5%/24hrs
Library Technical Report Nov.-Dec. 1997	CDs	-10°C-50°C (10°F-122°F)		10%-90%	
DVD Demystified, 2nd Ed. Jim Taylor, 2001	DVD-R DVD-Rom	-20°C-50°C (-4°F-122°F)	15°C/hr (27°F/hr)	5%-90%	10%/hr
	DVD-RAM	-10°C-50°C (10°F-122°F)	10°C/hr (18°F/hr)	3%-85%	10%/hr
	DVD+RW	-10°C-55°C (14°F-131°F)	15°C/hr (27°F/hr)	3%-90%	10%/hr
IT9.25 and ISO18925 Feb. 2002	CDs DVDs	-10°C-23°C (14°F-73°F)		20%-50%	Cycling no. greater than ±10%

9. Challenges for preserving Digitized information sources

The basic challenge, preserving electronic document or digital objects, arises from the nature of the objects themselves. Unlike non-digital materials digital objects are accessible only by using a combination of computer hardware and software. Such hardware and software can become obsolete with new technology. Therefore, ensuring ongoing access requires synchronization with technology changes and moving digital objects from obsolete to current file formats, storage media, operating systems and so on. Library professionals are facing various challenges in preservation of digital documents. They are-

(a) Obsolescence: -The biggest challenge faced by the librarians in managing and preservation of digital documents is that technology obsolescence as technology is changing continually.

(b) Increasing complexity of digital objects, incorporating text, images, audio, video in various formats and their increasing software dependence.

(c) Copyright/ intellectual property rights need consideration in digitizing existing information source materials.

(d) Use of different formats which make interoperability and seamless access important issues.

(e) Unstable storage media, whose life span is limited and data recovery from it, is uncertain.

10. A Study on Central Library of Tezpur University

A study has been made in the Central library of Tezpur University for getting knowledge about preservation aspects. Central Library of Tezpur University was established in the year 1994, along with the establishment of the university. The total collection of the library is 101777 including print books and journal, thesis and dissertation, e-journals, Databases etc. The following table states different types of materials available in the Central library of Tezpur University.

1.	Books	77286
2.	Print journal	180
3.	Back volumes	7848
4.	Thesis	489
5.	Dissertations	1025
6.	E-journal	11958
7.	Databases	46
8.	CD-Rom	2286
9.	VCD	81
10.	VHS Cassettes	36
11.	E-Book	500
12.	Newspaper/ Magazine	10
13.	Manuscripts	32
	Total	101777

From the above table, we get the information that Tezpur University has total collection101777, out of which 86828 print collection, 32 manuscripts and others are electronic collection. The university has developed their digital collection by converting their theses and dissertation into digitized form along with the e- journals and e-books.

Preservation in the Tezpur university library:-

All the furniture used in the library is 100% metallic. The library currently doesn't have a formal digital preservation policy. The digital records are stored on CD—Rom, DVD, hard disk of computer with back up and as part of a digital preservation repository system. They handled the digital records when they first come into the library by checking the viruses.

Thus, the Central Library of Tezpur University is preserving their resources for our posterity.

11 Conclusion: - User's expectations are changed in digital environment- first of all users want seamless

access to information. Secondly, users searching information not limited to textual materials but to other non-textual resources like image & data are also want to retrieve regardless of its level of granularity. Users want to get their information on web and also the users want information without delaying its publication. To meet the demand of users, libraries are operating in an environment of rapid change with a capability of rapid response. The digital environment makes it possible for libraries to create virtual collections of information for our users. The contents of those collections may be stored in many servers connected through web.

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PERCEPTION OF THE INSTITUTIONAL REPOSITORIES (IR) IN THE ACADEMIC CIRCLE: A CASE STUDY OF SOME OF THE LIBRARIES IN ASSAM

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Abstract: The research paper focuses on the perception of the Institutional Repositories in the Academic Circle in Assam. It focuses on the perception and expectations of the Research Scholars and Faculty members on the need of Institutional Repository in order to archive their research output for future use. At the same time the paper also brings to light some of the drawbacks of the IR, but, nevertheless, it emphasizes on the fact that there is a need of the IR in Universities and Academic Institutions and almost 88% of the respondents have consented in this regard. For the study, data has been collected using questionnaire method from different academic institutions which have begun to maintain the Institutional Repositories recently.

Keywords: Institutional Repositories (IR), Research Scholars, Faculty, Open Access, Assam

1.INTRODUCTION

With growing times there arouse a sense of dissatisfaction amongst readers and authors regarding the traditional publishing models. And this has encouraged to a great extent experimentations with different models. Besides, some important issues have come together to enable this, namely increasing subscription costs of journals, financial crunch, objections to subscriptions restricting access to publicly funded research, technology of the internet which allows information to be disseminate widely and cheaply.

Although the concept of Open Access can be found in the distant past, it is in the recent years that there has been an explosion of interest in Open Access publishing. The aim of such a move is to make research literature, especially peer-reviewed academic articles free and easily accessible for anyone in the world from anywhere. Amongst the various new technologies that Library and Information Science has been using its recent experimentation in the form of Institutional Repositories (IR) is worth of attention.

An Institutional Repository (IR) is a digital archive consisting of accessible collections of scholarly work that represent the institutional capital of an institution. It is a means for the institutions to manage the digital scholarship that their communities produce, maximize access to research outputs both before and after publication and also to increase the visibility and academic prestige of both the institutions and the authors as well. Institutional Repositories are digital collections of the outputs created within a university or research organization. They are established or maintained to provide open access to the institution's research output. In the face of rising cost, financial crunch, explosion of information and rapid changes of ICT university/institutions are moving towards the development of IR. Still the development of IR remains in the planning stages and has yet to be fully realized.

The present study is concerned with the activities of an IR in some of the libraries in Assam which is a means to preserve and disseminate research materials. In this regard, the paper tries to highlight the manner in which concerned faculty members and research scholars have received the open access publishing and Institutional Repositories.

2. SCOPE OF THE STUDY:

Although there are quite a number of university libraries and Research Institutions in Assam, given the limited time and space we have limited our study amidst a few major Universities and Research Institutions/ Organizations which have recently started using/maintaing the Institutional Repositories.

Table 1: List of the Institutions

Sl.No	Institutions	URL
01	Gauhati University	http://www.gauhati.ac.in
02	Institute of Advanced Study in Science and Technology, Guwahati	http://www.dst.gov.in
03	Indian Institute of Technology, Guwahati	http://www.iitg.ernet.in
04	Tezpur Central University, Tezpur	http://tezu.earnet.in
05	Assam University, Silchar	www.asu.ac.in
06	Dibrugarh University, Dibrugarh	www.dibru.ac.in

3. METHODOLOGY

Questionnaire method has been used for this study and collect data has been collected from Research Scholars and Faculty members serving at various academic and research organizations maintaining institutional repositories. Due to poor response, we have switched to email questionnaire, SMS and telephonic conversation. An interview was also conducted with some selected researchers about the IR and how it has been helpful in academics and thus to the society. The collected data has been analyzed with the help of simple tables, graphs, diagrams and percentage method.

4. OBJECTIVES:

The objective of the paper is to:

1. To find out the reception and perception of the research scholars and faculty on the use, development and implementation on Institutional Repository.
2. To find out the expectation and opinion on the mandate of archiving the research output.
3. To investigate the perceptions, expectations on the IR by the authors.
4. To find out the observation of research scholars and faculty on policy framework of Institutional Repository in the form or manner of self-archiving.
5. To find out the perception of Research Scholars and faculty on policy to support Open Access.

5. REVIEW LITERATURE:

Various sources have been reviewed, some of them are as: Prosser (2003) highlights the benefits of an Institutional Repository as under:

The Institutional Repository model provides a means for Universities/institutes to create archives and make available their research output. It allows individuals scholars to self-archive their own material. For the academic scholars, the Institutional Repository acts as a central archive for their work, representing a nutshell that provides a complete list of their research over the years. Because it is Open access, it increases the dissemination and impact of their work. For universities it acts to preserve their knowledge. It increases their visibility and prestige, and can act as an advertisement for funding sources and industrial sponsors. For knowledge society it provides access to the world's research and ensures the long term preservation of

research.

Krishnamurthy and Kemparaju (2011) conducted study on development of Institutional Repositories in India and found that 25 institutes in India Developed and maintain the IR, used DSpace software and only three institutes used e-prints. These Repositories contain research publications, conference papers, conference proceedings, theses and dissertations related to the subject scope of their organization. Majority of the repositories studied covered collections of diverse types and most of these collections have unique content.

National Knowledge Commission (NKC) on "Open Access and Open Educational Resources recommended the increase of Open Access content from India and to increase the public awareness and utilisation of OA material' (National Knowledge Commission, 2007).

6. Need of IR:

It is the age of information technology. So for a more convenient, easy and faster dissemination/access of research work that requires less or no space, IR has been globally acceptable by the users community. From the preservation point of view it is essential for the future generation. However, the IR is not without shortcomings or drawbacks. Some challenges or shortcomings of IR are:

There remains a fear that others might copy the work without the permission of the author, since the copyright is no longer possessed by him/her.

There also remains the risk that the Repository would have low prestige.

Again there are possibilities that the publishers would not let the author put his/her work in IR.

There may also remain a confusion on the point of how and what to deposit/preserve.

Again the fear that the work might not be preserved in the long run remains.

Another drawback is that the process involves no peer review process.

7. SOME IMPORTANT INSTITUTIONAL REPOSITORIES IN INDIA:

1. Bhagirathi
2. Digital Knowledge Repository of Central Drug Research Institute, Lucknow
3. Digital Repository of National Centre for Radio Astrophysics
4. DigitalRepository of the Raman Research Institute
5. Digital Repository Service of National Institute of Oceanography
6. DSpace at Guru Gobind Singh Indraprastha University (GGSIPU)
7. DSpace at Indian Institute of Management Kozhikode
8. DSpace at Institute of Mathematical Sciences (IMSC)
9. DSpace at Inter-University Centre for Astronomy and Astrophysics (IUCAA)
10. DSpace at Sri DharmasthalaManjunatheshwara College of Engineering and Technology (SDMCET)
11. Dyuthi Digital Repository of Cochin University of Science and Technology
12. Electronic Theses and Dissertations of University of Agricultural Sciences (USA) Dharwad ePrints at Central Marine Fisheries Research Institute   (CMFRI)
13. ePrint at Dr. Mohan's Diabetes Specialities Centre (MDRF)
14. ePrint at Indian Institute of Technology Delhi (IIT) Delhi
15. ePrint at School of Biotechnology Madurai Kamaraj University
16. Etheses- A Saurashtra University Library Service
17. Ethesis at National Institute of Technology Rourkela (NITR)
18. Indian Institute of Petroleum Institutional Repository
19. Information and Library Network Centre's Institutional Repository

20. International Crops Research Institute for the Semi-Arid Tropics Open Access Repository
21. Knowledge Repository Open Network
22. KR at Central Institute of Medicinal and Aromatic Plants (CIMAP)
23. Librarian's Digital Library
24. Mahatma Gandhi University Open Theses Library
25. National Center for Antarctic Research
26. National Institute of Technology Rourkela Digital Archive
27. National Science Digital Library
28. NISCAIR Online Periodicals Repository
29. North-Eastern Hill University Digital Library
30. Open Access Digital Repository of Indian Institute of Astrophysics
31. OpenMED at National Informatics Centre (NIC)
32. Shodhganga at Information and Library Network (INFLIBNET)
33. Vidya Prasarak Mandal

8. DATA ANALYSIS AND INTERPRETATION:

The analysis of the study has been divided into two parts. The reception including the perception and

8.1. PERCEPTION OF REASERCHERS

Table 2.

SL. No	Statements	Agree	Disagree	Neutral	No Remarks
01	Archival of Research output in the repository	140	10	15	5
02	Policy to support Open Access	154	6	5	10
03	Development and Implementation Of IR	118	12	30	10
04	Access to citation	110	10	40	10
05	Publications in Journals	135	05	20	10
06	Flexibility in the IR Policy framework	126	14	20	10
07	Indicator of academic quality	150	16	04	0

Statement 1 display that respondent 140 (82.35%) respondent agreed that the research output need to be archived in the repository for wider use across the world; 10(5.88%) disagreed the same and 15 remained Neutral. Large numbers of respondents agreed that institutes should initiate the Institutional archives and proactive action should be taken to deposit the research material in it.
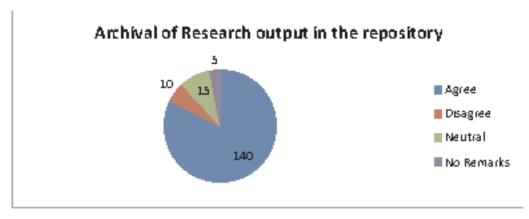
Fig 1: Statement 1

Statement 2 display that 154 (90.58%) respondents conserved that institutions should have a clear policy to support the open access system, 6(3.52%) objected it and 5 remained neutral about it. The guidelines for open access to be followed have to be mentioned clearly and the responsibilities should be described properly. Each institutions should define the policies dealing with the access to and use of materials.
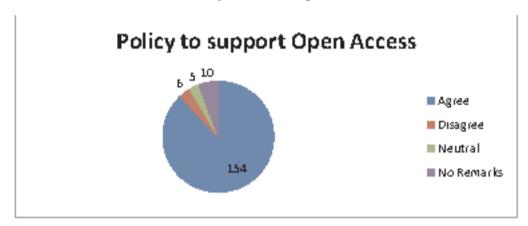
Fig 2: Statement 2

Statement 3 display that 138(69.41%) respondents stated that institutional archives have been set up in the institutions are good sign for the academic and research.12(7.05%) respondent opposed it, 10 respondents pose as neutral and 10 respondents didn't give any remark. Therefore, development of IR has become a necessity to reveal the researchers output for which Library and information professional have to take keen interest
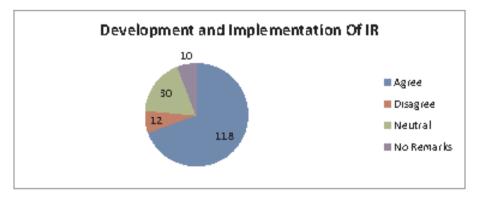
Fig 3: Statement 3

Statement 4 display that 110 (64.70%)respondent agreed that Institutional Repositories are making the scholarly output accessible to all users, and the articles are cited through which the authors are benefited in a different way. 40 (23.52%) disagreed about the statement. 10 respondents have no remarks about it.
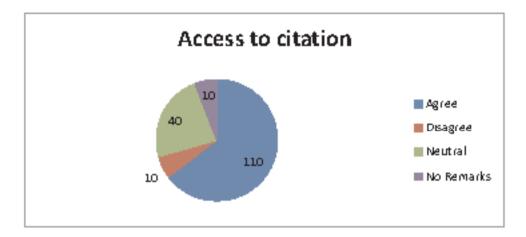
Fig 4: Statement 4

Statement 5 displayed that 135 (79.41%) respondents agreed from both the academic institutions and research organizations that journals publications carry more reputation than open access; 05 (2.94%) respondents disagreed with the statement and 20 respondent remained neutral and 10 respondents didn't give any remark. It is found that majority of the respondents agreed that printed material will always prime source of information. Open access to scientific journal is compatible with all the major advantages of traditional journals.
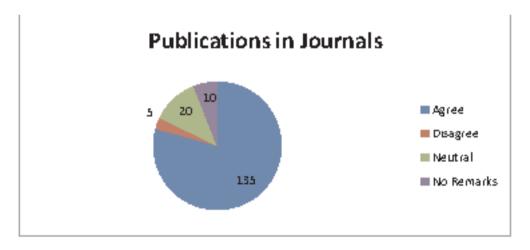
Fig 5: Statement 5

Statement 6 reveal that 126(74.11%) respondents opined that flexibility is important while framing the policy for the Institutional Repository, 14(8.23%) respondents disagree and 20 respondents remained neutral and 10 did not give any remark. The IR policy should be flexible so that the institution will be able to update and modify the digital contents. It preserves the contents for a long time.
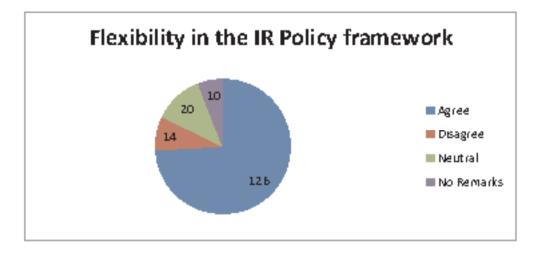
Fig 6: Statement 6

Statement 7 point out that 150 (88.23%) respondents agreed that IR is indicator of an organization, by capturing, preserving and disseminating an institution's collective intellectual capital. It serves as a meaningful indicator of academic quality; 16(9.41%) respondents disagreed and 04 respondents replied that they can't comment on it. It showcases the capability of the researchers and their contribution in their particular field. It enhances the visibility and prestige of the institute.
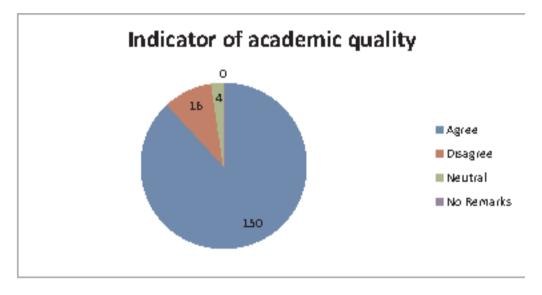
Fig 7: Statement 7

8.2. EXPECTATIONS OF THE RESEARCHERS:

Table 3.

	Statements	Agree	Disagree	Neutral	No remark
01	Institutions clear policy for supporting the Open Access	130	15	20	05
02	Mandating the self archival policy	145	15	5	5
03	Concerned that if I deposit my work in the university repository I may not be able to publish it elsewhere	152	8	5	5
04	No peer review process	156	08	2	4

Statement 1 of the table 3 point out that 130 (76.47%) respondents said that institutes should maintain the process to archive the scholarly outcome in the repository for open access; 15 (8.8%) respondents disagree the same, 25 respondents said that they have no remark about it.
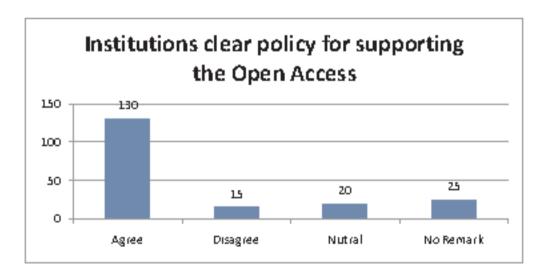
Fig 8: Statement 1

Statement 2 of the table 3. reveal that 140(82.35%) respondents agreed that institute should make it mandatory to have mandating the self archival policy. 15(8.8%) respondents disagreed the same. A huge member of researchers felt that institute should exploit their research impact and set an example for the rest of the globe by adopting a self archiving cell.
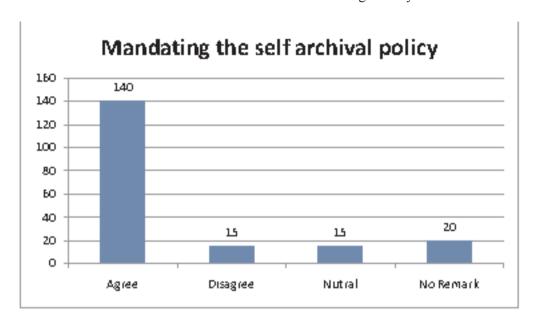
Fig 9: Statement 2

Statement 3 of the table 3 shows that 150 (88.23%) respondents fear on IR, that they would lost their right. 10(5.88%) respondents rejected it. 20 respondents replied as no remark.
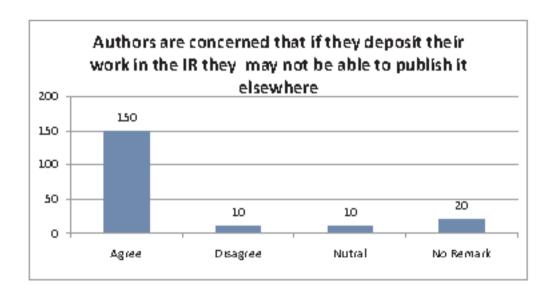
Fig 10: Statement 3

Statement 4 of the table 3 display that 156 (91.76%) respondents agreed that no peer review process on Institutional Repositories and they believe it not to be a good sign for the research activities. 08 (4.70) respondents rejected it and 16 respondents remained indifferent about it.
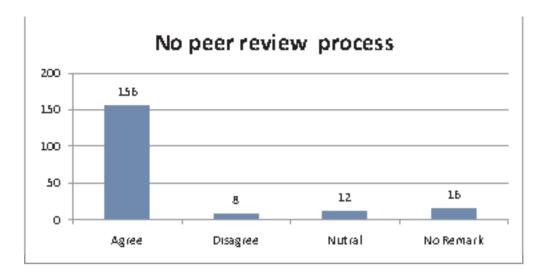
Fig 11: Statement 4

9. FINDINGS AND SUMMARY OF THE STUDY:

82.35% respondent agreed that institutions and universities need to implement a mandatory policy to archive their scholarly outputs. It has been observed that repositories provide services to faculty. Researchers and administrators who want to archive their research and creative materials should be allowed to do so.

90.58% respondents agreed that there should be proper policy to support open access in respective Institutions and Universities.

69.41% respondents said that every academic and research institutions should develop and maintain the IR for preserving the knowledge for society.

64.70% respondent believed that accessing citation is more important for the wider accessibility of publications.

79.41% respondents strongly believed that publishing in journals is still as important as earlier days; 2.9% reacted negatively.

74.41% respondent agreed that there should be flexibility in the policy structure of IR. Every organization should have an apparent policy for uploading, modifying and accessing the research contents. There should not be any protocols regarding the archiving of research materials and other publications.

88.23% respondents of the survey strongly agreed that IR showcases the intellectual output of an organization. It enhances the visibility and prestige of the organizations.

Large number of respondent strongly believed that the self archival policy should also be mandated. As the library professionals are involved to update the research outcome so also the scholars and faculty members should be allowed to do the same.

10. CONCLUSION:

The IR helps in acquiring, preserving and providing institutional intellectual assets to the wider community, thereby enhancing and encouraging research. The priority today dictates the use of IR with a view to curb the duplication in research work, ensure quick, timely and pin-pointed access of information, propagate

resource-sharing and end the problem of space. Its effectiveness can be strengthened further by way of integrating it with existing programme of the academic institutions. The IR process has proven itself to be of immense help to students, research scholars and the teaching faculty. It has opened the gate for old as well as new users to the library facilities and information services extensively as per their requirement.

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RANKING OF INDIAN INSTITUTES OF MANAGEMENT (IIMS) WEBSITES ON THE BASIS OF WEB IMPACT FACTOR: A WEBOMETRIC ANALYSIS

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ABSTRACT

In the present digital era, web became the master source of information and plays an important role in its dissemination because people became more webs centric to find their information. The present study is to rank the websites of Indian Institutes of Management (IIMs) on the basis of their Web Impact Factor (WIF) calculation, the survey was conducted for all IIMs websites for five rounds having the gap of fifteen days in each round. Search engine "Google" has been found suitable for the survey due to its capability to support webometrics search expressions. After analysis it was found that IIM Lucknow was ranked first among all IIMs with total impact factor 7.2.

Keywords: Link analysis, Web impact factor, URL analysis, Webometric, IIMs, Websites etc.

INTRODUCTION

The internet and websites became one of the most popular communication tools to the world in the age of Information and Communication Technology (ICT). The World Wide Web (www) which is the most popular part of the Internet is the result of the project initiated by CERN High Energy Physics Lab in Switzerland in 1990 for allowing the researchers to share information with each other. The internet has made it available to individuals all the information globally at just one click. So, there is an extreme need for developing and updating the websites. The development of technology has made a tremendous change in every sphere of life. So, there is always a need of developing the libraries to cope up with the pace of time. In the present era, people prefer browsing websites and collecting all the necessary information at one time rather than visiting physically, which is yet time saving too. Henceforth, the responsibility of website developer has become more important in updating the correct data so that it could reach in every nook and corner of the world.

Web resources are apple of information professional's eye due to its value added services to meet their current and diversified information needs. In the WWW, the web pages are the entities of information, with hyperlinks from them acting as citations. Quantitative analysis on the WWW is being carried out in the same way, as is tradition in citation databases. As information on Web increases towards entropy, it is needed to apply some theory/ metrics (measurement) to develop new methods, modeling techniques and metaphors to examine this emerging complex network.

Ranking of websites come under webometrics study and one can observe that how users actually react and use specific web document. The web is beyond control in growth, which means opportunities exist where good system architecture and diligent analysis can be applied for everyone's benefit. On the

basis ofthe study and conception, the definition of webometric is given, "the webometric study is basedon quantitative measurement – indirectly includes the qualitative aspect also of structure, use ofinformation resources and technologies on WWW drawing on bibliometric and infometricapproach" (Goswami, 2007).

WEBOMETRIC: OVERVIEW

Webometric is a scientific discipline that studies the quantitative aspects of information sources and their use. In other words, webometric try to measure the World Wide Web, analyses technology usage and allows us a simple content analysis.

The science of webometrics (also cybermetrics) tries to measure the World Wide Web to get knowledge about the number and types of hyperlinks, structure of the World Wide Web and usage patterns. According to Bjornborn and Ingwersen (2004), the definitoion of webometric is "the study of the quantitative aspects of the construction and use of information resources, structures and technologies on the Web drawing on bibliometric and informetric approaches". The Termwebometric was first coined byAlmind and Ingwersen (1997). A second definition of webometric has also been introduced, "the study of web-based content with primarily quantitative methods for social science research goals using techniques that are not specific to one fields of study" (Thelwall,2001), which emphasizes the development of applied methods for use in the wider social sciences. The purpose of this alternative definition was to help publicize appropriate methods outside of the information science discipline rather than to replace the original definition within information science.. The Webometrics concentrates on the Construction and Usage sides of the Web which mainly cover four areas namely:

a)   Web page content analysis

b) Web link structure analysis (e.g. hyperlink, self-link and external link)

c)   Web usage analysis (e.g. exploiting log files for users searching and browsing behavior)

d) Web technology analysis (including search engine performance)

Web page content analysis is a kind of subject analysis based on the content of the website. Web link structure is an analysis that provides links to other web page/ sites. Web usage analysis is an analysis performed on the record of user accesses to the application pages, collected in a Web server log. Web technology analysis refers to an information systems evaluation including engine performance.

WEB IMAPCT FACTOR (WIF)

According to Shukla and Tripathi (2015) "Web Impact Factor (WIF) are the number of outside web pages linking to a website which is divided by the number of web pages in that very website at a time".

That means, the numerator is the number of link pages made to a website and the denominator is a measure of the size of that very website.This very idea was adopted from the Journal Impact Factor (JIF), originally proposed by Eugene Garfield in 1972. The WIF is extemporaneous result of search engines' database at a specific time. It provides quantitative tools for ranking, evaluating, categorizing, and comparing websites, top-level domains and sub-domains.

There are three kinds of Web Impact Factors (WIF)based on three types of links found i.e. *inlinks, outlinks,* and *self-links.* Links coming into a site from another site is *inlinks*(also known as *backlinks),* links outgoing from a site to another site is *outlinks,* and links coming from the same site is *self-links.* The *selflinks*are made for navigational purposes only. (Shukla and Tripathi 2015)

The Web Impact Factor (WIF) based on links properties are:

a) **Overall WIF:**It is calculated by the total number of combining *inlinks*pages and *self-links* pages;

b) **Inlink (Revised) WIF:**It is calculated by the total number of *inlinks*pages coming from outside;

c) **Self-link WIF:**It is calculated by the total number of *self-link* pages of the website.

Calculation of Web Impact Factor (WIF):

The web impact factor (WIF) can be calculated by using the Showing formula given by Ingwersen (1998) where:

A = total links to a website (all *inlinks*and *self-links* pages)

B = *inlinks*to the website (subset of A)

C = *self-links* within the same website

D = total number of web pages present in the website at a time.

A. Calculation for Overall WIF

A = total links to a website (all inlinks and self-links pages)

_____

D= total number of web pages present in the website at a time

Overall WIF= A/D

B. Calculation for Inlink (Revised) WIF:

B= Inlinks to the website

_____

D=total number of web pages present in the website at a time

Revised WIF = B/D

C. Calculation for Self-link WIF

C= Self-links within the same website

_____

D= total number of web pages present in the website at a time

Self-link WIF = C/D

URL Analysis:

URL analysis is the study of analyzing the structure and properties of URLs embedded in interlinks web pages (i.e. incoming links or outgoing links), between one website / domain to another website/ domain or in any single website. Thus we can understand URL analysis is the study of characteristics and behaviour of web pages address of websites. The URL analysis includes study of top leveldomains (TLD), country code TLDs (ccTLD), generic TLDs (gTLD), sites / domains, sub-sites / sub-domains, structure of URLs etc. (Shukla&Vanlalfeli, 2014).

SCOPE OF THE STUDY

The present study is confined to websites of Indian Institutes of Management (IIMs). IIMs are the apex educational institutions for imparting education and research in Management. Presently there are nineteen (19) IIMs in the country as listed in MHRD site (website-http://mhrd.gov.in/iims), which are registered as societies under the Indian Societies Registration Act the overall strategy of IIMs is overseen by the IIM council. The IIM Council is headed by India's Minister of Human Resource Development and consists of the chairpersons and directors of all IIMs and senior officials from the Ministry of Human Resource Development of the Government of India. The list of IIMs with year of establishment and locations is listed in Table-1.

Table-1: List of IIMs with Code Name and Websites Address (as on 03.04.2017)

Sl.No	Name of Institution	Code Name	Websites
1	Indian Institute of Management Ahmedabad	IIMA	www.iimahd.ernet.in
2	Indian Institute of Management Amritsar	IIMAMT	iimamritsar.ac.in
3	Indian Institute of Management Bangalore	IIMB	www.iimb.ernet.in
4	Indian Institute of Management Bodh Gaya	IIMBG	www.iimbg.ac.in
5	Indian Institute of Management Calcutta	IIMC	www.iimcal.ac.in
6	Indian Institute of Management Indore	IIMI	www.iimidr.ac.in
7	Indian Institute of Management Kashipur	IIMKSP	www.iimkashipur.ac.in
8	Indian Institute of Management Kozhikode	IIMK	www.iimk.ac.in
9	Indian Institute of Management Lucknow	IIML	www.iiml.ac.in
10	Indian Institute of Management Nagpur	IIMN	iimnagpur.ac.in
11	Indian Institute of Management Raipur	IIMRP	www.iimraipur.ac.in
12	Indian Institute of Management Ranchi	IIMRNCH	www.iimranchi.ac.in
13	Indian Institute of Management Rohtak	IIM-RTK	www.iimrohtak.ac.in
14	Indian Institute of Management Shillong	IIMS	www.iimshillong.in
15	Indian Institute of Management Trichy	IIMT	www.iimtrichy.ac.in
16	Indian Institute of Management Udaipur	IIMU	iimu.ac.in
17	Indian Institute of Management Visakhapatnam	IIMV	www.iimv.ac.in
18	Indian Institute of Management, Sambalpur	IIMSMBL	www.iimsambalpur.ac.in
19	Indian Institute of Management, Sirmaur	IIMSMR	www.iiml.ac.in/iimsirmaur

REVIEW OF LITERATURE

Vaughan and Zhang (2007) examined the search engine coverage of websites across countries and domains. Websites in four domains (commercial, educational, governmental and organizational) from four countries (U.S., China, Singapore, and Taiwan) were randomly sampled by custom-built computer programs and then manually filtered for their suitability for the study. They examined the representation of the 1,664 sampled sites in four major search engines (Google, Yahoo, MSN, and Yahoo! China) in terms of whether the site was covered and the number of pages indexed by the search engines. Islam and Alam (2011) have examined a webometric study of private universities in Bangladesh. It examines and explores the 44 private university websites in Bangladesh and identifies the number of link pages, web pages and calculates the Absolute Web Impact Factor (WIF) and Overall Web Impact Factor (WIF). They found that some private universities in Bangladesh have higher number of web pages but their link pages are very small in number, thus the websites fall behind in their Overall WIF, self-link, external links and Absolute WIF.Babu, Jayshankar and Rao, P.N (2010) examined 40 central universities websites in India. They investigated domain systems of the websites, analyzed the number of web pages and link pages and calculated the Simple Web Impact Factor, Self-link Web Impact Factor, External link Web Impact Factor and revised web impact factor for central universities in India and ranked the websites as per the WIF.Shukla and Tripathi (2014) examine the extent of back links to different category of WebPages of the library websites belonging to institutes of national importance and premier management institutions. This is a longitudinal study started from 2009 and finished in 2013 including five rounds of data collection having one year gap between each round. The study concludes that index page/home page of library websites attracts highest number of back links than any other category of library web pages. Verma and Devi (2016) analyzed the role of websites and stated that website plays an important role in every institution and every organisation. Websites are the gateway to an institution through online mode. Libraries' websites web pages help the users to get all the information online related to the facilities and services provided by their respective libraries of an institution. Verma and Devi (2016) conducted a study on web content and design trends of Indian Institutes of Management (IIMs) libraries websites. They evaluated 12 IIMs and it is observed that out of 12 IIMs, only 7 IIMs have their separate library webpage, the other 5 IIMs i.e., IIM Raipur, Rohtak, Ranchi, Udaipur and Shillong have a dedicated library page in their respective IIMs websites.

OBJECTIVES OF THE STUDY

The present study is undertaken to have an in-depth study of webometric study of Indian Institutes of Management (IIMs) website with following objectives to:

1. Analyse URLs of IIMs websites understudy
2. Find out the Internal, External Link Pages of IIMs Websites.
3. Calculate the web impact factor (WIF) of IIMs Websites
4. Rank the IIMs websites on the basis of WIF.

METHODOLOGY

The present study is on Webometrics analysis of the IIMs websites by calculating web impact factor of respective websites and evaluates the performance of search engine through webometrics study. The

primary data will be collected from selected institutes' websiteby survey and observation methods by the respective institute website. For ranking of WIF, an Open site explorer is use as an optimization tool and search engine links analysis.The selected data are tabulated for inference to draw the findings

DATA ANALYSIS

URL Analysis of IIMs Websites

The URL's of websites of nineteen (19) IIMs was suffered and search queries were made using the search engine "Google". The data has been collected in five rounds using the selected search engine for retrieving inlinks, outlinks and number of web pages of IIM's websites. A uniform resource locator (URL) also known as web address is a specific character string that constitutes a reference to a resource. The first part of the URL consists of the transfer protocol, the second specifies the domain names which is followed by directory and file name. For studying the URL of the website the domain name have been taken onto account wherein Table 3 represent the most frequently used TLDs by the IIM's for their website.

Table-2: TLDs of IIM's Websites

Name of IIM's	Uniform Resource Locator (URL)	Top Level Domain	
		Genetic Top Level Domain (gTLD)	Country Code Top Level Domain (ccTLD)
IIMC	http://www.iimcal.ac.in/	.ac	.in
IIMA	http://www.iimahd.ernet.in/	.ernet	.in
IIMB	http://www.iimb.ernet.in/	.ernet	.in
IIML	http://www.iiml.ac.in/	.ac	.in
IIMK	http://www.iimk.ac.in/	.ac	.in
IIMI	http://www.iimidr.ac.in/	.ac	.in
IIMS	http://www.iimshillong.ac.in/	.ac	.in
IIMRTK	http://www.iimrohtak.ac.in/	.ac	.in
IIMRNCH	http://www.iimranchi.ac.in/	.ac	.in
IIMRP	http://www.iimraipur.ac.in/	.ac	.in
IIMT	http://www.iimtrichy.ac.in/	.ac	.in
IIMU	https://iimu.ac.in/	.ac	.in
IIMKSP	http://www.iimkashipur.ac.in/	.ac	.in
IIMN	http://iimnagpur.ac.in/	.ac	.in
IIMBG	http://www.iimbg.ac.in/	.ac	.in
IIMV	http://www.iimv.ac.in/	.ac	.in
IIMAMT	http://iimamritsar.ac.in/	.ac	.in
IIMSMBL	http://www.iimsambalpur.ac.in/	.ac	.in
IIMSMR	http://www.iiml.ac.in/iimsirmaur/	.ac	.in

Table-2 shows the total number of Top Level Domains of IIMs and it revealed that TLDs of IIMs websites which are .ac, .ernet, and .in. The TLD .ac .in is used by 17 IIMs websites i.e.89.47 % of IIMs websites whereas only 2 IIM's websites i.e. 10.52 % have used .ernet.in. The TLDs are further divides into generic TLD (gTLD) and country code TLD (ccTLD). The gTD .ernet stands for Education and Research Network is used by two IIMS (IIM-A & IIM-B) websites (i.e. 10.52%). The ccTLD .in stands for the country India has been used by all of the IIM's websites (i.e. 100%).There are 15.78% IIMs(IIMU, IIMN & IIMAMT) websites having sub-sites (eg. http://iimu.ac.in/) whereas 16 (84.21%) IIMs websites are following directory structure (e.g. http://www.iimcal.ac.in/).

Internal and External Link Analysis

Internal links are links that go from one page on a domain to a different page on the same domain. They are commonly used in main navigation. These types of links allow users to navigate a website. They help in establish information hierarchy for the given website and help in spreading link juice (ranking power) around websites.

External Links are hyperlinks that point at (target) any domain other than the domain the link exists on (source).In layman's terms, if another website links to you; this is considered an external link to your site. Similarly, if you link out to another website, this is also considered an external link. SEOs believe that external links are the most important source of ranking power. External links pass "link juice" (ranking power) differently than internal links because the search engines consider them as third-party votes.

Table-3 shows the ranking of Indian Institutes of Management websites on the basis of Total Internal Links and Total External Links. The result visualized that total 1070 total Internal Links and 5538 total External Links was reported from all IIMs websites. In Internal Links analysis IIM-Indore leads with 770 internal links followed by IIM-Trichy(188) which occupies second place and IIM- Kozhikode (45) occupies third place while five IIMs (IIM -Bangalore, ,Shillong, Rohtak, Raipur and Sambalpur) have no Internal Links. In Extenal Link analysis, again IIM-Indore with 2054, External Links occupied the first place among IIMs websites, followed by IIM-Udaipur (665) which occupied second place and IIM-Ranchi with 653 External Links occupied the third place while three IIMs (IIM- Shillong, Rohtak and Sambalpur) have not a single external link till now.Total Links(total internal links & total external links) result visualized that IIM-Indore leads with 2824 Total Links followed by IIM-Ranchi (664) which occupies the second place and IIM-Udaipur with 657 Total Links occupies third place

Table3: Total Internal Links and Total External Links of IIMs Websites

Sl No.	Name of IIMs	Internal Links	External Links	Total Links
1	IIMC	1	336	337
2	IIMA	1	45	46
3	IIMB	0	25	25
4	IIML	1	8	9
5	IIMK	45	51	96
6	IIMI	770	2054	2824
7	IIMS	0	0	0
8	IIM-RTK	0	0	0
9	IIMRNCH	11	653	664
10	IIMRP	0	5	5
11	IIMT	188	7	195

12	IIMU	2	665	657
13	IIMKSP	31	16	47
14	IIMN	16	470	486
15	IIMBG	1	372	373
16	IIMV	1	376	377
17	IIMAMT	1	447	448
18	IIMSMBL	0		0
19	IIMSMR	1	8	9
	Total	1070	5538	6598

Average WIF of IIMs Websites:

For calculation of average WIF of IIMs websites, five round data collected in fifteen days interval (from 25th August to 28th October 2016) at different time schedule and web impact factor has been calculated separately.

Table- 4 shows the overall average WIF of Inlinks i.e., RWIF of IIMs websites collection of a data in five round. Among the IIMs websites IIML (IIM-Lucknow) have the highest average rank category of Inlinks RWIF (i.e.7.2) while IIMRTK (IIM-Rohtak) and IIMC (IIM-Calcutta) ranked second and third with RWIF 0.011491 and 0.010663 respectively. IIMN (IIM-Nagpur) could not be included in the study due to lack of websites during data collection. From the above ranking and RWIF data for five rounds, it has been inference that *inlinks*of the IIMs websites remains constant during the whole study period and the results based on the RWIF proves that IIMs websites are having a very low visibility on the web as measured from

Sl. No.	Name of IIMs	Round 1	Round 2	Round 3	Round 4	Round 5	Average
1	IIMC	0.010442	0.011245	0.010442	0.011111	0.010078	0.010663
2	IIMA	0.001381	0.001366	0.001493	0.001498	0.00165	0.001477
3	IIMB	0.002938	0.002744	0.002744	0.002679	0.00256	0.002733
4	IIML	12	12	12	0	0	7.2
5	IIMK	0	0	0	0	0	0
6	IIMI	0.005508	0.005532	0.005439	0.004979	0.004959	0.005283
7	IIMS	0	0	0	0	0	0
8	IIM-RTK	0.011945	0.009983	0.009967	0.01278	0.01278	0.011491
9	IIMRNCH	0.001648	0.001667	0.001676	0.001622	0.001622	0.001647
10	IIMRP	0.002994	0.002381	0.002339	0.002339	0.002326	0.002475
11	IIMT	0.00995	0.007267	0.007267	0.006614	0.006784	0.007576
12	IIMU	0	0	0	0	0	0
13	IIMKSP	0.002516	0.001887	0.001911	0.001258	0.001887	0.001891
14	IIMN	Data not collected due to not availability of the websites during the period of data collection					
15	IIMBG	0	0	0	0	0	0
16	IIMV	0	0	0	0	0	0
17	IIMAMT	0	0	0	0	0	0
18	IIMSMBL	0	0	0	0	0	0
19	IIMSMR	0	0	0	0	0	0
	Total						

Ranking of IIMs website

Table-5 shows the overall ranking of IIMs on the basis of WIF and it resolved that IIML with 7.2 RWIF secured first position followed by IIMRTK (0.011491), IIMC (0.010663) IIMT (0.007576) and IIMI(0.005283).

Table-5: Overall Ranking of IIMs Websites

IIMs	Average RWIF	Rank
IIML	7.2	1
IIMRTK	0.011491	2
IIMC	0.010663	3
IIMT	0.007576	4
IIMI	0.005283	5
IIMB	0.002733	6
IIMRP	0.002475	7
IIMKSP	0.001891	8
IIMRNCH	0.001647	9
IIMA	0.001477	10

MAJOR FINDINGS

The major findings of the study based on the objectives are:

1. The 17 (89.47%) IIMs are using .ac .in URL and only 2 (10.52%) IIMs websites (IIM- Ahmedabad and IIM-Bangalore) used .ernet .in URL. The country code TLD (ccTLD) .in is used by all of the IIM's (i.e. 100%) websites.

2. With total 1070 internal links, IIM-Indore lead first position with 770 total internal links followed by IIM-Trichy (188) and IIM-Kozhikode (45) while five IIMs (IIM-Banglore, ,Shillong, Rohtak, Raipur and Sambalpur) have zero (0) Internal Links.

3. Total 5538 External Links reported in all IIMs websites, again IIM Indore with 2054 External Links occupied the first place among IIMs websites, followed by IIM Udaipur (665) and IIM Ranchi (653) while three IIMs (IIM- Shillong, Rohtak and Sambalpur) have not a single external link till now.

4. Ranking of IIMs websites on the basis of Total Links (total internal links & total external links) analysis IIM-Indore leads with 2824 Total Links followed by IIM-Ranchi (664) with second place and IIM-Udaipur (657) with third rank.

5. Overall ranking of 19 IIM's website, IIM-Lucknow has the highest (7.2) average RWIF and ranked 1st, while IIM- Rohtak and IIM-Calcutta ranked second and third with RWIF 0.011491 and 0.010663 respectively.

CONCLUSION

The World Wide Web (WWW) is used to access huge quantity of information available through Internet and become main source of information for academic and research activities. To cope-up the growing demand of users for information exchange, the easiest and effective way is websites. In the recent years, websites plays a key role through which information is disseminated effectively and efficiently. The

web services, rendered through websites have been gathering significant momentum in both academia and R &D institutions in the recent years. The academic websites are the primary source of all the information to their hosting institutions or organizations. An institutes website is increasingly used for the variety of purposes like attracting new students, information regarding courses, syllabus, job vacancies, library catalogue, acts as centre place for news and announcements.

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ROLE OF LIBRARY ASSOCIATIONS IN LIS EDUCATION IN INDIA: A CASE STUDY

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Abstract

Being a professional subject domain, professional associations play a crucial role in library and information science. The present study concerned the activatesof five LIS Associations of India. Research activates of these LIS Association include organization of seminar, conference publication and recognition of contribution of LIS professionals etc. Amongst the LIS Association ILA is found to be presenting the highest number i.e. Six awards for contributions in the LIS field IASLIC follows SALIS with Five Awards ITALIS is found to be the most active LIS Association as it has Nine publications for disseminating research output .

Keyword: Library Associations; India; ILA; BLA; IASLIC; IATLIS

Introduction:

In modern society, every human activity are organized and maintained through institutions. Every major social task, whether social and economic performance or healthcare, education or research, business or industry is institutionalized. Libraries and other similar types of institutions, associations, are those that collect, stock, process, organize, disseminate and distribute information/ knowledge recorded in documents. One person or single institution cannot possibly do much to deal with wider and far reaching issues of concerned professions. For this, a collective interested group is necessary, which can perform well by collective efforts. Theses collective efforts can be done by associations. The main objective is to foster a spirit of public service among their members, promote library services, project the interests of their members and build up the image of the LIS professionals. Professional Associations form a backbone of the Professional development.

In the context of different states of our country, there are various types of library associations like ILA; BLA; IASLIC; IATLIS etc. The basic mission of any library association is to develop products and serviceswhich offer practical solutions to the problems of this fast changing world, to provideleadership for the development, promotion and improvement of library services, topromote excellence through continuing educational program, publications, communicationsand awards, and to undertake other such innovative programs. The purposeis to develop, expand and enhance the professional knowledge and status of the profession. As the global information age becomes a reality, there is a widespread recognition about the role of library associations in educating and empowering professional communities, which holds that traditional bureaucratic hierarchical models of library associations are rightly criticized as too inflexible to deliver products and services. Library associations in India have been playing an important role in conveying useful messages and guidelines for library development, acting in this transitional era

as meeting places for professionals, helping them exchange opinions and promoting free access to

information while also facing a series of structural, political, cultural and financial challenges.

Objective of the study

➢ To focus on the present status of the Library Associations of India;

➢ To identify the various activities played by Library Associations;

➢ To focus the zone wise distribution of the Library Associations of India;

➢ To show the existence and non-existence of the Library Associations;

➢ To identify the key concepts that the library associations are dealing with and to assist in formulating strategies for improved library, information and related services;

Importance of the study

➢ Present Scenario of the Library Association of India can be easily viewed by this study.

➢ Major activities, conferences, publications, aims and objectives, awards, memberships of the Library Associations can be detected by the study.

➢ The relative significance of the Associations can be focused.

Methodology

The literature search has been done from textbooks, journals, official websites of associations, databases like Emerald, Blackwell Wiley etc. Data has been collected to know; the aims and objectives, conferences held, awards given, membership pattern of the Library Associations in India. Arranged the distribution of Associations Regional wise and classified them into four zones like-Eastern, Western, Northern, and Southern and arranged the datasheet to derive the present status of the Associations and analysed them graphically.

Results and analysis

Sl. No	Name of zone	Name of Association
1	Eastern	IASLIC
2		BLA
3		ABSLA
4	Western	BOSLA
5	Northern	ILA
6		DLA
7		SIS
8		MLAI
9		IATLIS
10		PLA
11	Southern	KALA
12		MALA
13		APLA
14		ITLA
15		SALIS

Table 1 shows there are 15 associations in India. Eastern zone has 3 associations namely IASLIC, BLA and ABSLA. Western zone has BOSLA. Northern zone has 6 associations ILA, DLA, SIS, MLAI, IATLIS, and PLA and Southern zone has 5 associations i.e. KALA, MALA, APLA, ITLA, and SALIS.

Table 2: Zone wise no of activity of the association

Sl. No	Name of the zone	Name of the association	No of Activity (According to types)
1	Eastern	IASLIC	6
2		BLA	5
3		ABSLA	4
4	Western	BOSLA	3
5	Northern	ILA	5
6		DLA	2
7		SIS	6
8		MLAI	5
9		IATLIS	4
10		PLA	5
11	Southern	KALA	7
12		MALA	6
13		APLA	6
14		ITLA	1
15		SALIS	8

Table 2 shows that zone wise number of activity of the association according to types. It is found that in Southern zone the association namely SALIS has the maximum number of activity i.e. 8.

Table 3: No of conferences/ seminars organized by the association

Sl No	Name of zones	Name of the associations	No of seminars and conferences.
1	Eastern	IASLIC	44
2		BLA	41
3		ABSLA	1
4	Western	BOSLA	2
5	Northern	ILA	36
6		DLA	-
7		SIS	21
8		MLAI	3
9		IATLIS	29
10		PLA	9
11	Southern	KALA	20
12		MALA	48
13		APLA	40
14		ITLA	1
15		SALIS	96
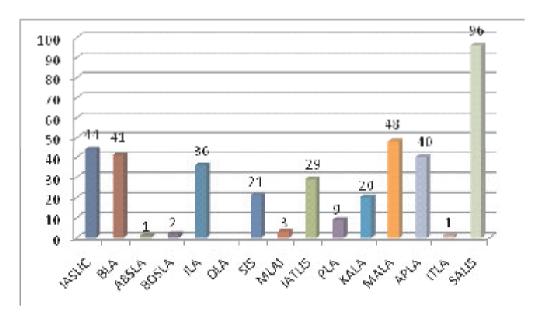
Fig 1 shows that SALIS association in Southern zone has organized maximum number of seminars/ conferences.

Table 4: Name of the publications of the associations

Sl no	Name of the associations	Publications
1	IASLIC	IASLIC Bulletin, IASLIC Newsletter, Indian Library Science Abstract, Books, Monographs, Directory, IASLIC Proceeding, IASLIC Annual reports
2	BLA	Various types of Bengali and English books, Bengal Library Association Bulletin.
3	ABSLA	Souvenir, Proceeding
4	BOSLA	BOSLA Infoline
5	ILA	Journal of Indian Library Association, Newsletter of Indian Association, ILA Bulletin, Annals, Granthalaya of Indian Library Association.
6	DLA	Library Herald Journal of Delhi Library Association, Library Herald, Indian Press Index.
7	SIS	Society for Information Science Communication, Society for Information Science Transaction, NISSAT Newsletter
8	MLAI	MLAI Bulletin, MLAI News, Proceedings of annual conventions seminar.
9	IATLIS	LIS Education Research and Training: Vision 2020, Emerging Challenges and Lingering Issues in LIS Education, Research and Training, Envisioning Employable LIS Courses in Developing Countries for the Emerging Knowledge Society, Changing face of LIS Education: Learning Styles and Teaching Methodologies, Equity of LIS education in IT based Pedagogical Environment of the Knowledge Society, Building Curriculum with a difference: A Vision for LIS Education in the 21st Century, Quality Education in Library and Information Science, IATLIS journal of Library Education and Research (IJLER)
10	PLA	Books, PLA Seminars Papers, PLA Newsletter.
11	KALA	KALA Newsletter
12	MALA	MALA Newsletter, The annual report of the MALA.
13	APLA	Periodicals, Books, Bibliographies, Monographs, Annual Reports, Conference Proceedings, Souvenir and Miscellaneous Publications.
14	ITLA	No Publications.
15	SALIS	SALIS Journal of Library and Information Science, SALIS Newsletter.

Table 5: No of the publications Category wise of the associations

Sl. no	NAME OF ZONE	NAME OF THE ASSOCIATIONS	NO OF PUBLICATIONS CATEGORY-WISE
1	EASTERN	IASLIC	8
2		BLA	3
3		ABSLA	2
4	WESTERN	BOSLA	1
5	NORTHERN	ILA	5
6		DLA	3
7		SIS	3
8		MLAI	3
9		IATLIS	9
10		PLA	3
11	SOUTHERN	KALA	1
12		MALA	2
13		APLA	8
14		ITLA	-
15		SALIS	2
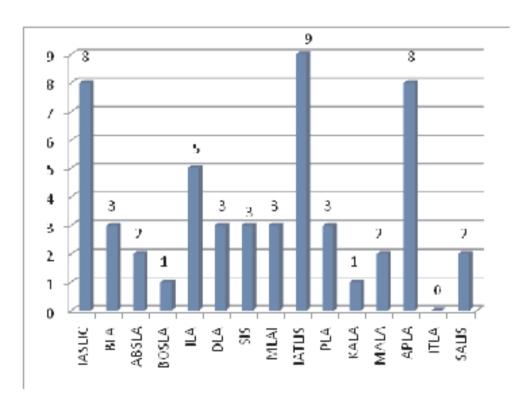
Fig 2 shows that no of publication category wise of the associations

Table 6: Name of different types of membership of the associations

Sl no	Name of the associations	Types of membership
1	IASLIC	Honorary, donors, Institutional, Individual, Life, Ordinary
2	BLA	Honorary, donors, Institutional, Life, Ordinary , Patron
3	ABSLA	Ordinary Membership
4	BOSLA	Life
5	ILA	Honorary, Life, Ordinary, Patron, Institutional, Associate. Oversea, Library Association
6	DLA	Honorary, Life, Ordinary, Patron, Institutional, Student, One time Institutional
7	SIS	Individual, Life, Institutional
8	MLAI	
9	IATLIS	Life, Associate
10	PLA	Individual, Life, Student, Institutional, Affiliated.
11	KALA	Honorary, Life, Ordinary, Student, Corporate
12	MALA	Life, Student, Institutional.
13	APLA	Life
14	ITLA	Regular, Associate, Individual
15	SALIS	Life, Institutional, Sustain.

Table 7: No of different types of membership of the associations

Sl no	Name of zone	Name of the associations	No of type of memberships
1	EASTERN	IASLIC	5
2		BLA	6
3		ABSLA	1
4	WESTERN	BOSLA	1
5	NORTHERN	ILA	8
6		DLA	7
7		SIS	3
8		MLAI	1
9		IATLIS	1
10		PLA	5
11	SOUTHERN	KALA	5
12		MALA	3
13		APLA	1
14		ITLA	3
15		SALIS	3
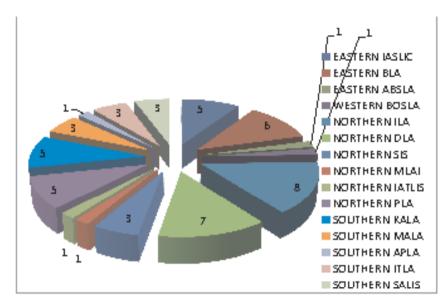
Fig 3 shows that No of different types of membership of the associations

Table 8: Name of the awards of the associations

Sl No.	Name of the associations	Awards
1	IASLIC	Best LIS teacher,
2	BLA	Kumar Munindra Deb RaiMahasaya Medal, Maithily Sengupta Medal, TincowrieDutta Memorial Medal.
3	ABSLA	No awards announced
4	BOSLA	No awards announced
5	ILA	8 types of awards declared
6	DLA	No awards announced
7	SIS	Fellowship Awards given in the field of LIS
8	MLAI	No awards announced
9	IATLIS	Motiwale Best LIS teacher award, Prof. S.P. Narang promotion award, Prof. J.S. Ramdev Lifetime Achievement award
10	PLA	PLA Satija National Award for professional Excellence award
11	KALA	No awards announced
12	MALA	No awards announced
13	APLA	No awards announced
14	ITLA	No awards announced
15	SALIS	Dr. Harish Chandra Sushilachandra best librarian award, AutolibTamilnadu Best Librarian award, National young librarian awards, Best paper award for LIS Professionals, Best paper award for LIS Students.

➢ All the Associations should conduct conferences for interchange of information and knowledge.

➢ Associations should try to develop the research institutions in the country for library development.

➢ Associations should organize workshops to give proper training to the library professionals to upgrade

the technical knowledge and practical work.

➢ Library Associations should conduct debate programmes and quiz competitions in the field of Library and Information Science and its development.

➢ The Associations should conduct meetings, seminar (like national, International) workshop, exhibitions for interchange of information in the field of Library and Information Science.

➢ Associations should give the instructions and management procedure for the professional efficiency of the academic Librarians.

➢ Compulsory publication Programme (like publishing journal annually or half-yearly) should be taken for fulfilment of the aims and objectives of the Associations.

➢ Associations should try to create general awareness and general interest among the people for spreading the library movement.

➢ Associations should try to establish new libraries in different parts of state or country.

➢ The Government should help financially to the Associations.

Conclusion

As voluntary organizations, the Library Associations published differentlibrary and information related journals, books, monographs Conferenceand seminar papers. IASLIC and ILA play a main role regarding this manner. Professional literature covering all aspects of library and information science is published by MALA almost at a rate of one or two publications each year. All the Associations like IASLIC, MALA, ILA, SALIS, IATLIS, ABSLA plays a significant role in sustaining professional awareness and maintaining professional solidarity among its members by organizing bi-annual seminars and conferences.Diversified membership pattern has been seen like honorary, life, ordinary and institutional (profit and non-profit) member in various Library Associations.The Associations has been giving awards in different manner like life-time achievement, fellowship to the best one. Therefore it can be said that the library associations are playing an active role in the development of the library and information science field and their participation promotes library activities. That there is an immediate need for restructuring these associations in pursuit of a new working model which would involve functioning in close partnership with other groups; the associations need to be stronger financially and have more impact in pursuing and meeting the objectives and goals of the members of association. To this end, an Indian Institute of Library and Information Science should be established on the pattern of the Indian Institute of Technologies.

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ROLE OF INSTITUTIONAL REPOSITORIES FOR THE SCHOLARLY COMMUNICATION: A STUDY AT GLOBAL CONTEXT

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Abstract

In this electronic age, users are more dependent on the use of e-resources by using internet. In this regard Institutional repositories are digital archiving service with open access facility for long term preservation of an institutions intellectual output developed by the academicians for worldwide dissemination. Aiming to achieve its service, institutional repositories provided its service for the visibility of an institution, centralize location of scholarly works, open access facility of the research output of an institution to collect, store and preserve the institution's both published and unpublished works. The paper discusses the different features of institutional repositories, benefits gained by the different groups of people from institutional repositories, challenges to develop an institutional repository and global scenario of the growth of institutional repositories. A study is conducted to find out the record for the growth of institutional repositories developed all over the world under both ROAR and OpenDOAR registry, usage of open source software specifically in India, growth of institutional repositories under ROAR in last five years with special consideration for India and the registered organisations of continents all over the world under OpenDOAR.

Keywords: - Institutional Repository, Open Source Software, Digital archiving, ROAR, OpenDOAR

0. Introduction: - Libraries are now moving towards digital environment and it is the need of the hour to give library services in digital mode. With the advent of ICT, users are now more dependent in the use of digital resources and it is also favourable to save the time of the users to retrieve the information content. Moreover, users are now more up-to-date, informative and their expectation from the library increases day by day. Due to the emergence of library automation, development/ conversion of digital libraries, web based services etc. the expectations of the users are more technology concerned and as a result the responsibility of the library professionals become challenging. The growing competitive nature of the users of the library experiences their varied information needs not only in academic performance but also in outdoor activities. Realising the varied information needs of the users, institutional repository (IR) is the need which acts as a digital archive of the intellectual output produced by faculties, research scholars and students of an institution and gives endless access to its users both within and outside of the parent institution. It acts as an open access model by collecting, preserving, and disseminating knowledge of an institution. Thus, institutional repositories are helpful in reflecting the past and present research activities of the institution and help to promote the future generations for achieving future goals.

1. Institutional Repository: an introduction

An institutional repository is a digital archive of the intellectual knowledge created by an academic institution. The prime activities of an institutional repository is to create a database having digital content with some sort of services to collect, store, index, preserve and make it accessible with the use of internet. Intellectual Repositories are the reservoir of intellectual output created by the fraternity of an academic

institution like teachers, researchers and students of the institution and its contents are varied in nature such as pre-prints, journal articles or research data, monographs, conference papers, research notes, artwork, project reports, teaching- learning materials prepared by the faculties, thesis and dissertations, research materials etc. Institutional repositories are generally created to advance the scholarly communication which can be accessible online for the use of both the users of that particular institution and general public.

1.1 Characteristics of an institutional Repository

An institutional repository is a virtual reality with the collection of some sort of digital content created intellectually by the members of an academic institution. The main characteristics of an institutional repository should have the followings-

1.1.1 Institutional repositories are institutionally defined: - The institutional repositories are web based services that represent the intellectual research output and earned knowledge of the parent institution as opposed to the subject repositories.

1.1.2 Includes scholarly contents: - The contents that may include in an institutional repository are scholarly contents or may include administrative, teaching-learning and research materials of the host institution including both published and unpublished outcomes.

1.1.3 Cumulative and perpetual: - The digital contents of the institutional repositories are the collection of records once submitted to the repository should not be withdrawn. Thus, store the contents as an archive for the long term preservation.

1.1.4 Nature of Open and interoperable: - The primary goal for the creation of an institutional repository is to disseminate the intellectual product of the institutions. To achieve this goal the minimum requirement is the metadata creation harvested by an appropriate software like Open Archive Initiative (OAI) protocol for metadata harvesting (OAI-PMH) compliant.

1.1.5 Dissemination of scholarly contents: - The institutional repositories are established with the aim to capture or collect, store, preserve and disseminate the scholarly outcomes of an institutions intellectual output

1.2 Needs and objectives of institutional Repository

The prime needs and objectives for the establishment of an institutional repositories are-

➢ To create an interface for the worldwide visibility of an institutions scholarly work.

➢ To collect all the scholarly works of the institution at a single centralize location.

➢ By self-archiving the contents in digital form, the repositories provide open access facility of the institutions research output.

➢ To collect, store, preserve and disseminate other institutions digital assets of both published and unpublished materials from which many objects are otherwise easily lost that carry valuable information, like grey literature including patents, technical reports, white papers, research notes etc.

➢ To assess the previous research outcomes, attitudes and motivations of the research scholars to get the out knowledge and inspires the other researchers to continue the research on further research areas.

➢ It identifies the role played by the research scholars of more established institutional repositories of other institutions for the advancement of research and development and academic performance of the host institution.

1.3 Importance of Institutional Repositories

To establish an institutional repository some important considerations are marked as-

1.3.1 Stimulates and encourages for developing an archive for preserving scholarly research works which is cost effective as compared to other library initiatives.

1.3.2 Students, research scholars and faculty members feel the need to store their intellectual output and to make these research works accessible within and outside the institution for the general public. With the aim of increasing the public service value of the institution, a strong requirement is realised to develop some repositories for long term preservation of the members intellectual output with wide dissemination among the academic communities by administering some property rights associated with the contents.

1.3.3 Due to the price hike of information resources there is always a scarcity to acquire varied information resources in the libraries of academic institutions. In such a case development of IR gives an interface with open access facility for the use of institutions intellectual output to the academic communities at free of cost.

1.3.4 It is a platform which defines the visibility, status and citation impact of the research output of the institution's intellectual works. It also acts as a marketing tool to capture the attention of new funding agencies for fund generation and attracts well qualified students and even faculties to join with the institution.

1.3.5 It is a reservoir to store and preserve the institution's produced output including both published and unpublished works otherwise these valuable resources will be lost in time (e.g.-grey literature, technical reports, research notes etc.)

1.3.6 It provides a path for the critical observation and reforms the systems for scholarly research works by compiling a complete list of their research works done over the years with open access facility, reasserts and restricted on the scholarships provided by the academy develops more competitiveness and research oriented nature among the research scholars. Moreover, the entire phenomenon diminishes the monopoly power of the journals and results in economic relief. This establishment of repository heightens the quality of relevance of the research output and develops the educational and research environment of the institution and the library that supports it.

1.4 Benefits of Institutional Repositories

The benefits of establishing an institutional repository are numerous for different groups of people as discussed below-

1.4.1 Benefits for the individual as an author or creator

➢ Increases the visibility of the intellectual output and acts as a marketing tool to show the research outcomes of the researcher along with the department and the institution.

➢ The contents of the institutional repository are openly available in the web. As a result, the users can use the scholarly works without any fees which will raise the impact factor of the cited works. Thus, helpful in recognizing the usage matrices of the particular papers.

➢ Provides some navigation links to access the contents of other repositories by following the citation analysis mentioned in the contents.

➢ Stores and preserves the institution's original research works for the long term. Thus, gives assurance for the greater security of work with some specific URL links.

➢ Acts as an archiving centre of the institution's research work.

➢ Institutional repositories give comments and feedback options in which authors are able to give

their opinions with the readers. This option facilitates the scope of interaction between the author and the user which gives pathways to improve the knowledge and the quality of work on the concerned subject.

➢   Maintains the researcher's profile, compiles the complete list of the research outcomes of the institution done over years.

➢   Institutional repositories gives benefits to the researchers by providing prestige, status, and prizes to them for their rewarding research work and attract the different funding agencies for the support of acquiring funds for their research projects.

1.4.2 Benefits to the Institution

➢   An institutional repository can increase the visibility and prestige of the institution through its scholarly research works. Institutional repository can also be beneficial in the marketing activities to attract high qualified students, teachers or staff to join with the institution and generate grants from the funding agencies.

➢   It collects, stores and preserves all institutions research output including both published and unpublished works.

➢   In identifying the research assessment and quality assessment of the institution's intellectual output, institutional repositories are considered to be an important consideration.

➢   The contents of the institutional repository are easily searchable not even locally but globally. This open access facility of the research outcomes gives interoperability by sharing experiences among the institutions.

➢   It maintains some standardization of institutional records by compiling Institutional CV and provides some navigation links to access full text of articles.

➢   Due to the establishment of institutional repository the libraries of the institutions are free from the monopoly power of the publisher's cost and even access barriers.

➢   No need of maintaining server or back up. Thus, cost effective for the libraries for giving a value added service without hampering on the limited budget.

1.4.3 Benefits to the User

➢   Users can easily access the information content in an institutional repository by using a search engine

➢   Users do not need to pay any fee for the use of digital contents of an institutional repository and there is no subscription price for the materials available in the repository. Moreover, the contents available in the institutional repository is available in its best digital format in case of multimedia objects such as audio files, animations, images etc

➢   The information material on grey literature are not easily found through conventional means that includes pre-prints, patents, white papers, technical reports, project reports, documentations, manuals, working papers and discussion papers etc. But with the establishment of institutional repositories users can access these valuable resources anywhere.

1.4.4 Benefits to the society

➢   Gives open access facility of the institution's intellectual output at global context. Thus, gives access facility of world's research on different subject topics.

➢   An institutional repository can accommodate the research outputs without hampering the volume

of research like no page limits, large- scale data-sets etc.

➢ Institutional repositories develop its institutional content for the access of world's population without any cost.

1.5 Challenges of Institutional Repository

Institutional Repositories are beneficial for the academic community, although a number of barriers are experienced for the successful implication of it as mentioned below-

Difficulties in Content Generation: - The biggest challenge that an institutional repository managers face are difficulties in generating its contents. Due to creators reluctance to deposit their work voluntarily hampers to support the working practice of an institutional repository

Cost: - For establishing an institutional repository depending upon the technological infrastructure and relevant expertise, the initial cost of expenditure may not require high cost. But for the smooth functioning of it, the recurrent cost such as cost of staff for drafting policies, licensing agreements, preparing development guidelines, publicising, training, supporting users and metadata creation may require high cost of expenditure. Moreover, some other costs are associated with the working of an institutional repository such as maintenance cost of the hardware and software for storage capacity makes it difficult to afford the repository service for an institution in its limited budget.

Sustaining support and commitment:-Institutional repositories are long term commitments which are not so easy to achieve from the management and academic staff.

Technological Support:-The establishment and maintenance of the institutional repositories require continuous technological support. But to work on open source software on which institutional repositories are based requires a sound technological knowledge for the smooth functioning of its different features.

Issues on rights management: - Due to lack of information regarding copyright and intellectual property rights issues, researchers sometimes infringing publishers copyright as their work may be available online without their concern before they deposit it for publication in a commercial traditional publisher.

Issues on Policy Formulation: - Institutional repositories are only successful if it can apply some policies mandatorily, but in experience it is seen that researchers react to it negatively for any compulsion or suggestion.

Lack of Incentive: - Academicians have now profit motive nature and they are not willingly interested to share their research output to deposit in an institutional repository as they are more interested to get some incentives in other institutions or from publishers.

2. Institutional Repository in global context

With the advancement of research and development, the importance of establishing institutional repositories is realized in the academic institutions all over the world. The effort has been also seen in India to enhance access of scholarly publications as well as its dissemination among the academic communities. The realisation for the creation of a web-based service with scholarly content was experienced in the early 1990's in United States. Since then the number of institutional repositories have been in the rise all over the world due to its usefulness in the scholarly contents at global context. This growth of institutional repositories increase due to the parallel growth and developments of other objects which require some technological knowledge such as -

· Open source software for operating system, e.g. Linux, Solaries, Unix, Ubuntu, Windows etc.

· Open Archive Initiative to preserve digital contents in softwares like Greenstone, Dspace, Eprints, Fedora, Mycore, OPUS, Drupal etc.

· Affordable cost of hardware maintenance

· Use of Open Archive Initiative protocol for metadata harvesting (OAI-PMH) compliant.

Directory of Open Access Repositories- OpenDOAR is a worldwide authoritative directory which controls over the quality of open access repositories of academic institution. It enables its service by giving identification and browsing facility with multiple search features which is user friendly to access. It is a project of SHERPA (Securing Hybrid Environment for Research Preservation and Access) under University of Nottingham of United Kingdom and Lund University of Sweden specially maintained for the listing of open access repositories around the world. To include in the OpenDOAR, the institutional repositories of the institutions must have some full text items with free access facility without having a user name and password. For assuring quality and consistency of the information provided in the institutional repository, OpenDOAR staffs visited each of the repositories for verifying the information recorded here. Till now OpenDOAR has recorded 2830 institutional repositories listing under it. Whereas ROAR is an another international registry of open access repositories which works for the promotion and development of the institutional repositories for providing timely information about the growth and status of repositories. ROAR indexes the creation, location, growth and information contents of the institutional repositories worldwide giving multiple search facilities like- by country name, year, repository type, repository software, institutional association etc. The main contribution for the smooth functioning of this worldwide registry is performed by the University of Southampton under which till now 4485 repositories are enlisted from all over the world. As per the record maintained in both OpenDOAR and ROAR the Table 1 shows the institutional repositories registered for some randomly selected countries are as follows-
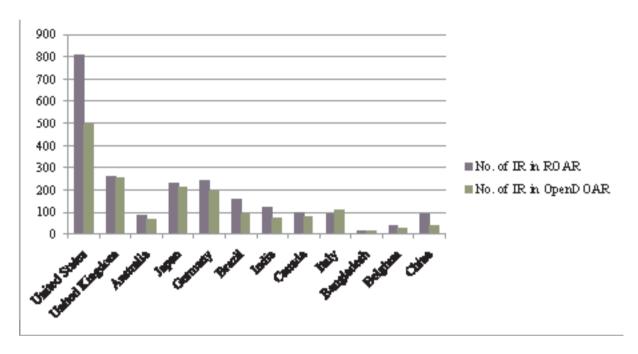
Table 1: Countries with number of institutional repositories in ROAR & OpenDOAR

Name of the Country	No. of IR in ROAR	No. of IR in Open DOAR
United States	806	496
United Kingdom	260	252
Australia	87	69
Japan	230	211
Germany	240	195
Brazil	158	92
India	120	76
Canada	96	81
Italy	94	110
Bangladesh	10	12
Belgium	35	25
China	93	39
France	96	119

In Table 1(as access on 10th June 2017) it is seen that United States have the highest number of 806 institutional repositories registered under ROAR, whereas 496 numbers of institutional repositories are registered under OpenDOAR. United Kingdom has the second highest numbers (260 in numbers) of institutional repositories as registered under ROAR and 252 numbers of institutional repositories are registered under OpenDOAR to till date. Among the randomly selected countries it is found that Bangladesh has the lowest 10 numbers of institutional repositories registered under ROAR and 12 numbers are

registered under OpenDOAR. While India has 120 numbers of institutional repositories registered under ROAR and 92 numbers of institutional repositories are registered under OpenDOAR. The data as shown in Table 1 are presented with a bar diagram in Figure 1 for the clear configuration of having institutional repositories in different countries under ROAR and OpenDOAR.

Figure 1:- Countries with number of institutional repositories in ROAR and Open DOAR

3. Institutional Repositories with open source software

Considering economic factors, built in interoperability feature for supporting metadata formats etc open source softwares are the most suitable and adoptable for developing institutional repositories. Uses of these softwares are free and provide their features which are helpful to capture, store, preserve and give seamless access of the digital content of institutions scholarly research output on web. Moreover, it provides an interface for the online submission of the research output of the research scholars, students and faculty members. A number of open source softwares are available developing an institutional repository under open source license. In India softwares like Dspace, EPrints, and Greenstone are most famous and widely used software for developing an institutional repository. The Table 2 depicts the usage of open Source repository software developed under ROAR and OpenDOAR in India as-

Table 2:- Usage of open source software in ROAR and Open DOAR in India

Name of the Software	Total no. of users in ROAR	Total no. of users in Open DOAR
Dspace	63	45
EPrints	38	23
Greenstone	02	01

From Table 2 it is seen that highest number of institutions are registered for the use of Dspace software under both ROAR and OpenDOAR which is 63 and 45 in numbers representing 61.17% and 65.22%. The lowest number of institutions are registered for Greenstone software both under ROAR and OpenDOAR which is 02 and 01 institution representing 1.94% and 1.45%. The clear picture of the Table 2 is shown with the help of Figure 2 in below-
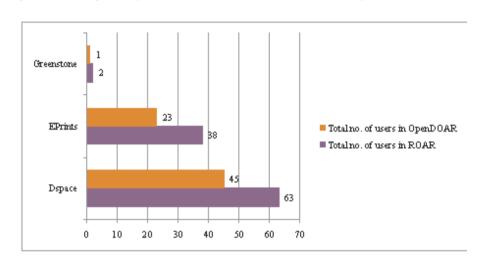
Figure 2:- Usage of open access software in ROAR and OpenDOAR in India

4. Growth of Institutional Repository globally under ROAR

The growth of institutional repositories in worldwide with some randomly selected countries are marked as per the record maintained in ROAR registry. In Table 3 a list is prepared from 2012 to 2016 including last five years to show the number of institutional repositories registered under ROAR. It is seen that maximum number of repositories were enlisted from United States, 385 in numbers where highest 154 numbers were joined in 2014 representing 40% of the total repositories in last five years and minimum number of repositories 25 are registered in 2013 representing 6.49%. Among the selected countries second highest numbers of institutional repositories are registered from the country Germany 102 in numbers where maximum numbers of repositories were registered in 2012, 52 in numbers representing

Table3:- Country-wise Growth of institutional Repositories under ROAR

Name of the Country	2012	2013	2014	2015	2016	Total
United States	132	25	154	45	29	385
United Kingdom	32	05	06	03	07	53
Australia	11	07	03	01	02	24
Japan	18	04	15	21	16	74
Germany	52	03	21	08	18	102
Brazil	15	12	09	05	05	46
India	14	06	09	04	07	40
Canada	07	02	07	02	03	21
Italy	14	04	03	01	01	23
Bangladesh	02	04	02	0	0	8
Belgium	08	0	0	02	01	11
China	05	04	01	01	02	13
France	16	09	04	04	0	33

50.98% and lowest number of repositories 03 in numbers are registered in 2013 representing 2.94%   . Minimum numbers of institutional repositories are registered from Bangladesh that is 08 in numbers where no repository was registered in the years 2015 and 2016. The growths of institutional repositories are clearly observed with the help of the Figure 3.
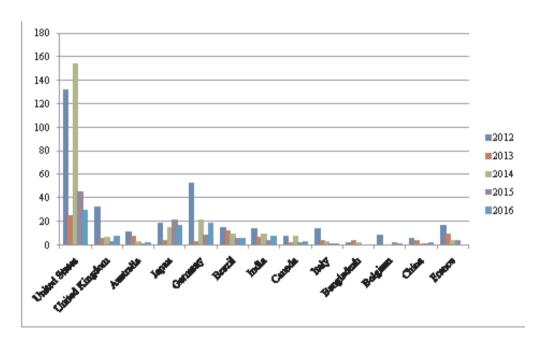
Figure 3:- Country-wise Growth of institutional Repositories under ROAR

From Table 3 if we concentrate on the growth of institutional repository for the country India then we get Table 4.

Table 4:- Growth of Institutional Repository in India under ROAR

Year	Growth of institutions registered under ROAR
2012	14
2013	06
2014	09
2015	04
2016	07

Here, in these last five years total 40 institutional repositories are registered under ROAR registry where maximum 14 numbers of institutional repositories are registered in 2012 representing 35% and lowest numbers of repositories (04) are registered in the year 2015 representing 10%. This growth of institutional repositories in India is shown in Figure 4.

Figure 4: - Growth of institutional repository registered year-wise in India under ROAR

Moreover if we give a look on the statistics of institutional repositories registered under OpenDOAR as per the last update on 15-Jun-2017 in the OpenDOA directory is given in Table 5.

Table 5:-Growth of institutional Repository worldwide under OpenDOAR

Continent Name	Organisations registered
Europe	1252
Asia	635
North America	469
South America	242
Africa	132
Australasia	61
Central America	18
Caribbean	18
Oceania	2
Unspecified	1

From the Table 5 we get the following worldwide proportion of Repository Organisations by Continent – Europe, Asia, North America, South America, Africa, Australasia, Central America, Caribbean and Other all together 2830 organisations in which maximum organisations are registered under the continent Europe 1,252 in numbers representing 44.24% and minimum organisations are registered under Caribbean (02) representing .07% and unspecified continent (01). The growth rates of organisations registered under different continents are shown with the help of the **Figure 5**.

Figure 5:- Growth of institutional repository registered worldwide under OpenDOAR

5. Conclusion

Institutional repositories are considered to be the best source to open access the research output of an institution's scholarly works. It enhances the teaching, learning and r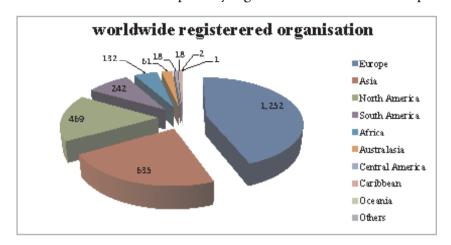esearch activities of the academic institutions for scholarly communication around the globe. It acts as marketing tool to attract different funding agencies to draw scholarship by improving its visibility and impact of their institutional research. The large numbers of establishment of institutional repositories all over the world make its path easier for the wider dissemination of information of the institution's scholarly works. By observing its importance and the benefits drawn by different groups of people; the researcher, library and information professionals, academic administrators and R & D institutions need to be aware for the future prospects of the Information and Communication technologies towards the development of the service of an institutional repository. Despite of many challenges that are standing as a barrier for the growth and development of institutional repositories, with the availability of several free and open source software packages makes it easy to open the path of developing an institutional repository in different universities and academic institutions. So there is a need to make an attempt to all the academic institution all over the worlds which are run by either public or private fund should also try to establish their own repositories to make their research widely accessible by world's scholarly community and to ensure its long term preservation for future use. Moreover, to enhance its goal for the wider dissemination of information and to raise its visibility, it is important that all the institutional repositories are registered under some open access registry like ROAR and OpenDOAR.

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RESOURCE SHARING IN CLOUD ENVIRONMENT: A PERSPECTIVE FOR CENTRAL UNIVERSITY LIBRARIES IN NORTH EAST INDIA

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Abstract:

Today is the era of Information and technology as technologies are developing very rapidly like, web 1.0, web 2.0, web 3.0, expert system, semantic web, neural network, cognitive sciences, artificial intelligence and recently Cloud Computing. The emerging Information Technologies have brought many changes in library and information centres too. These technologies have facilitated as well as compelled LIS professionals to work together, to acquire and share library resources. With new developments in Research and Development in various fields along with emergence of interdisciplinary subjects, increase of the literature in all subjects as well as shrinking of the library budget made the libraries depend upon each other. These factor force library professionals for library cooperation, resource sharing and networking. This paper tries to highlight the perspectives of digital and e- resource sharing in the cloud environment and tries to figure out a cloud model for university libraries in North East India.

Keywords: Cloud Computing, Resource Sharing, Information and Technology, Consortium, Resource sharing

1. Introduction:

No library and Information or resource center in the world is self sufficient to cope up and fulfil various information needs of the users. Information Explosion and increase of literature in all subjects as well as shrinking library budget made the libraries depend upon each other. The emergence of e-publications, digital libraries, Internet usage, web tools applications for libraries, consortium practices leads to further developments in the field of library profession. The latest technology trend in LIS for resource sharing is - "Cloud Computing": use of cloud computing for various purposes and for achieving economy in library functions. Since cloud computing is a new and core area, the professionals should be aware of it and also should master the application of cloud computing in library services a well as for digital resource sharing.

2. Objective:

2.1 Felicitate quick and easy resource sharing in cloud environment

2.3. Prepare a cloud model for central university libraries for resource sharing.

3. Scope: The study includes in its scope those libraries which are prime organ of Central Universities of North East India.

4. Cloud computing:

Cloud Computing "A style of computing where massively scalable capabilities are delivered as a service using Internet Technology" [12]

Cloud computing, an Internet based computing where software, shared resources and information are served to devices such as computers, electricity grid. Cloud computing contains a set of software and hardware resources which are available over Internet and its services are managed by third-party. These services provide access to advanced software applications and high configured servers. Service provider plays role of consultant. Cloud computing is a web based computing where shared resources, applications and information are provided to the set of computers and other devices on demand using web technology. Cloud computing is based on Internet; generally the Internet is commonly visualized as a cloud. Therefore, the process of cloud computing is being done through set of web enabled applications loaded on the server with proper access rights.

4.1 Types of Cloud Computing:

Types of Cloud Computing can be broadly divided based on:

4.1.1 Location of the Cloud Computing

4.1.2 Type of services offered

4.1.1 Location of the Cloud Computing:

i) Public Cloud: In Public Cloud, the computing infrastructure is hosted by the cloud service provider at their premises. The customer has no visibility and control over where the computing infrastructure is hosted, but data are able to share among many organizations. [3]

ii) Private Cloud: The computing infrastructure is established to a particular organization and data are not shared with other organizations. Private clouds are expensive and more secure compared to public clouds. [3]

iii) Hybrid Cloud: Hybrid cloud is a combination of private and public cloud where organizations can host critical applications on private clouds and applications with relatively less security concerns on public cloud. Its related term is Cloud Bursting. In cloud bursting, organizations use their own computing infrastructure for normal usage, but access the cloud for high/ peak load requirements. [3]

iv) Community Cloud: It involves sharing of computing infrastructure between organizations of the same community with same interest. For examples all college libraries within Guwahati, Assam may share computing infrastructure on the cloud to manage data related to e-resources in their respective libraries. [3]

4.1.2. Cloud Computing based on Services offered:

i) Software as a Service (SaaS): It includes a complete software offering on the cloud. Users can access a software application hosted by the cloud vendor on pay-per-use basis. [3]

ii) Infrastructure as a Service (IaaS): It involves offering hardware related services using the principles of cloud computing. This cloud include some kind of storage services (database or disk storage) or virtual servers. Leading vendors like Amazon EC2, Amazon S3, Rackspace Cloud Servers and Flexiscale provide IaaS. [3]

iii) Platform as a Service (PaaS): PaaS involves in offering a development platform on the cloud. These platforms are provided by Google's application Engine, Microsoft's Axure. [3]

4.2 Advantage of cloud computing:

Some of the advantages of cloud computing are:

4.2.1 **Cost effectiveness:** Cloud computing technology is paid incrementally hence save costs for organizations. It increases fund savings due to economies of scale and the fact that organizations such as libraries are only need to pay for the resources they actually use.

4.2.2 **Easy to install and maintain:** Cloud computing is easy to installed and once installed, we need not bother about constant server updates and other computing issues. Organizations will be free to concentrate on innovation and the IT staff may concentrate on other tasks. There is no need to procure any hardware to run the servers.

4.2.3 **Augmented storage:** Cloud can hold more storage than a personal computer or the servers available in the organizations and it is possible to extend as per the requirements of the organizations.

4.2.4 **Highly automated:** The cloud service provider watches over updating software whenever latest version is released. When the server is updated everyone using the service also get access to the new version without updating anything on their end.

4.2.5. **Shared resources:** One of the important components of cloud computing is that one can share the resources. It allows people within and outside the organizations to have access to the resources.

4.3 Disadvantage of cloud computing:

4.3.1 **Data security and privacy:** The biggest concerns about cloud computing are security and privacy of the data and resources. If proper security model is not yet in place, then the data stored on the cloud is vulnerable to attacks from viruses, theft, etc. Also, there is a risk of data loss owing to improper backup and systems failure.

4.3.2 **Network connectivity and bandwidth:** Since cloud computing is offered via Internet, if the connection breaks down due to any reason, the organizations suffer from loss of data connectivity till the connection is restored. Also the service requires more bandwidth, as it may not work on low-speed Internet connections.

4.3.3 **Dependence on outside agencies**: The cloud services being offered by third party services over the Internet, which is called service provider. It is tough to assess the contingency procedures of the service provider in regard to backup, updates, restore and disaster recovery.

4.3.4 **Knowledge and integration**: Deeper knowledge of cloud computing is essential as working of the service is totally dependent on the service provider. Similarly, integration is an issue as it will be difficult to integrate equipment used in data centers to host data with that of peripheral equipments in the organisation such as printers, USB drives, etc.

5. University Libraries of North East India:
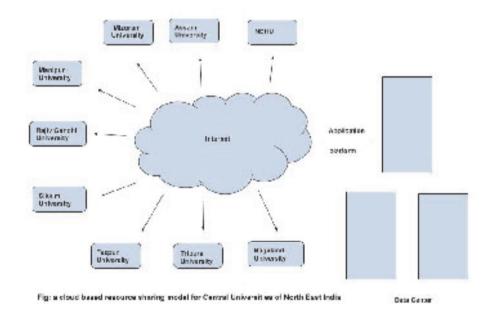
5.1. Assam University Library: Assam University came into existence through Assam (Central) University Act, 1989(Established under an Act of Parliament). It was established in 1994, since then the University is steadily becoming an excellent centre of learning. The University Library has a stock of total 118,296 (apox.) books. The library is also subscribe J Gate and UGC infonet. [1]

5.2. Manipur University Library: Manipur University was established on 5th June, 1980 under the Manipur University Act. 1980, as a teaching cum-affiliating University at Imphal with territorial jurisdiction over the whole of the state of Manipur and it was converted into a Central University from

13/10/2005. It has a Central Library established in 1962. Now it has a collection of more than 1,61,000 books and subscribes to more than 200 printed journals. The library is a member of UGC-INFONET and DeLCON Consortium. The consortium provides current as well as archival access to more than 8600 core and peer-reviewed journals and nine bibliographic databases from 23 publishers and aggregators in different disciplines. [4]

5.3. Mizoram University Library: Mizoram University was established as a Central University by an Act of Parliament of India on 25th April 2000 and started functioning from 2nd July 2001. University Library System has a fully automated Central Library and computerized Bibliographic information, which are accessible through Campus network (Intranet) and Web OPAC. Moreover RFID (Radio Frequency Identification Management System) was also installed for security for the Mizoram University Central Library in 2010. Collection of Central Library includes 86,517 number of books, 74 Thesis, 248 Dissertations and 8,026numbers of Bound Volumes of Journals. The Library at present subscribes to 238 Journals, 42 General periodicals and 21 dailies. [5]

5.4. Nagaland University Library: Nagaland University is a Central University established in 1994 by the Government of India in Nagaland with campuses at Kohima, Dimapur, Lumani and Medziphema. There are 54 colleges affiliated to it, with a total student of around 24000.Nagaland University is a Central University created under the Nagaland University Act passed in 1989 by the Government of India in the state of Nagaland. The Library altogether has 89327 volumes of books since its inception and has grown to 32916 volumes. The library is a member of UGC-INFONET and DeLCON Consortium. [6]

5.5. North Eastern Hill University Library: North-Eastern Hill University was set up by an Act of Parliament and notified on 19th July 1973.The University Central Library whose membership includes university and college teachers, postgraduate and undergraduate honours students and members of the non- teaching staff has a collection of close to 2,90,000 books, 38,000 bound periodicals and it subscribes to 316 foreign and 366 Indian current journals. [7]

5.6. Rajiv Gandhi University Library: Library was established in the the year 1984. the library has 59000 (approx) print documents, more then 300 CD/DVD, The UGC-Infonet Consortia of INFLIBNET Center is providing access facility to more the 5200+ e-journals, 331 Dissertation, 218 Thesis. [8]

5.7. Tezpur University Library: it was established in 1994. The library has 77,286 (approx) volumes of print documents, more than 2286 CDs and subscribed 919 titles of current journals. The UGC-Infonet Consortia of INFLIBNET Center is providing access facility to 7721 (including 525 on perpetual basis) e-journals and eleven databases. And they are also a member of DeLCON Consortium. [9]

5.8. Tripura University Library: The Central Library of Tripura University came into being in 1987 with an initial collection of 18780 books and documents. Now it has collection of 1,11,752 (approx) books and documents. The library subscribes 141 journals both national and international in the area of subjects taught and e-journals under UGC INFONET program. Approximately 8000 e-journals with millions full text articles in all subjects/disciplines are usable under the UGC INFONET program. They have E-Databases like Elsevier Scopus, Capitaline Plus etc. [10]

5.9. Sikkim University Library: started in the month of February, 2008. the library has grown with 29,000 books and 507 CD/DVD across various academic discipline. the library also has a collection of 1178 Braille books, 21 national and local dailies are presently being subscribed by the Library and subscribed to 70 nationally and internationally renowned academic journals and two online databases, namely e-ShodhSindhu, DeLCON, IndiaStat, PsycARTICLES, CMIE: Economic Outlook. [11]

6. Resource sharing model for Central University Libraries in Cloud Environment:

Library and information centers are growing with immense documents and nowadays LIS centers acquire a huge number of Print along with larger number of of digital and electronic documents (e-books & E-journals: which are very costly). For every library, it is not possible to acquiring each and every high cost digital and electronic documents. To cope up with this problem, they take the help of Resource Sharing, Networking as well as Consortia. Now Library and information centers are adopting new technologies.

A model for university libraries to share their digital resources in a cloud environment is being proposed for Universities in North East India. North Eastern Hill University being a Central University can act as Data center-point. Central Library of NEHU will have to set up a Cloud Server and all central and states universities will participate on this cloud. The main purpose of this paper is to formulate sharing resources within 12 Universities of North-Eastern states through Cloud Environment. 12 universities libraries in North-Eastern states will establish a Public Cloud and share their digital resources. This service will be user-centric services. A digital resource includes publications of teaching faculties, rare documents. Institutional

Fig: a cloud based resource sharing model for Central Universities of North East India

6.1 Pre-requisite for cloud base model of resource sharing:
6.1.1 Institutional liability is must to accept the procedures to be adopted for resource sharing purpose.
6.1.2 Fund and support for resource sharing from the concerned institutions.
6.1.3 Workshop/ Training for library staff to understand the changed situation.
6.2 Requirements for cloud base model of resource sharing:
6.2.1. Service provider: A service provider can help to set up a cloud based service with high specification servers. Some of the service providers are: BSNL, Netmagic, CtrlS.
6.2.2. A dedicated, Windows-based desktop.

Fig: Requirements for cloud base model of resource sharing

(Source: web)

6.2.3 Internet connectivity: National Knowledge Network will give best connectivity for this purpose.

6.2.4 Power Supply: 24 × 7 power supply is very essential.

6.3 Benefits of cloud based resource sharing model:

6.3.1. **Cooperation:** A group of libraries can come together and can put their resources at one place, which in turn will enable them to provide access to more number of resources to their end users. It encourages the cooperation among institutions.

6.3.2. **Cost effectiveness:** It is cost effective, only pay per use.

6.3.3. **Flexibility:** Cloud computing offers much more flexibility than other local network computing systems and saves time plus cost for organizations. It is possible for organizations like libraries to expand the services anytime, by requesting for an additional space on the servers.

6.3.4 **Better mobility:** The staff and the users of the library can connect to the library servers from any place or from wherever they are, rather than having to remain present at their desks by having a PC and Internet access.

6.3.5 **Highly automated:** The IT or library staff need not worry about keeping the software up-to-date. The cloud service provider takes care of updating software as and when new version is released. When the server is updated everyone using the service also get access to the new version without updating anything on their end.

6.3.6 **Controlling Publishers' Monopoly over E-resources:** Publisher's monopoly over the prices of E-resources (EBooks, EBooks) can be controlled with a group effort and participated libraries can save a huge amount of Funds which can be utilised for other purposes.

6.4 Problems of cloud based resource sharing model:

6.4.1. Lack of pioneering institution: Who take the initiative is a main question arise in regards of pre

6.4.2 Selection: another problems relating with resource sharing is selection of resources. According to objectives and goals of institution, every library or a group of library should select resources. sometimes it shows that lack of awareness or interest vendors sell some unnecessary resources.

6.4.3. Maintenance: Proper maintenance of hardware and software is a very important issue for the successful implementation of a cloud based model. On the other hand, proper maintenance is costly and it requires skilled professionals.

6.4.4. Difficulty in mutual agreements: Participated Institutions may not came to a uniform agreements

7. Cloud Computing developed in India:

The Centre for Development of Advanced Computing (C-DAC) has taken some cloud initiative in India, they are: [2]

–Meghdooth: Open Source Cloud Stack

–Scientific Cloud Computing: Scientific Cloud Stack, IaaS, StaaS, PaaS

–E-Sikshak: C-DAC's E-Learning on Cloud

–MANTRA: MAchiNe Assisted TRAnslation System over CLOUD

–Disaster Recovery: (DR) solution on Cloud

–eSanjeevani : Web based Telemedicine Appn, CDAC Mohali.

–Megh Shushrut: C-DAC Hospital Mgmt Information System

8. Conclusion:

Cloud computing is the future for the enhancement of library services to the learners. In case of distance and open learning it can play a big role for reaching the unreached. But to implement cloud computing in a proper manner, there are several problems which are also observed at this moment. If these problems can be solved and a cloud based model can be implemented for sharing the library resources, then in near future it can be a great support to the users of the university libraries.

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STATUS OF DATABASE CREATION IN THE STATE FUNDED GENERAL UNIVERSITY LIBRARIES OF WEST BENGAL

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Abstract

The present article provides information related to status of database creation among the state funded general university libraries of West Bengal. It also tells about the use of library management software by different university libraries and problem faced by them for implementing library automation properly.

1. Introduction

In West Bengal the library automation was started first by Calcutta University in 90's decade. Latter, all other State General Universities started library automation gradually. But due to certain problems most of them are unable to reach in its ultimate goal. The problems like proper library planning, fund crisis, staff crisis, lack of proper training to the staff are the most important. That is why they belong to different stages in database creation by using library automation software. Now the world is looking fast to provide variety of ICT based library services to its client. So it is necessary to finish the work of database creation very fast. The present article provides information related to status of database creation among the state funded general university libraries of West Bengal. It also tells about the use of library management software by different university libraries and problem faced by them for implementing library automation properly.

2. Objectives

The following are the objectives of the study:
1. To provide general information related to year of establishment of the university libraries, access facility, starting year of library automation.
2. To tell about kinds of library management software used by the libraries.
3. To reveal the status of database creation.
4. To state the problems faced by the libraries in library automation.

3. Review of related literature

Mahapatra and Padhi (2004) highlight the problems of IT application in Orissa libraries. They found that, lack of definite and clear goal by the parent organisations puts the libraries in a fix; as a result the real purpose of IT application is being defeated. Suku and Pillai (2005) present the results of a survey to assess the status of automation in the university libraries of Kerala. It is seen that library automation has been rather slow in Kerala due to various reasons like absence of University Librarian in most of the libraries; and lack of adequate qualified professional staff. 50% of university libraries in Kerala introduced comprehensive automation of housekeeping activities. Mondal and Bandyopadhyay (2010) examines the

situation of IT application and related manpower problems in government aided general degree college libraries of Burdwan Sadar (North and South), West Bengal. The findings of the study shows that, the government aided general degree college libraries of Burdwan Sadar are still in the state of infancy with regard to IT applications. Jayaprakash and Balasubramani (2011) investigate the status Automation in university libraries in Tamilnadu, India. Result shows that all libraries feel that computerization has increased productivity in terms of work output and information retrieval and helped in extending library services. The libraries have, however, divided opinions about the other prospects of computerization like economy in expenditure, enhanced the prestige of the library and increased user satisfaction. Siddiqui (1997) reports the use of information technology in seven university libraries of Saudi Arabia. The survey results show that information technologies used by the academic libraries are: automation, networks, electronic mail, online searching, CD-ROM searching, telex-facsimile, and personal computers. They found that, the status of Information technology (IT) in Bangladesh is not at par with the other developed countries, but recently the situation has changed significantly. Ramana and Rao (2003) have conducted a survey on the use of IT in central universities in India. The analysis has shown that, Central University libraries have made considerable progress in database activity as most of them have created one or more local databases. The level of response shown to the present survey indicated that Central University libraries continue to be more interested in using IT in future.

4. Methodology

Survey method has been used to conduct the study. To complete the survey structured questionnaire was prepared and e-mailed to the librarians/in-charges of the seven state funded universities individually in the month of September 2012. In-spite of several telephonic communications little response is received. Later the university libraries were visited physically for data collection. Latter, collected data has been analysed with the use of simple statistical techniques. Data has been presented in the form of tables and/ or charts using MS-Excel 2007 software.

5. Data analysis and interpretation

Name of Universities	Year of Establishment	Year of NAAC Visit (Latest)	NAAC Grade Point	Year of Library Establishment	Type of Library Access	Starting Year of Library Automation
C.U.	1857	2001	A	1872	MIXED	2002
J.U.	1955	2008	A	1955	MIXED	1992-1993
B.U.	1960	2007	B++	1960	CLOSED	2001
K.U.	1960	2008	B	1960	MIXED	2008
R.B.U.	1962	2002	4 STAR	1962	CLOSED	2004
N.B.U.	1962	2006	B++	1962	OPEN	1999
V.U.	1981	2008	B	1986	MIXED	2001

5.1 General information

Table 1 gives general information about state funded general universities of West Bengal with its libraries which comes under the study. Most of the libraries related to the universities were established in the year of their establishment, except C.U. and V.U. which were established 15 and 5 years later. N.B.U is the only university which provides open access library facility to its users. On the other hand, B.U. and

R.B.U. provide closed access library. Rest of the university libraries has mixed access. Library automation was first started by C.U. in the year 1992-93, followed by N.B.U. in 1999. But K.U. started its library automation in the year2008, almost last of the series.

Table 2 Software used by the library

Name OF University	Operating System			Library Management			Digital Library				DBMS		Antivirus				
	DOS	WINDOWS	LINUX	CDS/MISIS	SOUL	LIBSYS	GSDL	DSPACE	FEDORA	CUSTOMISED	MSSQL	POSTGRESQL	NORTON	KASPERSKY	QUICKHEAL	EKILL	TRENDMICRO
C.U.	N	Y	Y	N	Y	N	N	N	N	Y	Y	N	Y	N	N	N	N
J.U.	Y	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	N	N	Y	N
B.U.	N	Y	Y	N	Y	N	Y	Y	N	N	Y	N	N	Y	N	N	N
K.U.	N	Y	N	N	Y	N	N	Y	N	N	Y	N	N	Y	N	N	N
R.B.U.	Y	Y	Y	Y	Y	N	N	N	N	N	Y	N	N	N	Y	N	N
N.B.U.	Y	Y	Y	N	Y	N	N	Y	Y	N	Y	N	Y	N	N	N	N
V.U.	N	Y	Y	N	Y	N	N	Y	N	N	N	Y	N	N	N	N	Y
Total	3	7	6	1	6	1	1	5	1	1	6	1	2	2	1	1	1
Percentage	43	100	86	14	86	14	14	72	14	14	86	14	29	29	14	14	14

5.2 Software used

Kinds of software used by the libraries are depicted in Table 2. Regarding Operating system, as seen from the table all the 7 (100%) university libraries used Windows followed by Linux with 6(86%) libraries

and Dos with 3(43%) libraries. About 6 (86%) libraries used Soul as library management software. CDS/ISIS and Libsys are used by only 1(14%) library as library management software. On the other hand 5 (72%) libraries used open source software Despace as digital library management software. C.U. used customized software as it dispatch the digitization work to a private agency. 6(86%) libraries used MS-SQL as a backend DBMS. Only one library used POSTGRESQL as DBMS. There is a variation in using antivirus software. Out of 7 university Libraries antivirus software NORTON and KASPERSKY are used by 2(29%) libraries. Other libraries used single different kinds of software such as RBU used QUICKHEAL; J.U. used EKILL and V.U. used TRENDMICRO.

Table 3 Area of Library Automation

Name of University	Acqui sition	circ ulati on	Catalog uing	Serial cont rol	OPAC	Bar code Generatio n	Databa se creatio n	Digit izatio n	Refer ence servic e	Financial Manageme nt	Office file work	Stock verifi catio n	Securit y check gate
C.U.	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N
J.U.	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	N	Y
B.U.	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
K.U.	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N
R.B.U.	N	N	Y	N	Y	N	Y	Y	N	N	N	N	N
N.B.U.	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N	N
V.U.	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
Total	3	5	7	4	7	5	7	7	5	1	3	2	1
Percenta ge	43	72	100	57	100	72	100	100	72	14	43	29	14

5.3 Library Automation

Table 3 shows that three kinds of housekeeping operation viz., cataloguing, opac, database creation and Digitisation work have computerised by all the libraries. It is also seen that 5(72%) libraries have computerised housekeeping operations like circulation, barcode generation and reference service followed by 4(57%) serial control, 3(43%) libraries acquisition and office file work, 2(29%) libraries stock verification and rest 1 (14%) libraries have computerised financial management and security check gate.

Table 4 Bibliographic database Created by the Library

of sity	Books			Serial Titles			Theses			Reports			A/V Materials		
	Total No.	Data base	%	Total No.	Data base	%	Total No.	Data base	%	Total No.	Data base	%	Total No.	Data base	%
J.	15 L	5L	33	-	-	-	22 T	22 T	100	50 T	50 T	100	10 T	10 T	100
.	6 L	3.5L	58	4 T	4 T	100	13 T	6 T	46	-	-	-	-	-	-
J.	1.6L	1.3L	81	4H	4 H	100	3.7 T	3.7T	100	2 T	6H	30	-	-	-
J.	1.5L	36T	24	-	-	-	2T	6H	30	-	-	-	-	-	-
U.	1L	5.5T	5.5	3H	3H	100	1.2T	1.2T	100	-	-	-	-	-	-
U.	2.5L	2.3L	92	7 H	3 H	43	1.3T	3H	23	1.5T	N	0	1T	1.5H	15
J.	92T	92T	100	3H	3H	100	3H	3H	100	-	-	-	1.5H	1.5H	100

L= LAKH, T= THOUSAND, H= HUNDRED.

5.4 Bibliographic database creation

Table 4 shows details of databases created in the seven University Libraries using automated software. All seven University Libraries have created database of books and theses. V.U. library belongs to the top most positions in database creation where all the books, serial titles, theses and audio-visual materials have been recorded. On the other hand K.U. belongs to the lowest order for creating all kinds of databases. N.B.U. library belongs to the second largest position in book database creation where (92%) books have been recorded. Out of remaining 4 university libraries B.U. has created a maximum (81%) percentage of books followed by J.U. with (58%) books and C.U. with (33%) of books. Regarding serial titles researcher has not got any data from C.U. and K.U. Out of 5 responded libraries 4 libraries have recorded all (100%) all its serial titles available in the library except N.B.U where only (43%) serial titles has been recorded. In case of Theses database all the 7 university libraries have created more or less some records. Out of 7 university libraries 4 libraries recorded all (100%) of its' own theses repositories. The four libraries are C.U., B.U., and R.B.U. and V.U. Few libraries have initiated some steps to create database of non book materials like audio visual collections and reports. Regarding report C.U. has recorded all (100%) of its available resources followed by B.U. with (30%) database. It is also seen from the table that C.U. and V.U. have recorded all (100%) of it's a/v materials. However, it may be noted that in terms of raw number of records taken in computer database C.U. comes to the top position with 5 lakh books, 22 thousand A/V materials in computerised database. Next comes J.U. with 3.5 lakh books, 4 thousand serial titles and six thousand theses in computer record.

Table 5 Problem Faced by the Library to apply ICT

Problems	C.U.	J.U.	B.U.	K.U.	R.B.U.	N.B.U	V.U.		Rank
Insufficient funds	Y	N	Y	Y	Y	Y	Y	6	1
Library staff are not interested in ICT adoption	N	N	N	N	N	N	N	0	4
Inadequate trained staff in ICT application	N	N	N	N	N	Y	Y	2	2
Lack of initiative on the part of library staff	N	N	N	N	Y	N	N	1	3
Lack of ICT knowledge on the part of users	N	N	Y	N	N	N	N	1	3
Increasing operating cost of ICT applications	Y	Y	Y	Y	N	Y	Y	6	1
Lack of standard library management software	Y	N	N	Y	N	N	N	2	2
Lack of support from authority	N	N	N	N	Y	N	Y	2	2
Total	3	1	3	3	3	3	4	20	-

5.5 Problem Faced by the Library to apply ICT

Table 5 depicts problem faced by university libraries for the application of ICT. It is seen from the table that 6 libraries faced the problem of insufficiency of fund and increasing operating cost of ICT applications. These two kinds of problems positioned rank no. 1. Inadequate trained staff in ICT application, Lack of

standard library management software and Lack of support from authority has positioned rank no.2, as out of 7 libraries 2 libraries faced these problem. No library has faced the problem regarding library staff, as the library staff is interested in ICT adoption.

In another way V.U. has faced maximum no. of 4 problems followed by C.U., B.U., K.U., R.B.U. and N.B.U. have faced with 3 kinds of problems. But J.U. has faced only 1 kinds of problem.

6. Findings

1. Most of the libraries related to the universities were established in the year of their establishment, except the libraries of C.U. and V.U.
2. Regarding access system, only N.B.U is providing open access facility. B.U. and R.B.U. provide closed access facility. But rest of the university libraries has mixed access system.
3. Library automation was first started by C.U. in the year 1992-93, followed by N.B.U. in 1999. But K.U. started its library automation in the year2008, almost last of the series.
4. As far as housekeeping operation is concerned, 5(72%) libraries have computerised operations like circulation, barcode generation and reference service followed by 4(57%) serials control, 3(43%) libraries acquisition and office file work, 2(29%) libraries stock verification and rest 1 (14%) libraries have computerised financial management and security check gate.
5. All seven University Libraries have created database of books and theses. V.U. library belongs to the top most positions in database creation where all the books, serial titles, theses and audio-visual materials have been recorded. On the other hand K.U. belongs to the lowest order for creating all kinds of databases. N.B.U. library belongs to the second position in book database creation where (92%) books have been recorded. Out of remaining 4 university libraries B.U. has created a maximum (81%) percentage of books followed by J.U. with (58%) books and C.U. with (33%) of books.
6. Regarding database creation on serial titles only 4 libraries have recorded all (100%) its serial titles available in the library except N.B.U where only (43%) serial titles has been recorded.
7. In case of Theses database all the 7 university libraries have created more or less some records. Out of 7 university libraries 4 libraries recorded all (100%) of its' own theses repositories.
8. In terms of raw number of records taken in computer database C.U. comes to the top position with 5 lakh books, 22 thousand A/V materials in computerised database. Next comes J.U. with 3.5 lakh books, 4 thousand serial titles and six thousand theses in computer record.
9. Regarding problem faced by university libraries for the application of ICT, six (6) libraries faced the problem of insufficiency of fund and increasing operating cost of ICT applications. Two (2) libraries faced the problem of inadequate trained staff in ICT application, Lack of standard library management software and Lack of support from authority.

7. Conclusion

Due to tremendous technological advancement it is necessary to all academic libraries (especially university libraries) to cope up with the situation. First of all they should finish their database creation work very fast. But it is observe that the database creation activity in some library are very slow; therefore, SFGU libraries need to make rigorous efforts using INFLIBNET databases for retrospective conversion of their catalogues rather than duplicating the efforts through manual data entry in each individual library. Development of databases including retrospective conversion of catalogues should be done on contract basis to enable library to render computerised services within the stipulated timeframe. Only then it will

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STUDY OF THE DEVELOPMENT OF COLLECTION AND UTILIZATION OF PUBLIC LIBRARY SERVICES IN BARRACKPORE SUB-DIVISION, WEST BENGAL, INDIA: A CRITICAL ASSESSMENT STUDY

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This paper discusses the present inconvenient scenario of public libraries in the Barrack pore Subdivision. Different aspects of public libraries such as- their development of collection, utilization, performance of staff, service, user's information needs, user's literacy etc., are highlighted in this paper. The actual reason behind this miserable condition has been tried to investigate in this paper. Then some attempts have been to evaluate the functions of public libraries in the sub divisional area. Finally the inferences and suggestions for development of library collection and improvement of public library's policy in that zone have been recommended.

INTRODUCTION

The public library is often called the people's university, because, this educational institution is open to all-rich or poor, young or old. It is the only institution, which has no age limit, no entrance requirements other than the desire to learn. It has no restrictions on progress other than those determined by the individual himself. Ralph Waldo Emerson defined the public library as the place where "a company of the wisest and wittiest men that could be picked out of all the civilized countries, in a thousand years, have set in best order the result of their learning and wisdom." According to UNESCO Public Library Manifesto "the public library should be established under the clear mandate of law, so framed as to ensure nation-wide provision of public library service." Barrack pore Subdivision is a subdivision of north 24 Parganas district in the state of West Bengal, India. It consists of sixteen municipalities, one Cantonment Board, one Census town and two community development blocks (Barrack pore-I & Barrack pore-II). It is one of the most developed regions in west Bengal. The literacy rate in this sub-division is above the average standard of the state and district. The sub-division has a strong human resource connected with many colleges and technical institutions, universities. In addition, the sub-division is enriched by number of active public libraries. Some of them are century-old and has been carrying on the responsibility of cultural heritage of that respective area. In this paper an effort has been done to assess the gradual development of collection and standard of service of those public libraries.

SCOPE

For the present study, the active public libraries of total Barrack pore Sub-divisional area were chosen. The survey work was done for data collection among these libraries. Government-sponsored, non-government, government-affiliated all type of public libraries included in this survey work. There are eighty-six public libraries existed in this sub-division which consist of one district library, one sub divisional library, one area library, eighteen town libraries, forty-six primary unit libraries, nineteen rural libraries in Barrack pore sub-division. The present paper has been built on the collected data from these libraries.

LITERATURE REVIEW

The literature related to this paper includes papers that present case studies or recommendations for how librarians and libraries can develop the policies regarding library's collection and quality of service in a systemic way. Library collection development is the process of meeting the information needs of the people (a service population) in a timely and economical manner using information resources locally held, as well as from other organizations. Collections are developed by librarians and library staff by buying or otherwise acquiring materials over a period, based on assessment of the information needs of the library's users. **Paramjeet K Walia** and **EsmatMomeni(Walia,2011**) has carried out a research-study on the topic and showed how public libraries are providing access to information resources and whether the book collections of the libraries are adequate as per international standards. It has also suggested certain improvements for the existing system. His paper has aimed to determine the adequacy of the public library system with respect to the total population as well as the viable population of different regions of Tehran city. **Waldomiro CS Vergueiro (Vergueiro,1997**) reviewed the development of public libraries in Brazil, taking a close look at the reasons why such institutions have not developed their collections in a systemic manner. They deposit the necessity of organizing collection development activities rationally. He argued that a better management of public library collections can bring concrete benefits to every society, as well as help librarians to obtain better support from their clientele and from more senior management. Elizabeth Futas (Futas, 1982) said that building a collection in public libraries entails knowing the publishing markets and matching it to the community to be served. **Marta Seljak (Seljak,1996**) studied the Slovenian co-operative online bibliographic system and services (COBISS), a development of a shared cataloguing system based on a network of 99 co-operating libraries and linked with the Institute of Information Science Union Catalogue (COBIB). He demonstrated how this network of electronic catalogues enables effective online public access and allows co-ordinated collection development policies and interlending based on the use of electronic mail. **Seamus Seanlon (Seanlon, 2011**) have worked on the book collections on the Taliban in public libraries and argued that more extensive collections should be built despite the media and the general population's antipathy to the war. A comprehensive collection for students, scholars, the public and the next generation of officers about a contemporary war which has propounded financial, political and military sequel should be a priority for collection-building librarians. **Michael Stoller (Stoller, 2006**) studied on the collection development expenditures between 1994 and 2004 among New York's Associations of Research Libraries (ARL) largest and smallest public and private academic libraries and showed that libraries have largely responded to the revolutionary changes of the last decade very conservatively, retaining their commitment to monographic acquisitions and to their paper collections even as they have built new, electronic libraries. Digitizing or digitization is the representation of an object, image, sound, documentor a signal (usually an analog signal) by a discrete set of its point or samples. The result is called digital representation or, more specially, a digital image, for the object and digital form for the signal. For a document the term means to trace the document, image or capture the "corners" where the lines end or change direction. Yan Quan Liu (Liu, 2004) investigated current practice in digitizing library materials in the USA. Building a good digital collection has been a common task, pervasive in all types of libraries. Digitization becomes more and more crucial, affecting libraries while they work towards becoming digital. Roxanne Missingham (Missingham,
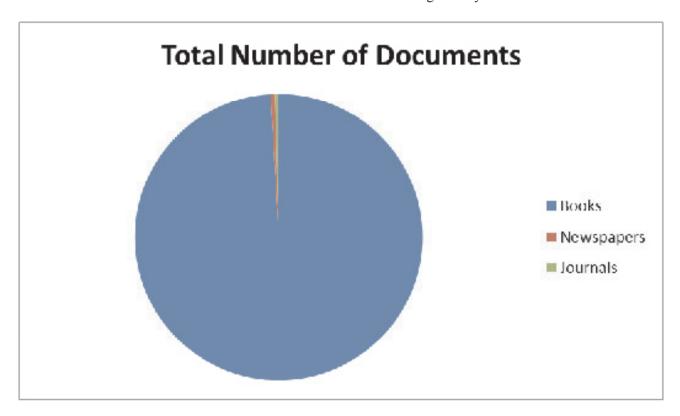
2009) studied on Electronic Resources Australia and showed that ERA has provided access to quality online resources for approximately 8.5 million Australians. The work has led to careful consideration of issues including subscription periods, governance, funding models, "best price" and collaboration with vendors for marketing and promotion. Interlibrary lending or interlibrary loan or document delivery is a service whereby a user of one library can borrow books or receive photocopies of documents that are owned by another library. The user makes a request with their local library, which acting as an intermediary, identifies owners of the desired item, places the request, and receives the item, makes it available to the user and arranges for its return. The lending library usually sets the due date and overdue fees of the materials borrowed. **Megan Allen (Allen,2003)** studied on patron-focused services in three US libraries and showed that some libraries are exploring new models of collaboration among the interlibrary loan to improve service and increase user satisfaction. One public libraries and two university libraries present models in which funds were set aside to purchase materials requested by library users through interlibrary loan. **John Carlo Bertot (Bertot, 2004)** proposed that the internet is an integral part of library service that can take many forms-an extension of library collections and resources through licensed and or digitized content, a gateway service through public access workstations, or as a means through which customers can interact with the library through such services as digital reference.

METHODOLOGY

For the present study, data were collected through a combination of questionnaire and unstructured interview from public libraries of Barrackpore Sub-divisional area in West Bengal district. A pilot survey was done at the initial stage of this study. Based on the results of the pilot survey a questionnaire was designed with structured mode. Two types of questionnaires were made – one for librarian and the other was for users of the libraries. Simultaneously observation process as non-participant was taken into consideration. The questionnaires were distributed to the librarians or library authorities of concerned public libraries. Besides, a thoroughly discussion was done with the users in a friendly mode about the service of the libraries and overall performance of the library staffs. For the present study, the data was gathered about collection development of libraries (nature and amount of documents during different years, tools used for book selection etc.,) and quality of services (performance of library personnel in various library services such as-circulation, reference service, etc.,) for testing the hypotheses. Survey approach was adopted using questioning method as a method of gathering data. In the full study survey responses were received from a very few libraries. Data collected in the above manner was tabulated and analyzed keeping in view the objective of the study.

DATA ANALYSIS :-
The data was analyzed using both descriptive and inferential statistics: -Table : - 1
Number of documents accessioned during the year of 2013

Books	Newspapers	Journal
18817	48	14
10,429	48	40
1501	48	52
9563	40	45
184	40	48
5808	42	52
8004	12	-
8009	45	46
15646	30	52
1849	12	-
79810	365	349

Total Number of Documents

- Books
- Newspapers
- Journals
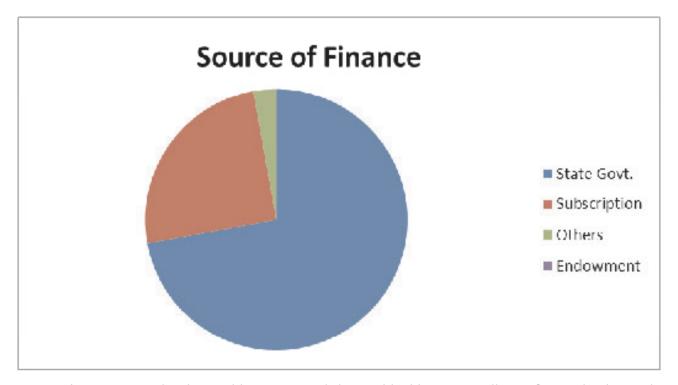
Findings: - From the above table it is proved that in the last year, among the accessioned documents, the number of books is highest and the number of journals is lowest in libraries. The number of newspapers is also in lower position. There is a big difference between the number of accessioned books and number of accessioned journals & newspapers. The significance of the above analysis is that, among the accessioned books major part of the books are purchased from the publishers by the library committee getting donation by the government of West Bengal and the rest of the accessioned books are donated to the library by the members and common local people. In the case of newspapers and journal, priority is given to newspaper as daily newspapers attract more people to the library and next weekly or biweekly or monthly journals are purchased by the library. Both newspaper and journals are purchased from the donation of government. Library's governing body should always be concerned about the wants of particular books, particular newspapers and particular journals of their choice.

Table:-2. Source of Finance in the year 2013: -

No. of respondent libraries = 10

Source	Budget	Ratio of components	Degrees
State Government	401428	0.72	259.2
Subscription	141242	0.25	90
Others	9894	0.017	10.8
Endowment	38	0.00007	0.0252
Total	552602	1.00	360

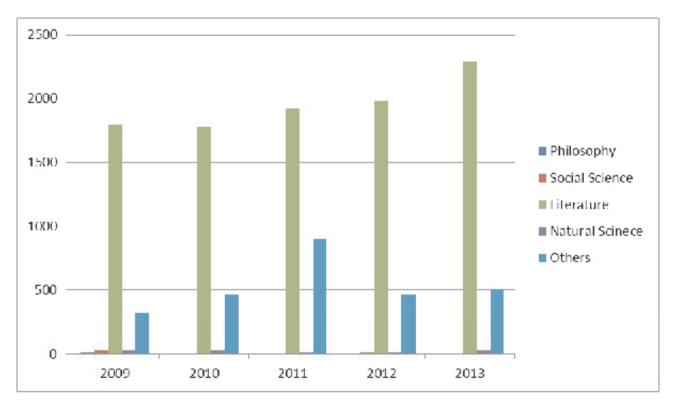**Findings:** - From the above table, it is proved that, public libraries usually get financial aids mostly from the State Government. They get satisfactory aids from subscription field. They earn nothing through Endowment channel. It has been seen that when the number of requirements of books is informed to Government sanction committee i.e. D.L.O., their granted amount of money is not sufficient to fulfill the requirements. So respective state government should increase their aids to the public libraries. Amount of subscription from members can only be increased when number of members will be increased. Aids from other sources such as local book-lover public individually may donate books and money to the library. For that libraryadministrative body should arrange various type of extra-curriculum activities such as Library Foundation Day, birthday of great poet, writers, scientists, social workers etc. and lectures, seminars, debating, cultural competition, blood donation camp, sports etc. these will draw attention of public for the development of library. Lastly there should be arranged for some reward or promotion from the behalf of state government for individual creative activities of the library personnel for discipline maintain good relationship with users. As a result, local inhabitants will be gradually interested for being member of the library.

Table:- 3Subject wise breakup of accessioned documents during last five years

Subject/Year	2009	2010	2011	2012	2013
Philosophy	12	-	1	3	2
Social Science	31	-	-	12	6
Literature	1798	1779	1925	1978	2294
Natural Sciences	30	29	12	15	24
Others	321	466	905	468	513

Findings: - The above analysis indicates that, generally public libraries of Barrackpore Subdivision spend their major portion of funds in purchasing documents in literature subject. They purchase a few number of documents in Philosophy, Social Sciences and Natural Science subject. The above analysis has signified that common people like novel, drama, i.e. books of literature. Those who are involved with subjects other than literature, seeks books of philosophy, social sciences, natural sciences & other recreational books. So the library authorities purchase more books of literature than philosophy, science, social science and others. Keeping the point of view of school and college student's textbooks and reference books of all of the subjects should be taken position in library shelf; otherwise there may be a possibility of decreasing the number of members.

MAJOR FINDINGS OF THE STUDY

The total observation has revealed some major limitations of the public libraries in Barrackpore Sub-division such as -

a) Majority number of libraries has very poor and insufficient collection. They have no collection about the subject philosophy, social science and pure science. This weakness is mainly responsible for decreasing number of users in public libraries.

b) In libraries, a large sum of money is spent for purchasing books (especially Bengali novels) than journals and newspapers. Libraries also lack recent publications and latest editions of old books.

c) These libraries generally get maximum fund from state government still. They do not earn satisfactory money through subscription and endowment process. From RRRLF (Raja Ram Mohan Roy Library Foundation) they get various library equipment's such as computers, furniture, book shelf etc.

d) The public libraries of Barrackpore Sub-division region spend maximum expenditure in purchasing of books than periodicals and newspapers. At present expenditure of competitive magazines is increasing day by day, large number of users in public libraries comes for reading these journals

regularly.

e) Library authority does not spend money in purchasing furniture and maintenance work. Audio-visual material is totally absent from these libraries. Some libraries have special arrangement for child users.

f) The work of book selection is generally done due to reader's demand or user's information needs. Besides, librarians usually take help also from Book Reviews, Indian National Bibliography, Trade Literature, online-search etc. Sometimes books are bought from book-fair. Library Committee often takes prominent role in book selection work. In collection building, importanceis given on old evergreen classic novels and stories than modern writer's work.

g) Majority numbers of libraries do not provide any computer facilities and reference services.

h) Library's hour of operation is not adequate for fulfilling the thrust for knowledge of users.

i) Earlier times, there was a provision for neo-literate section, but now it is closed due to noncooperation of the user community.

j) Among eighty-six libraries, only 10 to 15 libraries are involved in inter-library loan system. They take documents from the District Library, Khardah.

k) From the data analysis, it has been proved that, majority number of users in this region come two or three times a week in libraries.

l) Among various library facilities, library users give first preference in using reference books or newspapers or monthly journals.

SUGGESTIONS

The collection development for public libraries is probably the sophisticated activity and certainly calls for the most pervasive exercises. Here the information needs are more diffuse and the librarian has to anticipate needs –expressed or unexpressed –by providing an overall coverage to stock in most of the main subject areas. In promoting the culture of the community the public libraries should include works of literature, art, philosophy, history, biography and topography. In facilitating the non-formal education or self-education the public library should provide educational materials which include introductions or standard works on a subject. Most users of the public libraries read for recreation at one time or another and the provision of this kind of reading is essential. The public library should also encourage cultural reading which is always important in any society. Cultural reading according to Benge, involves disinterested pursuit of truth, beauty of goodness, even though it is always mixed up with other motivations such as search for social importance (knowledge is power), or for status and acceptance, or for comforts of a dream world, for the individual self-realization. In addition, the public library should provide the equipment for using audio-visual materials, micro productions and recordings. Public libraries content should be a living demonstration of the evolution of knowledge and culture, constantly reviewed, kept up-to-date and attractively presented. In this way it will help people form their own opinions, and develop their creative and critical capacities and power of appreciation. The public libraries should conduct systematic reader's surveys to identify the actual and potential needs of the community. On the basis of such identification it should organize well-balanced collection suited to the needs of the area. It should also organize a program of public information to make its resources not only available but eagerly sought by its community.

The public library is a cultural center in a community. In order to become a social and cultural center the library should organize lectures, exhibitions, cultural shows, local festivals, various competitions, etc. with the support of different social and cultural groups in a community.

CONCLUSION

In conclusion, it may be said that this paper has mainly highlighted to the present condition of the collection development and quality of services in public libraries of Barrackpore sub-divisional area, compared the present scenario with an ideal public library system and tried to investigate the reasons behind this limitations. This paper aims at demonstrating that the tough economic conditions may provide a setting for innovation and quality enhancement which may lead in turn to a corresponding growth in the library sector. During this work, potential responses and cooperation has been received from users than librarians or library authority. One of the significant reasons is the lack of awareness and obligations to the library and library users. Suitable training and education may fulfill this deficiency. Through the user survey a burning truth has been revealed and that is maximum number of users are not satisfied about the library's collection and limited area of library building especially the lack of sufficient reading room space. The quantity of document collection in different public libraries is not equal. One of the main reasons of this inequality is that, in the time of book selection, some libraries give importance in the quality of collection rather than the quantity. Keeping in view the student's needs in many libraries purchase authentic, expensive and standard textbooks and reference books. Obviously when quantity will increase quality will decrease. The process of changing libraries has started. It is the time for the profession of library and information science to tackle the task systematically. This subdivision is not ready yet to adopt this change.The new library of the Information Age should no longer be a physical depository of materials but a 'conceptual gathering', where the actual materials are dispersed all over the globe and accessed through the electromagnetic media. Modern societies need an 'information citizenry' by which we mean a citizenry that is up on the latest information. The public library system will play a lead role in this movement in future.Its contents should be a living demonstration of the evolution of knowledge and culture, constantly reviewed kept-up-to-date and attractively presented. In this way, it will help people

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SERVICES BEYOND THE WALLS BY USING LIBRARY BLOG AN EXPERIMENT IN UNIVERSITY OF CALICUT, KERALA.

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Abstract

Information and Communication Technology (ICT) has enables to break the obstacles of time and space of library services. *During the earlier periods, entry to libraries were restricted to clergies. The situation was changed and the democratization has been occurred. Formerly users were not able to take books out of library because they were chained. During the course of time it was also changed. Formerly closed access system was followed in libraries, gradually situation was changed and became open access. Presently due to influence of ICT library services have reached out of their walls. The experiment of Arabic department Library, University of Calicut has been briefly discussed in this paper.*

Introduction

There are two remarkable inventions in the history of man kind. The first one among these is the invention of wheel which enabled us to travel from one place to another place. The second one is the inventions of computer, Internet and communication technology, which helped us to bring the whole world in to our hands. This has affected each and every spheres of human life. Library and information field is not an exception.

Formerly people had to travel miles and kilometers for getting a piece of information. But today everything is available by a single click. The problem he faces is not the shortage of information, but the abundance of information. Presently conventional usage of library has been decreased. Most of the users are searching their relevant information sitting their seats or rooms in lieu to physical visit. At the same time lakhs of funds are being utilized for purchasing new collections in each libraries. In short most of the resources rest in their respective shelves without utilization. The solution to this problem is to make available the library service beyond the walls.

Review of related studies

Deferent studies have been done on library beyond wall and web based library services. A few among have been given here.

In terms of library perspective, library beyond the wall means web-based library services provided via the web. This service make the conventional library services available to the irrespective of their time and space. Definitely it will increase the usage of libraries. (Madhusudanan and Nagabhushanan, 2001).

According to Arora (2001), web based library services are the technology based modified services of libraries which helps to increase the usage of library in the Internet era.

The benefit of web based services have been discussed in a paper by Ahmed and Pathak. They opined that "library users value the services that they access from their desktops because the web-based library services save lot of time and traveling cost". (Ahmed, 2007; Pathak et al., 2011). The importance of outlook of webportals has been identified by Kanamadi and Kumbar. Their paper opined that library portals should be attractive and informative. It is the representation of library in the we world. Library portal reflects the strengths and weaknesses of the libraries very effectively. Libraries should make consistent efforts to provide web-based services to their users (Kanamadi and Kumbar, 2006). Ganeshan and Pandian opined that, starting the web based service is not an end, by starting the web based services, library is not supposed to stop the conventional services. (Ganesan and Pandian, 2004).

Benefits of web based services

Users' point of view

1. Users can use the resources any time irrespective of working hours including holy days.
2. Users can access the resources without coming to the library.
3. Simultaneously 'n' number of users can use the same resource.
4. Copying and preservation is very easy.

Librarian's Point of view

1. It will increase the usage of library resources.
2. No need of using multiple copies of same resource.
3. It is easy to preserve digitized resources than printed one.
4. No need of threat of stealing or tearing pages.
5. Library resources can be used even holy days.

Arabic Department Library

Arabic Department Library is one of the top Libraries in India in Arabic language & literature and Islamic studies. There are around 12000 books on various topics such as - Islamic studies, Arabic Language, Arabic Literature etc. in Arabic, English and Malayalam Languages. The Library has unique sections such as - Competitive examination, Indo- Arabic Literature, Children Literature ,Theses section, Migrated Literature, Biographies etc. In addition to the department students in the campus, students from Arabic and Oriental colleges and research scholars from different universities in India are visiting the library daily.

cuarabiclibrary.blogspot.in

A web blog is created by the department for providing library and information services beyond the wall. It is built by using the "Blogger" a free blog publishing software of Google. The domain name of the blog is Cuarabiclibrary.blogspot.in.

Figure 1. Home page of the Blog

The printed materials are scanned by using smart phone as the device and "camscanner" as the software. The scanned pdf files are saved the Google drive. There are 13 additional links in the home page. They are -

1. **Syllabus** - It has been given syllabus of all courses (MA, Mphil, Diploma courses) offered in the department.
2. **Question papers** - It has been given all question papers of all courses including entrance tests of various courses and PhD per-Qualifying examination.
3. **Research** - Titles of research topics with their supervising guide under three research centres in Arabic under Calicut University have been given under the link research.
4. **Theses & Dissertations** - Lists of PhD theses, Mphil dissertations and PG project reports, which are available in the department library have been given under this link.
5. **Library Catalogue** - By clicking the link library catalogue, automatically it goes to the OPAC of University Library (CHMK), it is the union catalogue of all departments.
6. **UGC NET** - By clicking this link, it will goes to the page there are previous years question papers with answer keys of general paper and subject papers.

Figure 2. UGC- NET
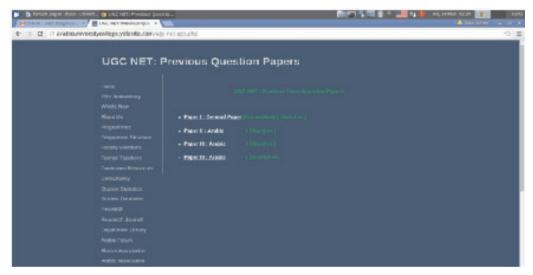
7. **Maktabat Ashamila** – It is the world largest Arabic database, which has more than 16000 Arabic and Islamic studies books as full texts, which can be downloaded and used.

Figure 3. Maktaba shamila

8. **PSC** - It is the link of all previous question papers of competitive examinations conducted by Public Service Commission (PSC) including LPSA to Assistant professor.
9. **New arrivals** - Images of the prominent new arrivals have been given under this link.
10. **E-journals** - Links of all electronic journals published in India has been given under the link e-journals.

Figure 4. E-journals in India

11. Spoken Arabic – By clicking the link spoken Arabic, it will go to the world popular spoken Arabic website ttps://www.madinaharabic.com.

Figure 5. Spoken Arabic

11. **Downloads** – In the download link, library membership form for department students and library reference certificate for outsiders. They can download and use as and when needed. In addition to these one popular Arabic text on literature " History of Arabic literature by Henna Fahoori (the print version of the same is not available today) has been given.

12. **Contact us** – Contact details plus how reach details have been given under this link.

Conclusion

ICT has influenced the life style of humanity. It has affected the service sector greatly. In the current scenario, users of the library willing and preferring to get their relevant resources   without physically coming to the libraries. During the earlier time   librarians were waiting their users for providing the information, but today a paradigm shift is needed and services are to be made available beyond the walls of libraries. In this experiment it was a great success. 3208 page views have occurred after the launching of this blog within 7 months. In this scenario it can be interpreted that that much users used the library.

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STATUS OF AUTOMATION IN COLLEGE LIBRARIES OF ASSAM: A CASE STUDY OF GHANASHYAM TALUKDAR MEMORIAL LIBRARY, BARNAGAR COLLEGE, SORBHOG, BARPETA

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Abstract:

This paper studies the present status of automation of college libraries in Assam. Library automation is one of the major factors of ICT that are used to replace manual systems in the library. Automation is a process of using the machineries for working and saving the human power and time easily. It helps the college libraries to provide additional services to the users with existing staff in a short span of time. Library automation is a phenomenon through which computer based information processing is used for operations of library system and library services. During the process of automation understanding and analyzing the various problems are faced by management and staff. Studies have shown that automation plays an important/ significant role in educational, industrial and technological progress of a country. The study is based on primary data by using structured questionnaire. Data are analyzed and interpreted using appropriate statistical tools.

Keywords: Automation, Library Automation, Library Service, College Library, Information Technology and ICT.

1. INTRODUCTION

Library is a part and parcel of any institution. It is soul of any learning institution. College library plays an important role in providing overall library and information service to the patrons. The history of library automation is sufficient old now. It started in early fifties in the United States of America. During 1960s some experiments were carried out in India in this field but very sparingly. Library automation, is an up to date method to help libraries and library patrons of effectively use library resource, is new streamlined because of computers and software. Automation of libraries reduces the repetitive work and saves time, brings accuracy and speed. It may be defined as the application of automatic and semi automatic data processing machines (computer) to perform traditional library housekeeping activities such as acquisition, circulation, cataloguing, reference and serial control.

2. CONCEPT AND MEANING OF LIBRARY AUTOMATION

The word "automation" has been derived from Greek word "automose" means something which has power of spontaneous motion or self movement. The term automation was first introduced by P.S. Harder in 1936. He defined it as the automatic handling of parts between progressive production processes since then the term has been applied to a wide variety of automatic machinery and automatic system. Automation is the name given to an automate system of working. It is a technique or a process to make a system automated

i.e. self-active. For this the electronic machines are used to automate any libraries. Thus library automation means the application of various types of machines to perform different functions and operations of the organization. Generally automation is a process of using the machineries for easily working and saving the human power and time. According to international Encyclopedia of library and information science "Library automation is the use of automatic and semiautomatic data processing machines to perform such as traditional library activities". The main purpose of the library automation is to free the librarians and library staff and to allow them to contribute more meaningfully to spread of knowledge and information. In the simple language " when we use machineries for collection, processing, storage and retrieval of information and do another works of library like acquisition, circulation, administration, cataloguing, serial control, reference with the help of machineries that called library automation.

3. ABOUT THE COLLEGE

Barnagar College, Sorbhog is one of the premier institutions of higher education in the district of Barpeta (Assam). It is the third oldest college in the District. The Barnagar College is a co-educational institution established on 3rd September, 1962 at Nizdamaka Village under Barnagar Revenue Circle, Sorbhog and is situated on North- West side of 31 No. National Highway. The College is affiliated to the University of Gauhati, Assam. The College was brought under deficit grant- in –aid system in December 1972 by the Govt. of Assam and it has been affiliated to the UGC under 2(F) since 1969. The college has been accredited Grade B (2.54) 2nd cycle by NAAC (National Assessment and Accreditation Council) Bangalore in 2016. The college celebrated SILVER JUBILEE in the year 1988 and 50 years of its glorious existence in the year 2012.

3.1 GHANASHYAM TALUKDAR MEMORIAL LIBRARY

The Barnagar College Library was also started to function in 1963 just after one year from the date of establish. There is a garden in front of the library which is properly maintained to make the Library look attractive. Teaching and learning system are supported by library through reading material. The library is well equipped with huge collections like reference books, textbooks, journals periodicals and newspapers etc.

The present Library building is constructed with the financial assistance from the UGC under 9th Plan Period.

Total UGC Grant -   Rs. 3.5 Lakhs
From College-   Rs. 1.0 Lakh

The College Library is named in memory of the founder Principal Late Ghanashyam Talukdar Memorial library. Digital library building is under construction. The total Grant amounting to Rs. 1 crore for Digital Library building provided by the State Government. The college receives funds from UGC and State Government in developing good Library collections and ICT Infrastructure.The Barnagar College has been taking adequate care to cope with the changing educational environment and to meet the growing demands of its users.

4. Literature Review

For any research work, literature review plays a vast role by pointing out the main gaps in the study. It is conducted to get a clear understanding about the specific field of study. For the present study the researcher has gone through several cases like

Bora, Susmita (2015) analyses about the library automation SOUL software. Library is a foremost thing comes under ICT. Computer and communication technologies have brought revolutionary changes in the library housekeeping operations.

Raval, Ajay Kumar (2013) examines the some problems of library automation like technological and attitudinal problems. Both hardware and software problems are include the library automation.

Sinha, Manoj (2008) says due to information explosion, automation of library services is imperative for effecting and effective working of library and information center. The automation is defined as a technique of making, a process or a system operates automatically.

Singh, Sanay Kumar (2007), carried out the focuses on the manpower aspects of library automation in the college libraries. Library automation may be defined as a process of mechanization of library operations, which are of routine and repetitive in nature. Library automation refers to the processing of routine clerical function of the library with the assistance of computer or other mechanized or automation equipments.

Bhanja, Monalisha and Barik, Nilaranjan in their paper states that recent trend in the scenario of library management. Library automation is providing automatic service. Library automation has changed the library operation and its function and it is too fast to work.

Sarma, Roon Devi and Sarma, Rahul opinion that the system analysis of library system is an automate environment. It is carried out to understand the present status of automation, to learn how it meets user needs.

Chandra, Harish analysis the library automation software is used to automate circulation central managing all operations like issues and return of books, reminder reservation of books, OPAC, activities and also to generate various reports for office purpose.

5.   OBJECTIVES

Following are the objectives taken for the study
1) To know about the use of software in the library;
2) To find out the present status of library automation in Barnagar College;
3) To study the problem and prospects in the library automation in Barnagar College; and
4) To provide some specific suggestions to overcome the problems related in this field.

6. HYPOTHESIS

Case studies had been done in order to carry out the present study and following hypothesis were formulated
1) The library automation of Barnagar College is still ongoing process;
2) There are lots of problems in library automation in this college Library;
3) Lack of staff training;
4) Lack of fund;
5) Lack of infrastructure facilities available in the library;
6) Lack of computer knowledge of users.

7. RESEARCH METHODOLOGY

The case study method has been adopted for the present study. Data have been collected using questionnaire and personal visit to the library. Collected data have been arranged in logical tables and presented through charts and analyzed using ms excel statistical tool.

8. DATA ANALYSIS AND INTERPRETATION

The paper deals with the analysis and interpretation of data which are collected through Questionnaire. The analysis means systematic recording, gathering, manipulating and summarizing of the data to obtain answer to the research problems. To make a clear view of the Barnagar College library, data analysis has

been collected by following tables.

9. 8.1 USE OF SOFTWARE

Software packages are brain of the hardware system, which runs the system as well as helps in particular assignment. Library Management Software is capable to manage all the functionalities of a library. Management of library is completely under the librarian so he or she manage and disseminate available information. Librarian had been selected best hardware and software for automation.

Table 1: Use of Software

Sl. No.	Name of the Software	Year of Installation
1	Pansoi Software	2014
2	SOUL 2.0	2016

Source: Field Survey

From the above table -1, we have seen that the Ghanashyam Talukdar Memorial Library has used first Pansoi Software in year 2014 and then SOUL software in the year recently.

8.2 LIBRARY STAFF

Library staff is the mediator between any user and the library resources. A librarian is a person who work professionally in a library, providing access to information and sometimes social or technical programming. The librarian should be well trained in the overall management and maintenance of the automation. A librarian has vital role to the academic library. In this case, he will get initial training to the staff about the software and has to continuously update it according to the changing user needs and technology.

Table -2: List of Library staff

Designation	No. of Staff
Professional	1
Semi Professional	0
Non Professional	4
Computer trained staff	2
Total	7

Source: Field survey

The above table gives an idea about the staff strength in this college. From the figure 1 we have seen that there is only one professional and other 4 are non professionals and only 2 are computer trained staff.

8.3   STATUS OF AUTOMATION

Automation is an automatic control. It is use of various control systems for housekeeping operations such as acquisition, cataloguing, circulation, serial control, OPAC and administration. Automation is use of computer and networking technologies in the library.

Table -3: Status of Automation in G.S. Talukdar Memorial Library

Status of Automation	Yes/ No	Year of Automation
Fully Automated	No	Yet to be done
Partially Automated	Yes	2014

Source: Field survey

From the above table 3 we have seen that the process of automation was first started in year of 2014. From the table it is clear that the G. S. Talukdar Memorial library is not fully library automated. The library automation process is till need to be completed.

8.4   LIBRARY HARDWARE

Hardware is also another important element of library automation programme. The college library has purchased different types of electronic devices as hardware requirement. The Hardware configuration mainly depends on software.

Table 4: Hardware in College Library

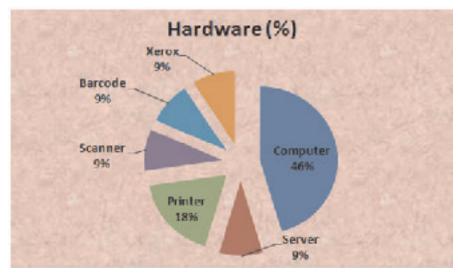| Type of hardware	Quantity	Percentage (%)
Computer	5	45.46
Server	1	9.09
Printer	2	18.18
Scanner	1	9.09
Barcode	1	9.09
Xerox	1	9.09
Total	11	100

Source: Field survey

Figure 1: Types of Hardware

From the above table 4, it shows the availability of hardware devices in the college library. One computer is used as the server and one as OPAC for the users. One laser printer have been using for printing of levels and one is for users. The Barcode reader was selected as input device for reading books and identity

cards. There are 45.46% computers in this library. Printers are available in 18.18%. The data of devices like server, scanner, barcode, Xerox machine are having same number of percentage in the library.

8.5 INTERNET FACILITY

Internet technology is one of the most important communication channels in modern world wide system for storage and transfer of information. The internet provides a better access to numerous sources of information around the world. Library is regarded as Information centre. It must provide up to date information to the user. So, Internet facility is very essential in a library.

The following table 5 depicts the internet facility in G. S. Talukdar Memorial Library.

Table 5: Internet Facility in College Library

Inernet Connectivity	Internet Section	Number of Terminals	LAN	Wi-Fi
Yes	Yes	10	Yes	Yes

Source: Field survey

From the above mention table 5, it can be seen that internet facility is available in this college. This college has Terminal in the internet section. Both LAN and Wi-Fi technology are used in this college. Regarding Internet Connections, it is used by both the staff and users.

8.6 AUTOMATED SUBSYSTEM

The library system consists of six basic subsystems. These are acquisition, cataloguing, circulation, serial control, OPAC and administration. The subsystems are interconnected and interrelated to each other.

Table 6: Automated Subsystems in the Library

Types of Sub System	Present Status of Automation
Acquisition	Yes
Cataloguing	Yes
Circulation	Yes
Serial Control	Yes
OPAC	Yes
Administration	Yes

Source: Field survey

In table no. 6 we have seen that acquisition module is not fully automated in this library and cataloguing, circulation, serial control, OPAC and administration are automated.

10. STATUS OF AUTOMATION IN THE COLLEGE LIBRARY

Library automation in India is facing an ironical problem. Some institution like IITs, IIMs, and central universities are directly funded by central government so that they have good infrastructure, good facility and update technologies. Colleges do lack in these. There is need to increase investment in case of college libraries. Some other major problems faced like lack of personnel knowledge of computer, inadequate facilities, lack of risk taking ability by the administrators, lack of fund etc. There is regular updating of the software package. The process requires computer, so when power of computer goes down due to any cause or when computer fails to functions well then there is missing of data or information store in the computer.

As the library automation is user friendly but when librarian fails to use the applications of automation then users also face many problems. So the librarian must be well expert and how to get the real essence of the enquiry, how to analyze the real needs of the inquirers, and how to present "user-friendly" systems seems to be a real challenge as well.

11. FINDING AND SUGGESTIONS

The findings of the study informed the following suggestions for developing and implementation of library automation software in this college.

1. There is only one professional staff, the librarian himself. It is very difficult to satisfy all users individually by a single Librarian.
2. ICT infrastructure of this college library is poor.
3. Apart from the theoretical knowledge, more stress should be given to practical knowledge.
4. There is the need for training and retraining of librarians in the use of information technology.
5. Professional and qualified librarian, trained manpower should be appointed in the library.
6. The library in which automation has been initiated should try to fully automate.
7. The Government of India should initiated schemes and other programmes to establish Library and Information Centres and help the existing libraries by providing financial packages for their development.
8. Librarian should select best hardware and software for automation.
9. Library should conduct training program time to time for the development of library staff;
10. Adequate funds should be allotted for automation;
11. The authority should recruit professional as well as the non professional staff with basic knowledge of computer application.
12. Librarian should convince the authority showing the importance of library automation in the present scenario.
13. Economical help should be provided by Central, state, local govt. and library authority according to library and information policy.
14. Library committee should be constituted for each and every individual library to take strong and meaningful decisions for proper functioning and developing of the library.

12. CONCLUSION

Library automation is a complex and continuous process involving various constraints faced in its implementation. Lack of ICT infrastructure, lack of sufficient staff with ICT skills and lack of initiatives from authority are found responsible for unsatisfactory process of automation in the college library. These problems should be resolved with effective planning management strategies. Automation of libraries in India are still is in decent stage. Most of the big libraries in India have already automated their libraries but when it comes to college libraries there is a very low ratio of automation process. We have been witnessing the sweeping changes all round the development of world for information organizing, processing and dissemination and retrieval of information through the computerized library Services. The G. S. Talukder Memorial library is mainly responsible for providing right information at the right time to the right users within the short possible time. This is the age of computer. Commuters have revolutionized all fields of knowledge. The need for automation in G. S. Talukder Memorial library is emphasized because of the effective handling of information, updating of information, resource sharing and to maintain profession wide standard. It can be concluded do by saying this that the library automation is very important in the library.

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SMARTPHONE APP FOR LIBRARY LIBRARIES IN HAND

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Abstract:

In modern world technological advances and devices have made humans live more convenient. The society has become more dependent on the technology as it has made communication easier and faster; at this point a click can conquer distance and time. Among them mobile phones become most popular device. We have been hearing about the approaching dominance of mobile phones now-a-days. With evolving technology mobile phones now have been upgraded with different innovate features and applications, but we rarely have been encountered such applications for library. The society where our live is changing from day to day, moving us rapidly from yesterday's well known conventional world into the e-world of tomorrow. To keep the same pace with this evolving e-world, there is a need of mobile applications for library in present days which will not only help by taking it one step advance in digitalization of library but also help the users to create a virtual library at any moment whenever they need. The paper attempts to discuss about the core designing and features of a mobile application that can be developed to use in library and how its users will be able to enjoy the services by creating a virtual library surrounding them with the help of their mobile phones. Further, it will discuss about its features and how they will help in building knowledge by interactions among the different users and how it will help in sharing library resources, information and some rare paper works, if different libraries across the world come up with an idea of mutual understanding to use a common mobile application then it will definitely help its users (individuals or libraries) in enriching their knowledge in near future.

Keywords: Mobile applications, Library, information technology, virtual library, e-resources.

Introduction : Information and communication technology has been introduced into higher education some decades ago. The Internet, originally developed for research purposes, is now commonly used in different educational settings. The technology that drives mobile devices has improved a lot in the last ten years. Mobile gadgets have gotten smaller, powerful and very useful. They are everywhere and playing increasingly greater roles in the lives of most everyone. Availability of mobile devices and its applications is rapidly spreading throughout the world and making significant improvements in many lives. We are living in the era of smart phones. No matter where we are, to make things easier all we need is a smart phone with internet connection. Now we have available a vast variety of apps that can make our daily life a lot easier. Learning using mobile technologies such as smart phones/iPhones/Kindles/iPods is boon especially for the people who are busy with their work. Using mobile technologies for getting information has become a trend now with the growth and development of technology. But there are only few examples of mobile apps that have been used to mobilise the library contents so far. In more or less numbers every library users

are using their cell phones or other devices to browse through the web searching the information, reading magazines and books. So it will be more effective if we are able to design or develop a mobile application to provide library services in our smart phones because mobile technology has now come up with the trend "Libraries in Hand" which provides the user a virtual library in their pocket.

Why to use an app :

In this era of smart phones, from children to adults all are finding their piece of information with the wireless technology. Various researches has been showed that people today are using their handhold devices to access internet from their mobiles and to carry out many interactive activities by using the various features or the apps provided on their smart phones. There are already more than 5 billion mobile phones in the world among which 1.08 billion smartphone users in the world, this means around 80% of the world's population has a mobile phone now. Now if we go deep to these data we will notice that around 74% of the total users lie in between the age group 17-26, that's definitely are the students, scholars who need this kind of devices to educate themselves. As 84% of them use their smartphones regularly to browse the internet and consume more than 582 Mbs a month, so we have a great potential to develop a mobile app for library which will obviously help them to learn and to use it for education purpose. This app will help them to connect with the library anywhere at any moment whenever the users want, by providing them a mini virtual library on their devices. By using the app they can get the latest information and can read books, magazines, newspaper, journals etc. Not only that, they can also get to know about the latest or upcoming books by different authors across the world and the app provides a feature for the reviews of the books and came up with a concept of rating the books by the users so that they can have a better experience of reading. This app also provides us the feature of Group Discussions which is an important part of a library for sharing of information among the individuals and to enrich one's knowledge. This app will be very helpful in mobilising the library contents or resources (especially the valuable information which are on the way to lost) in a portable form suitable for small screen and delivering the information/contents by multiple sharing features. In these days of technology, libraries should become more proficient in using the application to enable its users to access them anywhere from anyplace. Moreover, this app contains a feature of updating information about the upcoming event like seminars, exhibitions, conferences and workshops etc. to be held in library to its users regularly. The app will help the libraries in the most appropriate and effective ways to access its contents by the users anytime, anywhere on one's own handheld device and for sharing and marketing of its resources by developing a knowledge networking among its different users and different libraries present throughout the world. In a total point of view, we can also say that it comes up with an idea of "Libraries in Hand".

Designing The App :

The world of smartphone and mobile application is expanding at a rapid pace. Today we have a vast variety of mobile applications which are making our lives easier and more convenient. A mobile software application or mobile app is a software application designed to run on a mobile device such as a smartphone or tablet. As we all know mobile apps often stand in contrast to desktop applications that run on desktop computers, and with web applications which run in mobile web browsers rather than directly on the mobile device. Similarly, the app for the library will be the same as the other mobile apps (like the social networking apps) in this regards. Now let us discuss about the complete layout of the app to be used in the library, about its complete construction, design and what particular features it possesses and about their respective functions.

Like the other social media mobile app it has the same basic principles. Different individuals and

libraries around the world can register themselves in the app and can become its user. This app will provide them a common platform to interact among themselves. This app mainly focuses on gathering the various library contents or information present throughout the globe and to use it in according to the requirement of its users providing them a better knowledge networking service. We are focusing on the fact, "learn through discussions". For that, it must have some basic elements and advanced features to serve its users in a proper and better way. So let's put some light on the working of the app and discuss about its features and how they will perform their respective functions.

❖ **The News feed** :- Nearly every social network requires news feeds. Though this is a library app but it is somewhere similar to the other social media app as it is a common platform among different users to interact and to learn the things with the help of discussions and their reviews. In other social media users generate an enormous amount of content themselves like statues, video, audio and photo upload. Even they sometimes share else's contents. In this app too they will be able to express themselves. They will get the opportunities for self expression and to give their own reviews about any library resources/contents (e.g. any article on newspaper, magazine or about any research work or about books) which will help them to get into the things very deeply increasing their knowledge. Here the users can upload their own thinking view about any library contents as their status or check-ins along with photos where they can discuss about it, which will certainly attract the users of the app and will give them a better experience of learning. But one thing must be kept in mind of the users and developers of the app that it should be use only for learning, knowledge and information sharing purposes and this should be always strictly followed.

❖ **A Prominent and Functional search button** :- A common feature in almost all mobile applications is the use of search bar, it may be accompanied by a drop down list to present users with past searches or search suggestions or may be the live search results and filtering. When a user type into the box, the results are filtered out in a drop down style. This helps them to quickly find the content they are looking for and get rid of any other content that they don't require. The input in the search bar may be a name of a book or any other library contents allowing the user to check out the availability of that particular content in the particular nearby library from where they want to borrow it in offline mood, or if it has been already uploaded as any of the readable forms to the internet they can also avail it on their handheld devices. This will be obviously user friendly and will not put them in trouble regarding the availability of the library resources.

❖ **Discussions** :- To get a more vivid and efficient user experience of learning with the app, it is necessary to elaborate the system of the app with a feature of interacting the users among them. Communities, forums, Q& A services are one of the best and first forms of social media. Modern representatives of this type include some mobile apps like Quora, Lynda, Coursera, Reddit etc. which are fulfilling the needs of the users by sharing knowledge with the help of discussions. Today a library app also needs this kind of feature. It is not possible for an individual to read all the library contents and to learn the things whatever he needed. It will be more efficient if the users are provided such a facility so that they can share the e-resources and can discuss among themselves about any of the library contents so that they can make sure which one will be more efficient and profitable for them without wasting their valuable time in searching the materials. In the app there should be a feature of two types of interactions. One is Group Discussions or Forums allowing multiple users to take part in the conversations and another one is the private communications or chats. No matter how thrilling is the experience of public user interaction; but there are always some things that should be discussed privately and the app must contain built-in-services for secure private communication. In a total viewpoint, with this feature the app

comes with a concept of learning through discussions and probably it is more efficient to gather knowledge quickly than any other method.

❖ **Events information sharing** :- We know that different events like seminars, workshops, conferences and exhibitions are usually took place in library to enrich the knowledge of the users. But it is almost impossible for a user to get all the data about the events from a single source or sometimes they miss most of the events without getting any proper information about it. To overcome this problem, this app has a feature so that the users can regularly get the information about any such events that are going to take place. Any users (Individuals or Libraries) can upload the information to the app about the upcoming events. This will help the knowledge seekers to join the event according to their own choices. This system has been followed by the Brisbane City Library of Australia and by some of the other libraries for its users which prove out to be a very useful method.

❖ **Users Account** :- Any individual or a library can become a user of it by simply registering themselves to the app. This will allow them to use the app and to carry out their activities. It is nothing different from the other social media apps like facebook, twitter, quora, linkedln etc. It is quite similar to them; only the difference is that it will be use for learning purposes. Any users (may be a person or Library) can upload the e-resources or contents, can review the things, rate the contents and can give feedback upon them. The users will be provided their own unique identification with their bio and pictures and with their links. This is especially important when you are looking to connect with others who may not necessarily recognize you by the name. Also the privacy settings of the users will also be maintained in a serious way and the users will also be asked to maintain a healthy level of activity as it will be an app for library connecting different types of people in a common platform like those other social networking sites.

❖ **Availability of Books, Newspapers, Magazines etc. contents in the app and the users feedback mechanism** :- In the app the users will be able to share and upload the contents like books, newspaper, magazines, journals, research papers etc. as e-resources making them available to read at any moment from anywhere by the users. In addition to this, the users can upload the cover page of the book with a small summary which will help the readers to get to know about the book and will help them to choose a book according to their own choice without searching much. Further this will help the authors and publishers whoever are the users of the app to promote their upcoming books. The readers can go through the summary of the book and can decide to choose or reject the book. Now let's move to the feedback mechanism. For feedback every book uploaded to the system will have two options - reviews and ratings. The readers who have already read a book can give reviews and ratings on the basis of its level of presentation of the subject matter of the book. In this case it will be similar to the IMDb for the movies or the playstore for the mobile applications which consider ratings and reviews of the users. This type of feedback mechanism has been appreciated by all as it will help the readers to find out more worthy contents and will help them to get the best knowledge and a reliable source of information.

In addition to the books the app will have the features to get the e-resources like e-magazines, newspapers, research work and journals at any moment on our smartphones. Now-a-days we have various news apps for the newspapers which provide an online version of their newspaper to the consumers. But, without using those multiple news apps and without going to the library if we can get the newspaper in our device with the help of this single library app and will be very useful to the reader.

This app or mobile application totally follows the concept of "Libraries in Hand". With its multiple features it is able to create a virtual library around the users. From group discussions to ratings and reviews of the books it will be able to serve better the users. Later with further development; the privacy and

copyrights issues should be a matter of concern. We should make sure that the app is not misused. This app can provide an environment that we usually encounter in the library.

Conclusion :　　Technology has been evolving day by day and everyday it is attaining one step higher. It is very important for the libraries and the librarians to keep the same pace with the evolving technology. Now the mobilizations of library contents are helping them to develop their systems. More and more changes are expected within five to ten years in the field of mobile technology and its applications in the library and to attain such a level this type of app is really required which can give their users an experience of virtual library by mobilising the library contents and e-resources. Further this will be able to provide an excellent 24*7 service which is not possible both for the libraries and the users in present days. As we mentioned above the data regarding the use of smartphones so we already knew that there is a great potential for the use of such mobile applications in the library in near future. The day is not so far when we will use phone to read barcodes or RFIDs in the library and the OPACs will develop GIS sensitivity and be able to communicate with the users through the mobile phones for fines, late notices etc. The libraries and the librarians have to understand fully the capabilities and potentials of the mobile technology and its use in library by providing the quality based services matching with the needs and demands of the users. And these types of mobile applications are obviously able to provide such quality based services to the users by uniting the libraries and different readers around the world on a common platform.

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STUDY OF BEST PRACTICES IN RE-ACCREDITED PROVINCIALISED COLLEGE LIBRARIES IN BONGAIGAON DISTRICT (ASSAM)

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Abstract:

The twenty first century creates a new environment for education in general and higher education in particular. Government of India, UGC and NAAC are seriously concerned regarding how to improve standards of education and establish best practices in the universities and colleges and their libraries. In the process of institutional accreditation, libraries play a crucial role. College libraries play an indispensable role in the dissemination of information of knowledge; they should be in a position to provide effective teaching learning information support to its user's communities. Therefore, the role of NAAC in college library development has become very important. NAAC tries to develop library through the library best practices in their publication "Best Practices in Academic Libraries".

The paper discusses the process that is adopted in the academic libraries of Bongaigaon District and concludes with the adoption of the best practices in academic libraries. The paper mainly highlights the progress of college libraries after the 2nd cycle of NAAC Assessment. The prospects and problems of continuous improvement and overall performance in the institution / organization would also be highlighted.

Keywords: **Academic Libraries, Accreditation, Best Practices, NAAC Assessment, Quality in Education, User's Community.**

1. Introduction

"Libraries store the energy that fuels the imagination. They open up the winds to the world and inspire us to explore and achieve and contribute to improving our quality of life. Libraries change lives for the better."

- S i d n e y

Sheldon

The above quote by Sidney Sheldon presents a clear image of Library, the expectations that users have from libraries, services provided by the libraries etc. Libraries are definitely powerhouse of Knowledge. Librarian and other staff of libraries are expected to introduce the users to almost all the sources of information available in the library and sometimes beyond that. The advent of information communication and technology helped the new age libraries to break the boundaries of information access and provide the user easy access to information available in libraries of the world.

Library and Information services of Higher Education Institutions play a central role in enhancing the quality of academic and research environment. Keeping in view the importance of libraries in higher education various organizations of national importance like UGC/NAAC/AICTE have framed policies or guidelines defining the essential requirements and guidelines to set up a proper academic library. National Knowledge Commission report (2007) also realizes the significance or the role of different types of libraries.

The National Accreditation and Assessment Council (NAAC) strive for quality and excellence in higher education and advocates for enhancing the role of Library and Information Services in improving academic environment. Document prepared by NAAC for Best Practices in Academic Libraries says: "Best practice may be innovative and be Philosophy, Policy, Strategy, Program, Process or Practice that solves a problem or create new opportunities and positively impact on organizations". NAAC Developed a set of best practices followed in academic libraries and presented under the following four broad areas:

1. **A. Management and Administration of Library.**
   1.1 In -service program
   1.2 Observation of other library practices by institutional visits
   1.3 Staff promotional practice
   1.4 Maintenance of service areas
   1.5 Special deposits scheme
   1.6 Resource generation (through external membership)
   1.7 Resource generation (through internet service)

   1.8 Student internship programme
2. **B. Collection and Services**
   2.1 Collection development in different formats
   2.2 Compact storage of less used collection
   2.3 Library book exhibition
   2.4 Extended library opening hours
   2.5 Extended hours of service

3. **C. Extent of the Use of Services**
   3.1 User Education (Information literacy programme)
   3.2 Preparatory course for students' projects
   3.3 User orientation(Information aids)
   3.4 Library use statistics
   3.5 Library best user award User feedback practice through different formats.
   3.6 Suggestion box and timely response

4. **D. Use of Information Technology in Libraries**
   4.1 On-line information retrieval (Internet access facility).

4.2 Free browsing Unit (Internet access facility)
4.3 Broad band Internet Center (Internet access facility)
4.4 Library homepage for Information dissemination
4.5 Dynamic Library Website
4.6 User feedback through library homepage
4.7 24/7 Access to e-resources.
4.8 Access to Digital repository through library website.
4.9 Digital repositories
4.10 Using self developed integrated Library software (Automation of in-house services).
4.11 Web OPAC
4.12 Campus-wide local area network (LAN) facility
4.13 Database creation using international standard format
4.14 Electronic surveillance system

2. Statement of the Problem

The objective of the study is to address the questions that arise after NAAC's assessment and accreditation to the college libraries like whether the infrastructure, services, facilities, learning resources etc. are being compatible with changing learning environment.

3. Scope of the study:

The area covered under study is limited to the provincialised College Libraries of Bongaigaon district affiliated all under Gauhati University. Three College Libraries have been selected for the study. The selected college libraries have different types of disciplines mainly Arts, Science & Commerce.

4. Aims and Objectives of the study:

The study was carried out to achieve the following objectives:
i.   To assess the progress of the College Libraries of Bongaigaon District after 2nd Re- accreditation of NAAC's assessment.
ii. To examine the implementation of the guidelines imparted by NAAC in the College Libraries of Bongaigaon District.
iii. To study the present scenario of the selected College Libraries of Bongaigaon District.
iv. To study the outcome of the NAAC's assessment and accreditation for the College Libraries of Bongaigaon district.

5. Methodology

In order to study the assign topic keeping the above scope and objectives in mind,   the methodology and technique applied are survey method, questionnaire technique. To collect the necessary information a questionnaire is prepared for the librarian of the college.

6. Analysis
6.1 General Information of College Libraries.
There are three colleges in Bongaigaon district which are NAAC accredited. The following table

Table No. 1 College Libraries of Bongaigaon District under Study

Sl No	Name of the College	Name of the Library	Year of Establishment	Year of 1st Cycle of NAAC Accreditation & Grade	Year of 2nd Cycle of NAAC Accreditation & Grade	Suggestions by NAAC in re-accreditation
1	Abhayapuri College	Central Library Abhayapuri College	1955	2004 (B)	2015 (B) (2.55 CGPA)	1. Automation Process should be upgraded 2. Barcode Technology should be Implemented
2	Birjhora Mahavidyalaya	Birjhora Mahavidyalaya College Library	1986	2004 (B)	2015 (B) (2.72 CGPA)	1. Automation process should be upgraded. 2. Digital Library should be built. 3. Number of Journals should be increased.
3	Bongaigaon College	Bongaigaon College Central Library	1964	2004 (B+)	2012 (B) (2.71)	1. Automation process should be upgraded.

From the Table No.1 it is seen that Abhayapuri College is the oldest College in the district. The first cycle of the accreditation was in the Year 2004 and Bongaigaon College has been graded B+. The second cycle of NAAC Accreditation took place between the year 2012-2015 where Birjhora Mahavidyalaya was graded (B) with 2.72 CGPA. All the three colleges have been suggested to upgrade the automation with other basic requirements. Moreover, the implementation of Digital Library has been suggested in the 2nd Cycle of NAAC Visit.

6.2   Progress of College Libraries after 2nd cycle of NAAC Assessment

Table No. 2. Major Areas of Development after NAAC's Assessment

Sl No.	Area of Development	Abhayapuri College	Birjhora Mahavidyalaya	Bongaigaon College
1	Computers	3 + (15 Increased) Total = 18	7 + (2 Increased) Total =9	2 + (1 Increased) Total = 3
2	Internet Facility	Yes	Yes	No
3	Wi-Fi Facility	Yes	No	No
4	N-List Facility	Yes	Yes	Yes
5	Infrastructural Development	Yes (Tiles in Library)	Yes	Yes (Reading Room & Librarian's Chamber)
6	Separate Reading Room	No	Yes	Yes
7	Well Organized furniture	Yes	Yes	Yes
8	Efficient Seating Capacity	Yes (50)	Yes (60)	Yes (80)
9	Increase of Collection Development	Yes	Yes	Yes
10	Increase of Periodicals	Yes (46)	Yes (15)	Yes (10)
11	OPAC Facility	Yes (2)	Yes (1)	No
12	LAN Connectivity	Yes (18)	Yes (9)	Yes (3)
13	Network Version of SOUL	Yes (SOUL2.0)	Yes (SOUL2.0)	Yes (SOUL2.0)
14	Digital Library	Yes (In Progress)	No	No
15	CCTV Camera	Yes (4)	Yes (0)	Yes (2)

Table No. 2 reveals that after NAAC's assessment the college libraries of Bongaigaon District are improving in terms of Computerization, infrastructural developments etc. Increase in Collection Development & periodicals could be seen. Abhayapuri College has connected their Library with 18 Numbers

of LAN Connections in computers and the project of Digital Library is in Progress. CCTV Cameras for security surveillance is implanted in all three colleges.

6.2   Collection Development

Different users have different information need. Their preference is also different from each other. Different reading materials and existing collections at present are shown below.

Table No. 3 Present Status of Collection Development in Colleges

Sl No.	Name of The College	Books	Journals & Magazines	E-Resources	Newspaper	Audio-visual materials	Publications	Others
1	Abhayapuri College	22,564	45	N-List	7	50	55	-
2	Birjhora Mahavidyalaya	12,000	15	N-List	4	200	100	-
3	Bongaigaon College	38,800	10	N-List	6	45	15	-

From the above Table it is revealed that Bongaigaon College is having highest number of collections in books and Abhayapuri College has highest number of Journals & Magazines. N-List service of E-Resource is availed by all the three colleges in the district.
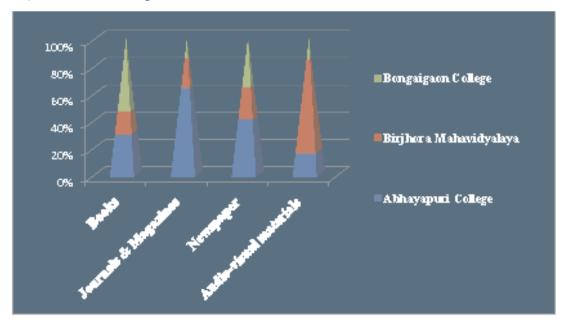

Figure-1: Present Status of Collection Development in Colleges.

6.4 Timings of College Libraries:

Working hour of a library affects the use of the college library. In college neither the students nor the teachers are able to properly visit the library during the college period.

So, the library needs to serve its users beyond the normal class hour. NAAC in their guideline for the college libraries have distinctly mentioned on the opening and closing hours of the library.

Table No.4 Timings of the College Libraries

Sl No.	Name of The College	Working Hours	One Shift	Two Shift	Extended hours of Service during Exams	Extend of service on Sundays/Holidays
1	Abhayapuri College	9.30 AM-5.00 PM	-	-	-	-
2	Birjhora Mahavidyalaya	9.00AM -5.00PM	-	-	-	-
3	Bongaigaon College	10.00AM-4.00PM	-		-	

From the above table, it is found that that three college libraries open and close their libraries at different timings. None of the colleges follow the shift systems and there is no extended service timings or openings during Exams or holidays.
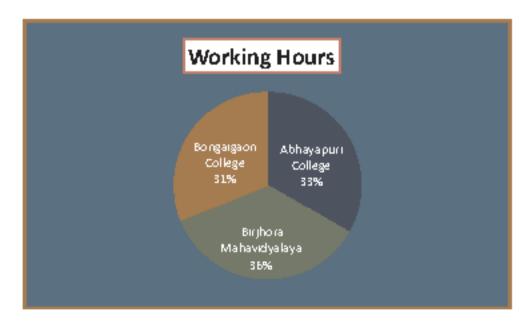

Figure-2: Working Hours

6.4 Library Services:

Table No.5 below describes the services of the college libraries of Bongaigaon District.

Table No. 5 Present Services provided by the college libraries

Sl No.	Areas of services	Abhayapuri College	Birjhora Mahavidyalaya	Bongaigaon College
1	Automation	Yes	Yes	Yes
2	Services			
	OPAC	Yes	Yes	No
	N-List	Yes	Yes	Yes
	ILL	No	No	No
	Internet	Yes	Yes	No
3	Section			
	Reference section	Yes	Yes	Yes
	Book Bank	Yes	Yes	Yes
4.	Bibliography	Yes	Yes	Yes
5.	Reading Room Facility	Not Sufficient	Not Sufficient	Not Sufficient
6	Photocopying Facility	Yes	Yes	Yes
7	Drinking Water Facility	Yes	Yes	Yes

The Table shows that out of seven services which have been selected for the study all the three college libraries provide almost all the services at present but OPAC and Internet facility is yet to be implemented in Bongaigaon College. ILL service is not provided by any of the college. Again is found that the reading room facility for the users is not sufficient according to the number of students enrolled in the college.

6.2   Extend of Use of Services:
The below shows the extended use of services in College libraries prescribed by NAAC as Best Practice.

Table No. 6 Extended use of services in College libraries

Sl No.	Name of The College	User Orientation	User Statistics of Student / Teacher	Best User Award	User feedback	Suggestion Box	Display of Current Arrivals/ Newspaper Clipping	Inclusion of Sufficient Information of Library in College prospectus	Application of Instant Messaging
1	Abhayapuri College	Yes	70/10 Per day	No	Yes	Yes	Yes	Yes	No
2	Birjhora Mahavidyalaya	Yes	60/8 Per day	Yes	Yes	Yes	Yes	Yes	No
3	Bongaigaon College	Yes	50/8 Per day	No	No	No	No	Yes	No

It reveals that User Orientation is followed in all three college libraries where the newly enrolled users are oriented with the facilities and services provided by the library. The User Statistics of teachers in all the three colleges is below 10 per day. To attract more students to visit the library and use the resources, Best User Award is followed in Birjhora Mahavidyalaya. Application of Instant Messaging to the users is not followed in three colleges.

6.7 Automation
6.7.1 Status of Automation of Surveyed Libraries
Table no.7 gives an idea about the library Automation status of the college libraries under study.

Table No.7 Automation Status of Surveyed Libraries

Sl No	Name of The College	Status of Automation	No. of Computers used	Internet Connectivity	Software used	Total Holdings	Total Numbers of Records in Database	Use of Barcode Technology
1	Abhayapuri College	Partially	5	Yes	SOUL 2.0	22,564	19,000 (84.20%)	In Progress
2	Birjhora Mahavidyalaya	Partially	4	Yes	SOUL 2.0	12,000	9000 (75%)	No
3	Bongaigaon College	Partially	3	No	SOUL 2.0	38,800	28,900 (74.48%)	No

The above reveals that all the three college libraries have automated their library with SOUL 2.0 Software developed by INFLIBNET (An IUC of UGC). The status of Automation at present is partially followed as all the modules are not followed. Abhayapuri College library has entered highest of records (84.20%) into the database followed by Birjhora Mahavidyalaya (75%). Use of Barcode Technology is found only in Abhayapuri College which is in initial stage.
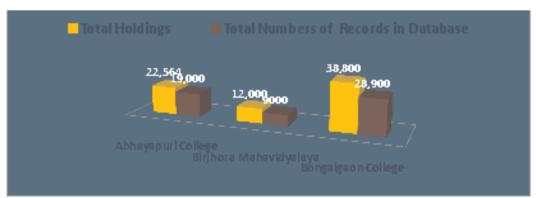

Figure-3: Automation Status of Surveyed Libraries

6.7.2 Library Activities Covered under Automation
The below table shows the House Keeping Operations through SOUL 2.0 Software in the College Libraries.

Table No.8 Library activities covered under Automation (House Keeping Operation)

Sl No	Name of The College	Cataloguing	Circulation	Acquisition	Serial Control	OPAC	Budget	Administration
1	Abhayapuri College	Yes	Yes	No	Yes	Yes	No	Yes
2	Birjhora Mahavidyalaya	Yes	Yes	No	No	Yes	No	Yes
3	Bongaigaon College	Yes	Yes	No	No	No	No	Yes

The Table shows that all the three college libraries use SOUL 2.0 Software and has followed the automated cataloguing and Circulation system as per modules present in software. No College has started the automated Acquisition, Budget module. Serial control is done only in Abhayapuri College. Bongaigaon College is yet to introduce OPAC module in the college.

6.7.3 Extended use of IT in Libraries:

The success of a college library depends on the condition of the college. In this age of ICT, many new services and facilities are introduced in the library and information centre.

Table No.9 Extended use of IT in Libraries

Sl No	Name of The College	Institutional Repository	Database Creation using International Standard format	Library Website	User Feedback Through Library Homepage	24/7 Access to e-Resouces	Web-OPAC	Impact of mobile technologies
1	Abhayapuri College	In Progress	Yes	No Separate Website	No	No	No	No
2	Birjhora Mahavidyalaya	No	Yes	No Separate Website	No	No	No	No
3	Bongaigaon College	No	Yes	No Separate Website	No	No	No	No

Only Abhayapuri College has initiated the Project of Institutional Repository in the College. Almost all the IT Operations Prescribed by NAAC is yet to be implemented in all the College Libraries.

6.8 Library Building

It is noticed that the importance of separate library building and separate reading room facility to the users is mentioned in best practices prescribed by NAAC.

The below table shows the Library building status of the surveyed libraries.

Table No.10 Status of Library Building of Surveyed Libraries

Sl No	Name of The College	Separate Library Building	Special Reading room	Separate Reading Room	Area of Library Building	Extension of Library Building	Provision for Handicapped Person
1	Abhayapuri College	No	No	No	457.2 sq metre	Yes (Proposed)	No
2	Birjhora Mahavidyalaya	No	No	Yes	165.25 sq. metre	Yes (Proposed)	No
3	Bongaigaon College	Yes	No	Yes	480 sq. metre	No	No

The above Table shows that only Bongaigaon College has Separate Library Building of its own. There is no separate Reading room in Abhayapuri College. Moreover, there is no provision for Special Reading Room or for Handicapped Person.

6.9 Library Staff

The efficiency of an organization largely depends directly on the capability and talent of its personnel. The table shows the staff strength of the libraries.

Table No.11 Staff strength of the libraries under study

Sl No	Name of the College	Librarian	Semi-professional	Non-professional	Total	Staff with computer knowledge
1	Abhayapuri College	(1) MLISc., M.phil	Nil	3	4	Nil
2	Birjhora Mahavidyalaya	(1) MA, (BLISc.)	Nil	2	3	Nil
3	Bongaigaon College	(1) MSc., (BLISc.)	Nil	4	5	1

The above table shows that most of the college libraries have less number of staff. There is no semi professional staff to assist the librarian. Only Bongaigaon College Library has one computer personnel to handle the activities of library.

7. Findings

1) From the survey it is found that (Table No.1) none of the Provincialised Colleges in Bongaigaon District were graded "A" in the NAAC Assessment. All the three college libraries were suggested to upgrade Automation in their Library.

2) It is also found from (Table No.2) that the numbers of Computers in library are gradually increasing, infrastructural development is improving and only Ahayapuri College has taken initiative in building Digital Library.

3) From (Table no.5 & 6) it is seen that Bongaiagaon College library is yet to provide Internet and OPAC services to the users. Again, all the college libraries are yet to introduce the application of Mobile technologies for quick service.

4) Slow implementation of the recommendation of NAAC to the libraries.

5) Through the survey it is found that (Table No. 7, 8, & 9) that the automation status with modern extended use of IT is lagging behind in all the three college libraries. Most of the college libraries are rendering services to its patron in traditional way. Use of new technologies in library is no longer a matter of choice but a matter of survival in an era of rapidly changing technology and global knowledge society.

6) Only Bongaigaon College Library has Separate Library building. None of the College library has special reading room service or provision for physically handicapped persons.

7) Most of the College libraries have very few numbers of staff. None of the library has semi-professional staff.

8. Suggestions

1) The libraries should provide Internet and Wi-Fi facility to the users to access to information generated globally, web resources, open access resources, e-resources, Institutional Repositories etc.

2) User survey should be conducted in order to know users requirement.

3) As suggested by NAAC team the libraries should upgrade the automation process fully and use modern technologies to improve quality, increase productivity, more efficient operations, better resource sharing and more effective services to the users. Barcode Technology or RFID technologies should be used so that minimum required services can be provided with less staff. OPAC terminals should be made available so that users need not spend time in searching the documents.

4) Expedite the process of digitization of libraries. Building Digital Library will facilitate the users to have timely access to the information on Institutional development, create awareness of the institutional needs, individual responsibilities and privileges.

5) Use of Mobile devices help to connect with patrons. Creating a library application ("app") or mobile Web site will allow patrons to access library hours view their library account or even search databases in easy way.

6) The libraries should provide more space for reading standard to the users as well as provide a provision for physically challenged people.

7) Information Communication Technology (ICT) is advancing very rapidly. In order to keep pace with developments in ICT field, the manpower needs to be continuously trained and retained in the use and application of new devices and equipment. Library professionals at all levels need to be acquainted with the latest technology.

9. Conclusions

The Best Practices prescribed by NAAC will help for improving quality of library services. This will create best image of the library & library profession in the society. The best practices adopted should bridge the gap between library and user for maximum utilization of the resources.

The above state of circumstances presents the current status of the college libraries of Bongaigaon district is trying to achieve remarkable upliftments due to NAAC's assessment but not to satisfactory level. The rapid development in the IT sector has brought tremendous scope for these libraries to modernize their services for which college authorities should realize the need and importance of their libraries. But lack of professional staff and other supporting staff has hampered in providing quality services to the users and for this the college authorities should come forward and develop the strength of library staff. NAAC is an accreditation agency where it has limitation of power only up to the assessment but the college library and authorities' attitudes, practices and policies need to change if libraries are to truly benefit themselves and their community of users from service point of view.

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SCENARIO OF LIBRARY AUTOMATION IN MANIPUR

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Abstract

The present paper analyses the automation scenario of different types of libraries in the north-easternmost corner of India. The same has been based on the findings of a recent study conducted by the authors selcting different libraries to assess their problems and prospects.

Key-words:Library Systems; Automation ;Manipur

1. Introduction

Library automation in a simple sense is a process of mechanization of library operation and use of computer in the library that replace most of the routine and repetitive nature of works. Therefore we may say that computerization of all library operations is library automation. The term automation was first introduced by D.S Harder in 1936. He defined it as 'the automatic handling of parts between progressive processes in relation to engineering industries". According to the Encyclopaedia of Information and Library Science, "Automation is the technology concerned with a design and development of the process and systems that minimizes the necessity of human intervention in their operation". A Library whether academic, public or special its main objectives and functions are- to collect, organize and disseminate information to its user effectively and efficiently. Thus, library automation is a process that brought and will continue to bring profound changes to the library world in terms of both technology and the involvement of people (Savita Mittal 2001).Manipur , one of the northeastern states of India is found to have different types of libraries , the automation process of which had been started since early 1990s. However there are many issues to be taken into account when we assess the scenario of the same from the academic point of view. The present paper , based on a recent study (Vaiphei, 2014) is an attempt to understand the prevailing scenario of automation of these libraries.

2. Objectives of the Study

The main objectives of the present study include:
- To survey different types of libraries of Manipur;
- To ascertain the level of computerization/automation in Manipur;
- To assess the availability of infrastructes in terms of hardware, software and humanwares;

- To know the areas of automation in the libraries;and
- To find out the present status of automation of libraries.

3. Scope and Methodology of the study

The scope of the study has been limited to 75 (seventy five) different types of libraries: academic, public and special libraries spreading across the state of Manipur.For the study a survey has been carried out using semi-structurally designed questionnaire as the tool for collecting data to study the detailed status and extend of automation of the libraries and the collected data have been presented using tables and charts for empirical interpretation.

4. Analysis and Discussion

4.1 Infrastructural Development of the Library System

The existing infrastructural library system in Manipur can be understood from the following table1:

Table-1: Infrastructural development of different types of library

Infrastructure		Type of library			Total
		Public	Academic	Special	
		(%)	(%)	(%)	(%)
Sufficient trained manpower	Yes		14 (25.93)	4 (26.67)	18 (24.00)
	No	6 (100.00)	39 (72.22)	10 (66.67)	55 (73.33)
Facilities for proper toilet/ canteen/ electrification/ ventilation/ power supply/ mechanism to keep clean/ Others	Yes	2 (33.33)	19 (35.19)	6 (40.00)	27 (36.00)
	No	4 (66.67)	33 (61.11)	8 (53.33)	45 (60.00)
Sufficient number of computers	Yes		12 (22.22)	2 (13.33)	14 (18.67)
	No	6 (100.00)	40 (74.07)	12 (80.00)	58 (77.33)
Suitable software to work in automated environment	Yes	1 (16.67)	11 (20.37)	3 (20.00)	15 (20.00)
	No	5 (83.33)	40 (74.07)	11 (73.33)	56 (74.67)
Internet connectivity	Yes	2 (33.33)	15 (27.78)	5 (33.33)	22 (29.33)
	No	4 (66.67)	37 (68.52)	9 (80.00)	50 (66.67)

From the table it is observed that all the public libraries have no sufficient trained manpower and 25.93 percent of academic libraries and 26.67 percent of special libraries are having sufficient number of trained manpower to run their library. Again 40 percent of the special libraries under study are having the facilities for proper toilet/ canteen/ electrification/ ventilation/ power supply/ mechanism to keep clean/ others, followed by 35.19 percent in academic libraries and 33.33 percent in special libraries. Finally, it is concluded that all the types of libraries in Manipur have less number of sufficient trained manpower and other facilities as mentioned above. As reported by the Librarians, 22.22 percent of academic libraries and

13.33 percent of special libraries have sufficient number of computers. Besides all the public libraries do not have sufficient number of computers. Moreover, only 1(16.67%) public library, 11(20.37%) academic and 3(20%) special libraries have maintained suitable software to work in automated environment.Out of 75 libraries only 22(29.33%) libraries have internet connection. 2(33.33%) public libraries, 15(27.78%) academic and 5(33.33%) special libraries have internet connection.

4.2. Automation Status
The automation status of the different libraries of Manipur is shown under table-2 below.

Table-2: Present status of library automation of different types of libraries

Automation Status		Types of library		Total (%)
		Academic (%)	Special(%)	
Is your library automated?	Yes	15(27.78)	2(13.33)	17(22.67)
	No	39(72.22)	13(86.67)	58(77.33)
If yes, present status of automation	Initial stage	7(12.96)		7(41.18)
	Partially automated	8(14.81)	1(6.67)	9(52.94)
	Fully automated		1(6.67)	1(5.88)
Add more hardware developed/procured on computer	Yes	11(20.37)	1(6.67)	12(70.59)
	No	4(7.41)	1(6.67)	5(29.41)
Add more hardware developed/procured on Printers	Yes	10(18.52)	1(6.67)	11(64.71)
	No	5(9.26)	1(6.67)	6(35.29)
Add more hardware developed/procured on UPS	Yes	9 (16.67)	1 (6.67)	10 (58.82)
	No	6 (11.11)	1 (6.67)	7 (41.18)
Add more hardware developed/procured on Scanners	Yes	4 (7.41)	1 (6.67)	5 (29.41)
	No	11 (20.37)	1 (6.67)	12 (70.59)
Add more hardware developed/procured on digital camera	Yes	1 (1.85)	1 (6.67)	2 (11.76)
	No	14 (25.93)	1 (6.67)	15 (88.24)

Table-2 indicates that 15(27.78%) from academic and 2(13.33%) from special libraries selected under study are automated. But all the public libraries are not automated. As reported by the librarians, 11(20.37%) in academic libraries and 1(6.67%) in special libraries have reported that their libraries were added more hardware developed/procured on computer. Again 10(18.52%) of the academic libraries and 1(6.67%) of the special libraries are found to procure more hardware . Total of 10(58.82%) libraries in which 9(16.67%) from academic libraries and 1(6.67%) from special library have developed UPS. Only one academic and one special library have added more hardware like digital camera.

4.3. Human Resource Devlopment

The human resouce development of the libraries under differnt nature of organisations of the libraries is shown below:

Table-3: Trained persons involved in automation work

Nature of organisation	No. of library	Mean	Std. Deviation	Minimum	Maximum	F-value
Central Govt.	5	1	0.45	1	2	
State Govt.	8	3	0.93	1	4	F =5.353
Private	4	2	0.58	1	2	P =0.019
Total	17	2	0.93	1	4	

It is seen that in central government libraries, average number of trained persons to carry out the automation is minimum 1 and maximum 2. However, the average number of trained persons in state government libraries is 3 with minimum 1 and maximum 4. In private organisation libraries, average number of trained staff is 2 and with minimum being 1 and maximum being 4.

All the libraries under different organisation as a whole employ an average 2 trained staff. By F-test, it is confirmed that variation in the average number of trained staff among the libraries under different organisations is statistically significant with P-value = 0.019. Hence, state government libraries have more average number of trained staff than the other central government and private organisation libraries.

4.4. Areas of Automation

The different areas of the library automation are discussed in the following table-4.

Table-4: Areas of Automation

Areas of Automation	Nature of organisation			Total (%)
	Central Govt. (%)	State Govt. (%)	Private (%)	
General administration	2(40.00)	2(25.00)	2(50.00)	6(35.29)
Cataloguing	5(100.00)	6(75.00)	4(100.00)	15(88.24)
OPAC/ Web OPAC	1(20.00)			1(5.88)
Circulation	1(20.00)	1(12.50)	2(50.00)	4(23.53)
Serial control	2(40.00)	1(12.50)		3(17.65)

As the above table shows, of the 17 automated libraries, 40 percent libraries under central government, 25 percent libraries of state government and 50 percent libraries of private organisation have automated their general administration section. As reported by the librarians, 5 libraries of central government, 6 libraries of state government and 4 libraries of private organisations have automated their cataloguing work. Among the automated libraries of Manipur selected under study, only one central government libraries have the facility of OPAC/ Web OPAC. Similarly, facilities of circulation, acquisition and serial control are also very less among the automated libraries funded by different organisations in Manipur.

4.5. Reasons for Non-Automation of Libraries

The basic reasons behind the non automation of the libraries in the state can be realised from the following table-5.

Table-5: Reasons for Non-Automation of Libraries

Reasons	No. of libraries	Percent
lack of manpower/ fund/ infrastructure/ others	51	68.00
Want of initiatives from the side of library staff	6	8.00
Lack of awareness of the authority	6	8.00

A well equipped infrastructure, manpower, sound financial support with the initiative of the concern authorities are essential in the automation of library. But, as reported by the librarians, the main reasons for non-automation of all libraries in Manipur is lack of manpower/ fund/ infrastructure with 68 percent respondents. The other reasons for non-automation are want of initiative from the site of library staff and lack of awareness of the authority with 8 percent response each.

4.6. Planning for automating the libraries

As reported by the librarians, 10(13.33%) of the libraries has submitted proposal to the authority for automating their libraries.As the following table highlights, 8(10.67%) libraries has started

Table-7: Plan for automating the libraries

Status of Planning	No. of Libraries	Percent
Proposal has submitted to the authority	10	13.33
Infrastructure development work has started	8	10.67
Proposal is being made	9	12.00
Going to start very soon	18	24.00
No plan at all	19	25.33

infrastructure development and 9(12.00%) libraries are making proposal for automating library. It is also seen that 18(24.00%) libraries are going to start automation very soon while 19(25.33%) libraries are still having no plan for automating library.

5. Conclusion

Most of the libraries under different organisations in Manipur do not have sufficient number of staff, computers and, suitable software to work in an automated environment. Infrastructure development, application of Information Communication Technology (ICT), use of computer in the Library and, internet connectivity among the different types of library is very low. Libraries of semi-government and voluntary

organisations under study are out of the purview regarding automation. The study shows and reveals that the number of automated libraries in the state are still very less in number. Again, it is found that most of the automated libraries are in the initial stage in their automation. Therefore libraries in the whole state of Manipur or library under study have to go a long way and hence authority and library professionals need to take initiatives for marching towards trans forming the libraries in the state of Manipur.

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SCIENTOMETRIC PROFILE OF SEISMOLOGY RESEARCH IN INDIA

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Abstract

Scientometric study on seismology research in India has been carried out on publication and citation data sets retrieved from the Web of Science database of Thomson Reuters in a publication window of 15 years i.e.2001 – 2015. Share of Indian publications to the global total is found to be 4% (approx). Indian share of research output to the world over the years of study ranges between 3.23 to 4.90 with an uneven trend of growth ($R2 = 0.117$). Leading organizations at global level and Indian organizations taking lead in research in Seismology have been identified and ranked. In order to evaluate and rank (both absolute and relative) bibliometric indicator named exergy (= energy) and z – index values have been used. USA occupied the top rank with India at 9th in number of research output normalized with X index ($X = i^2P$, where i = Citation Per Paper, P = Number of Paper). Leading organizations in the world and in India have been worked out based on z index where University of California Berkeley and CSIR India occupied the top rank, respectively. Distribution of the most productive institutions have been portrayed in 2-D graph of h (h –index) and z. Jangid RS occupied to top place in the ranking of prolific authors from India.

Keyword: Seismology, Earthquake, Three dimensional evaluation, z-index, Exergy.

1. Introduction

The scientific study of the sudden, violent movements of the earth connected with earthquakes is known as seismology. In many literatures, the term seismology and earthquake is seen to be used synonymously (Oxford English Dictionary). It is the scientific study of earthquakes and the propagation of elastic waves through the earth or through other planet-like bodies. The field also includes studies of earthquake environmental effects such as tsunamis as well as diverse seismic sources such as volcanic, tectonic, oceanic, atmospheric, and artificial processes and explosions. A related field that uses geology to infer information regarding past earthquakes is paleoseismology. A recording of earth motion as a function of time is called a seismogram. A seismologist is a scientist who does research in seismology (Wikipedia). Seismology deals not only with the study of earthquakes, but also with the generation, propagation and recording of seismic waves. It is the primary tool for studying earthquakes and the earth's interior. With the advancements of technology and demand for earthquake related studies, the scope of seismology encompasses a wide range of problems like earth structure, source mechanics, and seismic hazard (http://educationtimes.com). Study of seismology is well known in search of petroleum and other minerals in the earth surface. It is one of the core components in the civil engineering more particularly structural engineering, aviation industry, environmental studies and allied sciences. Increased demand on the study and research on seismology is

evident in the Web of Science database which has reached at 8789 records in 2015 from 2988 in the year 2001 with annual average growth rate of 7.56. In this paper an attempt has been made to portray few basic parameters of the growth of literature in seismology and earthquake attributed to India.

2. Objectives of the study

The broad objective of the study is to visualize the research output in Seismology credited to India and to compare Indian research out with the world total during the window period of 2001 -2015.

3. Materials and methods

Source of data for this study has been populated from the Web of Science (WoS) database of Thomsson Reuters. The search query used to retrieve bibliographic data on seismology is as follows:

Data Source: Web of Science Core Collection

((TS = (seis* OR earthquake))) *AND* LANGUAGE: (English) *AND* DOCUMENT TYPES: (Article) Timespan: 2001-2015. Indexes: SCI-EXPANDED. Results: 81236

((TS = (seis* OR earthquake))) *AND* LANGUAGE: (English) *AND* DOCUMENT TYPES: (Article) Refined by: COUNTRIES/TERRITORIES: (INDIA) Timespan: 2001-2016. Indexes: SCI-EXPANDED. Results: 3715

The 81238 number of records for all the countries contributing to the field in the world and 3715 against the country India have been downloaded, filtered and further analysis are carried out. In built data analysis feature available in WoS has been used to refine the search results by author, country, source journals in which the articles published for world and specific to India available during 2001-2015. Citation portfolios in respective parameters have been generated as per convenience of analysis and downloaded.

In order to carry out the evaluation of the research on Seismology the 3 D evaluation metrics proposed by Prathap (2011a, 2011b) has been used. The quantity of publication (P) is evaluated by the number of citations (C) received. If the productivity is measured by the number of publication P, then the quality of those published papers may be measured by the number of citations received in a citation window. Prathap (2014) has proposed to complement the quality with third dimension s called consistency. This consistency is measured in terms of the citations weight or variability of each of the publications over a given citation window.

The very concept of the consistency has been derived from the fact that in a bunch of publications credited to a given author or organizations, there is wide variability in the quality which is reflected in the number of citations received. The impact (i) of a paper is measured by C/P is regarded as the best proxy for quality (Nishy, 2012). The consistency parameter has been proposed $X = i^2P$, where X is named as an energy like term *i.e.* Exergy. In order to calculate s there need the knowledge of the total mapping of C of all publications (k) which he represented as Energy (E). As such citations (C) credited to all k (k^1 to k^{th}) papers. This gives the third dimension of the quality of the publications representing the Energy.

Mathematically, we may describe Exergy (X), Energy (E) and z- index as follows:

Publications = P

Citations = C

$X = i^2P = iC$ $\qquad$ [i = C/P]

$E = \sum C_k^2$ $\qquad$ [The complete citation sequence of each paper of K]

$\eta = X/E$

The z – index may be computed from Z (Zynergy) which is represented as a third order of the distribution curve (after C and i of given P)

As such,

$Z = sX = s^2E$ and $z = Z^{1/3}$

4. Result and Discussion

Annual Growth Rate of world Seismology research representing in the Fig 1. over the period of study, giving a highly uneven growth. The percent share of Indian publication to the world total as presented in Table. 1. and Fig.2 It is evident that the growth of Seismology research output is highly uneven both at the global total and of India as representing by the R^2 value of 0.075 and 0.117, respectively.

Leading countries in the world in Seismology research as presented in Table 2. depicting USA at the top while India at 9th in the byline of top ten countries next to China ranked according to X (Exercy). Leading institutions in the world ranked by z – index as presented in Table. 3. places University of California Berkeley, USA at the top. Significantly no India institution is appearing in the list. Fig. 2. CSIR laboratories taking the lead in Seismology research in India followed by National Geophysical Research Institute, Hyderabad and IITs (Table 4). National Institute of Oceanography with only 63 publications occupying the 6th position in the byline concretized the efficiency of z –index in comparing research output. 2D h-z map both for leading world organizations (Fig.3) and India (Fig. 4) further concretize the accuracy and efficiency of z – index.

Table 5.giving the Indian authors contributing in Seismology research ranked according to z – index. It is evident that mare higher citation in a significantly small number of papers (as measured to the total output) may not necessarily lead to higher rank, but it is the consistency of the citations received which is achieved by mapping the total citation window against a given author. Table 6 giving the sorted leading journals where Indian Seismologists publishes research as ranked by the Indian share to the world publications places Current Science at the top with a significantly higher percentage of 94%.

5. Conclusion

The z –index is used to rank leading organizations, Institutions at the world and India in particular. Exergy metrics is also used to rank world countries in Seismology research. In addition to this percent share is used to normalize data to avoid great disparity of publication output before comparing and ranking. It is observed that z – index is very closely portraying the quality of research in taking consistency parameter of the citation as evident in the h-z map. In this study, the Seismology research of Indian contribution is evaluated and compared to the world productivity only using very few metrics considering it is a relatively newer area of research. More metrics are there which might reveal some more fascinating facts regarding research outputs in Seismology. This kind of study is instrumental to help the research community to visualize the leading players in the given in the discipline/subject/ specialty and facilitate network of research, which is regarded as one of the core components for advancement of research and other academic pursuit.

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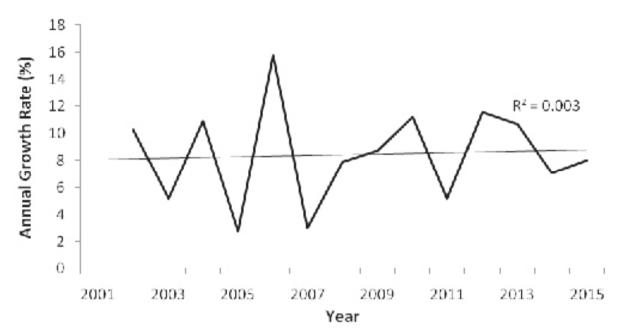

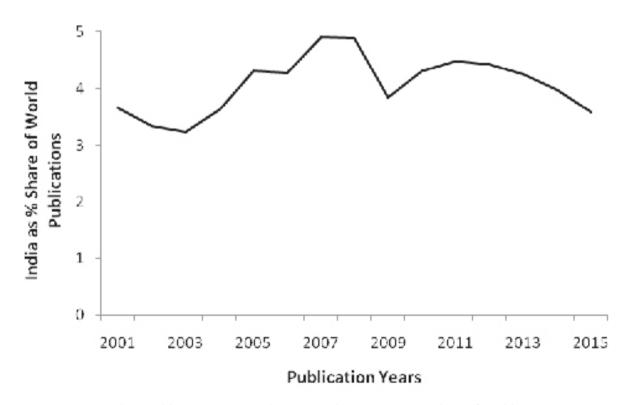Fig.1. Annual Growth Rate (AGR) of Seismology research of World

Fig.2. India's Publication in Seismology research as a percentage share of world outputC

Table 1: India's Publication share to world total

Year	Number of Paper		% Share
	World	India	
2001	2988	109	3.65
2002	3294	110	3.34
2003	3465	112	3.23
2004	3912	142	3.63
2005	3943	170	4.31
2006	4566	195	4.27
2007	4568	224	4.90
2008	4930	241	4.89
2009	5360	206	3.84
2010	5961	257	4.31
2011	6272	281	4.48
2012	6999	310	4.43
2013	7745	329	4.25
2014	8447	336	3.98
2015	8786	314	3.57

Table 2: Earthquake research publishing top ten countries ranked by X index

Country	P	C	i	X
USA	28883	580808	22.27	11821920
France	6249	144182	23.07	3826684
England	4950	111340	22.49	2504708
Japan	7904	130756	16.54	2123099
Italy	7640	125679	16.43	2005008
Germany	4926	97442	19.78	1927516
Canada	4072	69008	16.95	1109475
Peoples R China	8954	91988	10.27	944002
India	3336	33104	9.92	328500
Russia	3545	29248	8.25	241310

Table 3: Leading organizations in the world in Seismology Research ranked according to z index

| SlNo	Organizations	P	C	h	i	E	η	z
1	University of California Berkeley	1221	34377	82	28.15	69166	13.994	238.37
2	United States Geological Survey	2265	61351	98	27.09	441300	3.766	184.28
3	Kyoto University	1169	17561	55	15.02	15552	16.963	164.79
4	Chinese Academy of Sciences	1717	23070	65	13.44	37459	8.275	136.89
5	Centre National De La Recherche Scientifique CNRS	3262	78231	101	23.98	5549609	0.338	85.92
6	Istituto Nazionale Geofisica E Vulcanologia INGV	2039	40045	73	19.64	2236759	0.352	65.15
7	University of California System	4047	115094	122	28.44	44789018	0.073	62.08
8	University of Tokyo	1768	31695	69	17.93	2242983	0.253	52.41
9	China Earthquake Administration	1155	16262	58	14.08	1165842	0.196	35.56
10	Russian Academy of Sciences	2744	21613	53	7.88	1203079	0.141	28.88
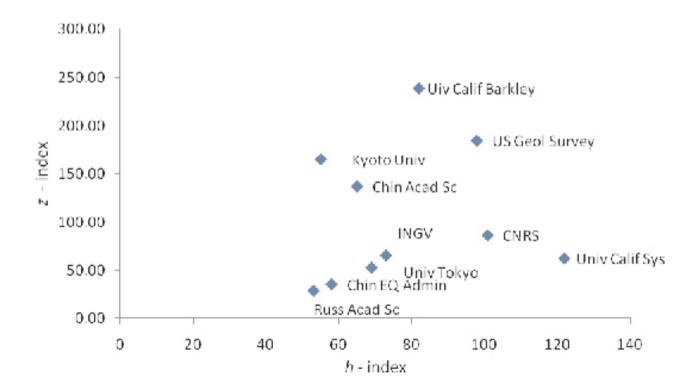
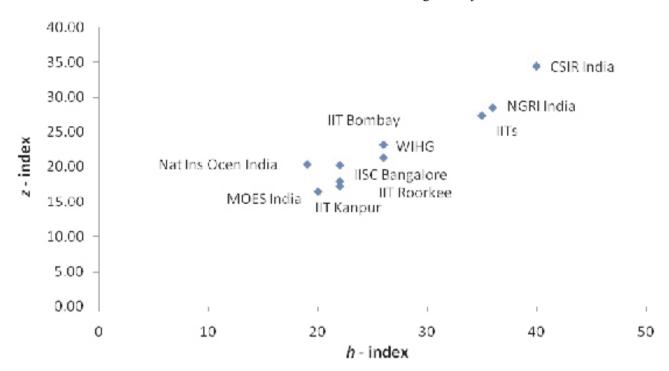Fig. 3. h-z map of leading organization in the world in Seismology research

Fig. 4. z - h map of leading organizations in India in Earthquake research

Table 4. Leading organizations in India in Seismology Research ranked according to z index

SlNo	Organizations	P	C	h	i	E	η	z
1	Council of Scientific Industrial Research CSIR India	896	10492	40	11.71	368030	0.33	34.49
2	National Geophysical Research Institute India	645	7533	36	11.68	333144	0.26	28.53
3	Indian Institute of Technology IIT	932	8801	35	9.44	335139	0.25	27.42
4	Indian Institute of Technology IIT Bombay	213	2676	26	12.56	91128	0.37	23.15
5	Wadia Institute of Himalayan Geology	162	2413	26	14.90	133075	0.27	21.33
6	National Institute of Oceanography India	63	1008	19	16.00	30806	0.52	20.36
7	Indian Institute of Science IISC Bangalore	170	1731	22	10.18	37319	0.47	20.27
8	Indian Institute of Technology IIT Roorkee	248	1965	22	7.92	41727	0.37	17.98
9	Indian Institute of Technology IIT Kanpur	152	1912	22	12.58	111946	0.21	17.29
10	Ministry of Earth Sciences MOES India	153	1579	20	10.32	59207	0.28	16.49

Table 5. Leading authors from India in Earthquake research ranked according to z index

SlNo	Authors	P	h	i	E	η	z
1	Jangid RS	60	19	17.92	54471	0.35	18.95
2	Rai SS	46	16	16.83	27912	0.47	18.25
3	Mandal P	49	16	14.69	21028	0.50	17.46
4	Kumar P	43	12	23.30	110632	0.21	17.02
5	Choudhury D	48	16	13.33	15970	0.53	16.58
6	Rastogi BK	59	16	12.95	23834	0.42	16.01
7	Kayal JR	54	16	14.67	33940	0.34	15.84
8	Kumar S	52	15	15.88	49130	0.27	15.19
9	Gahalaut VK	59	16	11.37	17525	0.44	14.92
10	Kumar N	44	13	12.89	16777	0.44	14.71
11	Chadha RK	55	13	9.56	10234	0.49	13.52
12	Kumar MR	51	13	10.45	15143	0.37	12.70
13	Sain K	52	12	9.40	17709	0.26	10.61
14	Kumar A	93	14	9.52	68419	0.12	10.12
15	Sharma ML	43	10	7.07	5196	0.41	9.62

Table 6. Leading Journals where Indian Seismologists publishes research

SlNo	Source Titles (Country/Publisher)	No. of Papers World	India	% Share
1	Current Science (India/Indian Academy of Science))	324	305	94.14
2	Bulletin of the Seismological Society of America (USA)	3090	95	3.07
3	Acta Geophysica (Springer)	226	29	12.83
4	Disaster Advances (USA)	184	28	15.22
5	Astronomy Astrophysics (France)	337	17	5.04
6	Construction and Building Materials (Elsevier)	235	16	6.81
7	Arabian Journal of Geosciences (Springer)	257	16	6.23
8	Annals of Geophysics (Italy)	546	16	2.93
9	Advances in Space Research (Elsevier)	130	15	11.54
10	Astrophysical Journal (UK/ IOP,)	192	11	5.73
11	Bulletin of Earthquake Engineering (Springer)	744	10	1.34
12	Acta Geodaetica et Geophysica Hungarica (Hungary)	66	9	13.64
13	Advances in Structural Engineering (USA/Sage)	277	8	2.89
14	Applied Radiation and Isotopes (Elsevier)	33	7	21.21
15	Computers and Concrete (Techno Press/Korea)	75	7	9.33
16	Computers Geosciences (Elsevier)	279	7	2.51
17	ACI Structural Journal (USA/ACI)	307	7	2.28

TRENDS OF USING E-RESOURCES AMONG THE STUDENTS, SCHOLARS AND TEACHERS OF THE ENGLISH DEPARTMENT OF VISVA-BHARATI UNIVERSITY

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Abstract

This paper presents the trends of using internet resources among the students, scholars and teachers of the English Department of Visva-Bharati University. To conduct this study a small survey has done by using a questionnaire. The result shows that the effect of technology has reached in every corner of the English department. At the same time penchant towards textbooks remains same as it was in the past.

Keywords: Electronic resources, Technology, Retrieval, Internet, E-Journal, Information technology.

1. Introduction

Today world is running fast with the tremendous development of information and communication technology. Now it is observed that information is flooded in many folds. Most of the printed resources have converted into an electronic form and distributed via internet. With the changing pattern of information resources, the information seeking behaviour of the users has also changed. The users of the present day environment not only depend upon printed resources but also E-Resources. The users of the department of English are not far behind to take the advantage of it. To know their trends of using internet resources a small survey has been conducted among the students, scholars and teachers of the English Department of Visva-Bharati University.

2. About Visva-Bharati University

It is one of India's major Central Government funded autonomous universities located in Santiniketan, West Bengal. It was founded by Rabindranath Tagore who called it Visva Bharati, which means the communion of the world with India. In its initial years Tagore expressed his dissatisfaction with the word 'university', since university translates to Vishva-Vidyalaya, which is smaller in scope than Visva Bharati. Until independence it was a college. Soon after independence, in 1951, the institution was given the status of a university and was renamed Visva Bharati University.

3. Review of Literature

Ali (2005) found out that 83% of students surveyed felt that using this source saved them time, and found it relatively easy to use. Two thirds of those surveyed stated that if the CD-ROM was busy, they would wait for it to become free rather than use the print tool. However, a study of online searching of scientific

information in science and technology libraries of Delhi reveals a sizeable number of users (almost 60%) are facing numerous problems while browsing electronic information, such as lack of knowledge about the resources, lack of trained staff and inadequate terminals. Madhusudhan (2008) found that seventy-eight percent (78%) of the respondents feel that the use of the UGC – Infonet e-journals has created high dependency value on their research work and they needed current article alert services and electronic document supply services. Okello-Obura and Magara (2008) investigated electronic information access and utilization at the East African School of Library and Information Science, Makerere University, Uganda. Out of the 250 targeted students, 190 responded, giving a response rate of 76%. The study revealed that users derived a lot of benefits from electronic resources gaining access to a wider range of information and improved academic performance as a result of access to quality information. Kebede (2002) found that, although most libraries had internet connectivity, very few were offering web-based information services to their users. Oduwole and Akpati (2003) investigated the accessibility and retrieval of electronic information at the University of Agriculture Library, Abeokuta, Nigeria. The 425 participants responded out of a survey population of 1,000, giving a response rate of 53.87 percent. The study revealed that electronic information cuts across all members of the University community that it was to a greater extent easy to use and were satisfied with their search outputs. The constraints identified included insufficient number of terminals available for use despite high demand and inadequate electricity supply.

Ojo and Akande (2005) revealed that the level of usage of the electronic information resources is not high. A major problem however identified is lack of information retrieval skills for exploiting electronic resources, thus making the level of usage of resources by medical students very low.

4. Objectives

The primary objective of the study is to know awareness of e-resources among the students, scholars and teachers of the English department of Visva-Bharati University. The specific objectives of the study are to know:

  i.   Purpose of searching information of the students, scholars and teachers.
  ii. Sources of information used by themselves.
  iii. Preferences given by them in using print and electronic information resources.
  iv. Reasons for using electronic information resources.
  v.   Their dependence on internet for collecting information.

5. Scope

To conduct this study the students, scholars and teachers of English Departments of Visva- Vharati University has been included.

6. Methodology

A brief survey has been conducted by using questionnaire. The questionnaires were distributed among the teachers, scholars and students of the department of English. After a great deal of efforts very small percentage of data has been retrieved. To see the detailed response rate minutely follow table 1. After collecting data, these are analysed by using statistical methods.

7. Data Analysis and Interpretation

Table 1: Response rate

	Students		Scholars		Teachers	Total
	B.A.	M.A.	M.Phil	Ph.D		
No. of questionnaire Distributed	63	52	8	10	12	145
Response received	15	18	4	3	7	47
Percentage	24%	35%	50%	30%	58%	27%

It is seen from table-1 that, highest number of response (58%) was coming from teachers followed by 50% response from M.Phil scholars. It is also seen from the table that total number of 145 questionnaire were distributed among the respondents, but only 27% response received.

Table 2: Purpose of searching information

Purpose	Students		Scholars		Teachers	Total	#Percentage (rounded off)
	B.A.	M.A.	M.Phil	Ph.D			
Lecture preparation	1	4	2	-	7	14	30
Updating knowledge	15	14	4	3	6	42	89
Research	1	3	4	3	7	18	38
Spending leisure time	6	3	1	-	6	16	34

Percentage has been calculated on total response rate (47)

Respondents were asked about the reasons for searching information. It is found from table 2 that the highest trend goes towards updating knowledge (89%) as far as purpose of searching information is concerned. As most of the respondents are students so the purpose for lecture preparation (30%) is given less importance. Scholars have given similar importance towards their updating knowledge and research work. On the other hand teachers of the university have given simultaneous priority towards lecture preparation as well as their research activities.

Table 3 Sources of information

Sources	Students		Scholars		Teachers	Total	#Percentage (rounded off)
	B.A.	M.A.	M.Phil	Ph.D			
Textbooks	12	12	4	3	7	38	81
Reference books	6	6	3	3	7	25	53
E- resources	5	5	3	3	7	23	49
Internet	9	12	4	3	7	35	74
Others	1	1	-	-	4	06	13

Percentage has been calculated on total response rate (47).

Table 3 shows that most of the respondents (81%) preferred text books as a source of information. Their second priority is nothing but internet. So the effect of technology has reached in the corner of the English department. It is also correct that penchant towards textbooks remains same as it was in the past.

Table 4 Place to find information

Place	Students		Scholars		Teachers	Total	#Percentage (rounded off)
	B.A.	M.A.	M.Phil	Ph.D			
Library	8	11	4	3	6	32	68
Home	7	8	3	2	7	27	57
Cyber-café	4	3	2	1	-	10	21
Computer lab	2	1	-	3	1	07	15
Other	1	-	-	-	-	01	02

Percentage has been calculated on total response rate (47).

It is seen from the table 4 that most of the respondents (about 68%) use library resources to find their required information. Their next preference is home. According to themselves they have their own computer and internet connection.

Table 5 Ratio of using print and electronic information sources

Ratio	Students		Scholars		Teachers	Total	#Percentage (rounded off)
	B.A.	M.A.	M.Phil	Ph.D			
50:50	10	5	1	3	4	23	49
40:60	2	3	1	-	2	08	17
30:70	-	3	2	-	-	05	11
20:80	1	4	-	-	1	06	13
10:90	2	3	-	-	-	05	11

Percentage has been calculated on total response rate (47).

In case of table 5 the ratio of using print and electronic information sources 49% respondents has given weight age 50:50. Out of 47 respondents only 08 (17%) has given 40:60 weight age. It is also observed that only 10 respondents give equal % of response (11%) though their ratio (30:70 and 10:90) is different. Therefore it may be concluded that the trend goes towards the dependence upon electronic resources now a days.

Strategies	Students		Scholars		Teachers	Total	#Percentage (rounded off)
	B.A.	M.A.	M.Phil	Ph.D			
Search engines	10	13	4	2	7	36	77
Websites	8	12	3	3	6	32	68
E-Mail alerts	-	1	1	2	2	06	13
Subject gateways	1	1	2	-	6	10	21
Others	-	-	-	-	2	02	04

Percentage has been calculated on total response rate (47).

Table 6 shows search strategies used by the respondents whenever they use internet. It is seen from the table that 77% respondents used search engine device followed by 68% website users for searching their required information. Out of 47 respondents 10 users know subject gateways. Therefore it may be concluded that the users are convergent with new technologies.

Table 7 Success to find required information using internet

| Success rate | Students | | Scholars | | | | #Percentage |
	B.A.	M.A.	M.Phil	Ph.D	Teachers	Total	(rounded off)
25%	1	2	1	-	-	04	09
50%	4	2	2	-	-	08	17
75%	9	13	1	3	6	32	68
100%	1	1	-	-	-	02	04
Other	-	-	-	-	1	01	02

Out of 47 respondents 32 (68%) think that success rate to find required information by using internet is 75%. Only 2 respondents get 100% success in using internet. As the success rate of using internet is high, therefore it may be said that most of the users like to browse internet.

Table 8 Reasons for using electronic information sources

| Reasons | Students | | Scholars | | | | #Percentage |
	B.A.	M.A.	M.Phil	Ph.D	Teachers	Total	(rounded off)
Saves time	9	10	4	3	5	31	66
Reliable	1	5	1	2	1	10	21
Authentic	2	2	-	1	-	05	11
Easy access	11	15	4	3	7	40	85
Others		1			3	04	09

Most of the respondents (85%) opine that using electronic information sources is required to get easy access. Another reason for using electronic information is to save time (66%) as shown in the table 8. No teacher believes that electronic information sources are authentic.

Table 9 Necessity of formal training to use modern technology effectively

| Number of- | Students | | Scholars | | Teachers | Total | #Percentage |
	B.A.	M.A.	M.Phil	Ph.D			(rounded off)
Believers	14	11	3	1	5	34	72
Non-believers	1	7	1	2	2	13	28

Table 9 shows the result of believers and non-believers of necessity of formal training are mandatory to use modern technology effectively. A larger (72%) percentages of respondents believes that formal

training is necessary to use modern technology effectively. Due to lack of scope it is not possible for them to do that.

Table 10 Dependence upon others for searching information from E-sources

Number of-	Students		Scholars		Teachers	Total	#Percentage (rounded off)
	B.A.	M.A.	M.Phil	Ph.D			
Dependents	-	2	1	-	1	04	09
Non-dependents	15	16	3	3	6	43	91

It is seen from table 10 that, 91% of respondents have not depended upon others for searching their required information by using E- Sources. Therefore, it is proved that most of the respondents are well in computer literacy.

8. Major findings

1. Basically the students, scholars and teachers of the English department of Visva-Bharati University searched information for keeping themselves update with the present state of their subject.
2. The effect of technology has reached in every corner of the English department. At the same time penchant towards textbooks remains same as it was in the past.
3. Dependence on electronic resources is gradually increasing. Again they did admit their dependence on printed resources.
4. Most of the users like to browse internet as they think that it is more reliable than any other sources. But they do not get same percentage of success at the time of using internet.
5. Electronic information is mainly used to get easy access and save time. But all teachers think that electronic information is not authentic.
6. Seminar on information should be arranged for the teachers, scholars and students of the English department of Visva Bharati University.
7. A formal training is very urgent to use modern technology fruitfully. Though most of the respondents did not depend upon others for fulfilling their requirement.

9. Conclusions

The fast growth of information and communication technologies and particularly internet and electronic resources has changed the traditional methods of research, storage, retrieval and communication of scholarly information. Now a day's internet has emerged as most powerful medium for storage and retrieval of information. In order to retrieve relevant information, users have to make use of different electronic and web resources. In this study the users of English department, Visva Bharati university have welcomed e-resources; at the same time they think that a basic training might be given to students who are unaware of this fantastic technology; on the curriculum of higher education, basic education on information technology can be included.

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TRANSFORMING UNIVERSITY LIBRARIES: THE STRIDE AT AMU

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Abstract:

In this article, an attempt has been made to encompass the developmental activities at the Aligarh Muslim University Library during the years 2013 to 2015 which led to its declaration as the best amongst all Indian university libraries by NAAC Peer Review Team in February 2015. The study is confined to the application of the state of art ICT, digitization of resources at a massive scale, introduction of digital resources in large quantity and their extensive use. It is evident from the usage statistics that if used properly in university libraries, the digital resources will not only bring excellence in services but also ease the financial liabilities of the institutions.

Key Words: University Libraries; Higher Education; Library Transformation; Aligarh Muslim University; ICT in Education

1.0 Introduction

Like many other organizations, libraries are also in transience since their establishment but the rate of change remained comparatively slow from scriptorium of monasteries till invention of the printing press during mid 15th century. A major breakthrough was witnessed with the invention of computer and the World Wide Web which accelerated the rate of creation and distribution of information, witnessed never before in the history. The nature of library collections and services kept changing rapidly continuing to play a significant role in the development of society.

According to the Oxford Living Dictionaries, the word transformation means 'a marked change in form, nature, or appearance' whereas the Cambridge English Dictionary defines it as "a complete change in the appearance or character of something or someone, especially so that that thing or person is improved. In an organizational context, transformation is "a process of profound and radical change that orients an organization in a new direction and takes it to an entirely different level of effectiveness. Unlike 'turnaround' transformation implies a basic change of character and little or no resemblance with the past configuration or structure.

1.1 University Libraries Today

University libraries have been greatly affected by the potential of technology. Internet has now brought revolutionary changes. It is one of the two innovations that have dramatically influenced the development of communication strategies and practices in both the general and the business communities of the world. Another significant change in the libraries is being brought by the development of digital libraries which

are the current innovation emerging out of the technological advancements in the field of electronics engineering as well as the changing requirements and expectations from the traditional libraries Ali (2005). They are also referred to as the collections of information stored in digital format and accessible over a communication network. Digital libraries are developing fast at the national as well as international levels accumulating more and more resources day by day.

With ever increasing convergence between computer and communication technologies and the spread of telecommunication networks, the present day universities are advancing to gradually transform themselves into virtual universities where all functions of the university will take place electronically over the digital links and networks. Resultantly, the virtual universities are being established all over the world. A number of projects have been undertaken at the national as well as international levels in specific areas of knowledge. The Universal Digital Library and the Digital Library of India projects are worth mentioning here. Their merger into the National Digital Library along with many other academic resources created within the country under the Digital India Programme of the Prime Minister of India proved a milestone within first two years of its inception since all the resources so created are being centrally stored and managed for wellbeing and advancement of the human beings.

2.0 Literature Review

A vast amount of literature is available on transformation of libraries which was led by development in the educational technology. Based on the merits and demerits of the newer technologies, their adoption process started for education and research activities. Many a technologies such as microfilming and audiovisuals died an untimely death whereas some of them like printing press, computer and Internet still prevail since their birth. Ali (1994) in his article discussed the advantages and disadvantages of print and electronic media and concluded that the later being more effective, economic and long lasting will bring major changes in the nature of library collections and services. Nyein (2016) in her paper '**Transforming libraries** in Myanmar: the eLibrary Myanmar project' has shared her experiences and elaborated that the transformation of libraries in Myanmar began with the introduction of electronic information in libraries. Michalak (2012) in her paper 'entitled This Changes Everything: **Transforming** the Academic **Library'** observed that **Library** users and their expectations for services and collections have changed. Among the factors driving change are: networked technologies, powerful search engines available to all, social technologies and the digitization of everything and concluded that The transformed **library** is outward facing, de-siloed, technology diffused, collaborative, and operated by an engaged staff who demonstrate leadership in small and large ways in all sections of the organization. Mamtora (2013) in her paper 'changing role of the research librarian with specific reference to Charles Darwin **University,** Australia. **Transforming library** research services: towards a collaborative partnership' discusses about the changing role of the research librarian with specific reference to Charles Darwin **University** in Australia impact of the support being provided to researchers has been measured through two questionnaires and the findings include that the research librarian needs to ensure his or her skills and qualifications will need to be continually updated. Librarians have to become involved in new roles, roles that are not traditionally associated with librarians, such as data management and curation. Lewis (2016) through an article 'From Stacks to the Web: The **Transformation** of Academic **Library** Collecting' emphasizes that the existence of a ubiquitous and cheap worldwide communications network that increasingly makes documents easily and freely available will require a **transformation** of academic **library** collecting practice and it will be driven by a number of specific developments including: the **digitization** of content; the development of print repositories; the development of e-readers and print-on-demand publishing; the growth of open access; challenges to establish academic publishing organizations; and the growth of new forms of scholarship

based on openness and social productivity. If academic **libraries** are to be successful, they will need to: deconstruct legacy print collections; move from item-by-item book selection to purchase-on-demand and subscriptions; manage the transition to open access journals; focus on curating unique items; and develop new mechanisms for funding national infrastructure. The study '**ICT applications** and user satisfaction in Aligarh Muslim University, Aligarh: a survey' of Ali et al (2016) aims to investigate the researcher's awareness and use of **ICT** based library services provided by Maulana Azad Library, Aligarh Muslim University, Aligarh in which it has been found that the **application of ICTs** based library operations and services have raised the usage level of library's resources.

3.0 The AM U Library

The main library of the Aligarh Muslim University is known as Maulana Azad Library which was established in the year 1877. It comprises of about 110 sister libraries in colleges, departments, halls of residence and centres of studies. The Library is a world famous repository of rare manuscripts and books in Urdu, Persian and Arabic languages. The state of the art information technology has been introduced in the Library for making it automated with advance version of LibSys software which connects almost 10,000 computers/mobile phones within the University as well as at the centers of the University in distant states besides the function of database management. The 3M security system and a range of CCTV cameras ensure safety of the Library material. It accommodates about 1800 readers at a time and over 8,000 students, teachers and other members visit the Library almost every day. The Library was declared as the best amongst all Indian university libraries by NACC Peer Review Team of the Government of India in March, 2015.*http://amu.ac.in/malibrary*

The Library has always been regarded as a treasure trove of invaluable manuscripts and rare books besides providing services to the academic community of the University effectively. It is one of the very few institutions which introduced automation, introduction of research databases and digitization of resources successfully earlier than others. Both the resources and services of the Library received appreciation from NAAC Team on its visit in February, 2015 by declaring Maulana Azad Library as the best amongst all Indian university libraries.

3.1 ICT in the Library

The following ICT components related with the Library services are available for creation of content and providing access to it throughout the campus as well as in the centres of the University in distant states:

3.1.1 Computerization

The Library started computerization in mid 2001 after purchasing the LibSys software and within two months of starting the work, it created a database of 93,000 records. The special features of the software, the speed of work and satisfaction of the users allowed us to go a long way and even today, the improved version of the same software along with additional features is used with full confidence and utility. Presently there are about 150 computers within the Library plus 4,000 in the departments of studies. Bibliographical records of the holdings can be retrieved from anywhere in the world with the help of Web-OPAC (Online Public Access Catalogue).

3.1.2 Digitization

The work of digitization started at many fronts simultaneously. Besides engaging CDAC for digitization of rare books, a very sophisticated Zuetchel Scanner shown at Figure-1 was imported from Germany, mainly for better quality pictures of more than 16000 manuscripts and a large number of copyright free publications.

At the same time, the hand listing of manuscripts and uploading of catalogues started eliminating the need of foreign scholars to come to Aligarh in search of the manuscripts since the information could be retrieved by them through Internet while at their home. Moreover, it fetched finance as copying charges since they used to consult the resource earlier free of cost.

3.1.2.1 Contribution to Shodhganga

The Inflibnet Centre at Ahmedabad established the Shodhganga Project for digitization of theses submitted to various universities and also provided grant for the same. We could not even initiate the work prior to 2013, however, after securing the grant, we started the project and within two and a half months more than 10000 theses and dissertations were digitized. Consequently, we were declared the largest contributor to Shodhganga and achieved number one position in the country.

3.1.4 AMULIBNET

The Library started AMULIBNET basically to facilitate the sister libraries to upload their bibliographic information about their collection for visibility on OPAC. In turn, the books available in the entire sister libraries are also reflected in the database of Maulana Azad Library. As evident from figure-2, the cataloguing of books of the entire Library system was intensified which formed the basis for their wide usage within the Library as well as in the various departmental libraries.
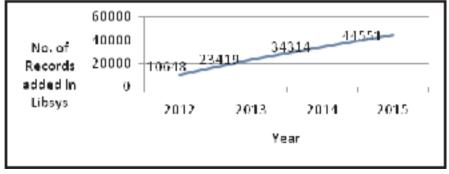
Figure-2 Records added to AMULIBNET Yearwise

2.1.5 Electronic Databases

The year 2013 witnessed a major drive in modernization of the Library with subscription of electronic databases like EBSCOHost, ProQuest, Scopus, JGate, IndiaStat.com etc. and utilization of the freely available resources. Training and workshops were organized for the users and they were frequently encouraged
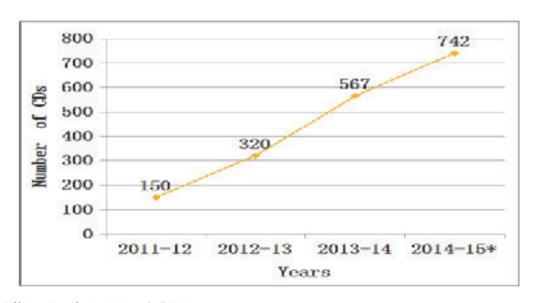
to use the new resources by sending letters to their departments and inviting users to contact the Library staff in case of difficulty. This promoted the usage of resources. In case of ProQuest, in the first year of its subscription, we were declared as its largest user amongst all universities of the country in the first year of subscription.

2.1.6 ICT for the Differently-Abled

One of the special features of Maulana Azad Library is its service to the visually impaired students through Braille Section. Apart from the books in Braille script, a large number of documents and electronic devices are also available for the students. Many students have showed excellence and have qualified state and national have competitions after the new electronic resources and devices have been made available to them recently.
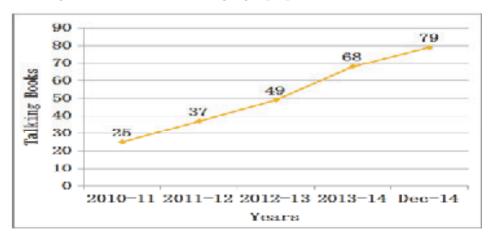
2.1.6.1 Taking Books in English

Figure-3 shows the number of talking books prepared in English which has the facility of OCR.

2.1.6.2 Talking Books in Non-OCR Languages

In oriental language, specially Urdu and Hindi which do not have successful implementation of OCR, talking books are prepared by voice recording in the Library studio meant for this purpose. Figure-4 shows the number of talking books in Non-OCR Languages prepared Yearwise

2.1.6.2 Purchase of Machines

Two type of machines were acquired for the students including Angle Pro, a mobile like apparatus along with memory chips of 32 GB for recording the classroom lectures and listening to the already recorded books. The same are issued to all the students for the entire duration of the course. An Angle Pro machine is shown at Figure-5

Figure-5 Angle Pro

Refreshable Braille Display Units

Two Refreshable Braille Display Units have been received as a gift for the Library from an NGO, Karishma Enterprises of Mumbai. These machines when attached with computer convert the electronic data from computers or Internet into Braille script and voice. The Unit is shown in Figure-6 below:

Figure-7 Refreshable Braille Display Units

3.0 The Collections: Print versus Electronic

As survey conducted on comparative use and cost factor of print and electronic media in education Ali (1994) revealed that the electronic media is not only more effective in the learning process but also it is economic.

3.1 Books

The Library collection of AMU has been developed over the last 140 years and at present, it holds over 14 lakh books now on about all subjects of study in a dozen of languages but predominantly in English and Urdu. Its growth during the last few years is shown in Figure No. 8 below:

Figure- 8 Growth of Hard Copy Collection Yearwise

The accessibility to digital collection has miraculously increased in the Library during the last few years. Now, the Library provides links for access to over 60 million books and 8 million electronic journals and an equal amount of electronic theses and dissertations besides providing subject information gateways and useful information in audio and video formats. Moreover, the same books can be consulted in different languages and also in varied formats.

3.2 Journals

Journals are essential for research and developmental activities of the universities. In AMU Library, the number of subscribed print journals is being reduced every year as shown in Figure-9 whereas the electronic journals are increasing tremendously as evident from figure-10.
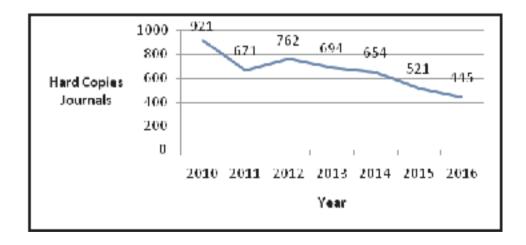
Figure-9 Subscription of Hard Copy Journals Yearwise

During late 1990s', the electronic journals were made available through INSDOC after printing, thereby reducing the cost and the time of delivery to the end users. Thereafter, the INFLIBNET Centre arranged them from foreign publishers in large number to make available to the universities free of cost. INDEST also provided journals for technical education in the quantity of journals at AMU is shown below:

Figure-10 Growth in number of e-Journals

Year	No. of e-Journals	Source
2010	6263	INFONET
2011	7342	INFONET
2012	7324	INFONET
2013	7840	INFONET
2014	16669	INFONET + EBSCO
2015	60,000 plus	INFONET + EBSCO + JGate Complete

3.3 Resources from the Public Domain

Recently, a huge quantity of resources on almost all disciplines of study has been made available online free of cost which may be accessed through their links. Downloading of link will need a lot of time and disc space and may involve IPR issues also. Furthermore, the links provide search windows for ease in retrieval of the selected documents. The resources located by the staff of Maulana Azad Library are in huge quantity and only a few of them are being listed in Table-1 below:

Table-1 Links to Resources in Public Domain

S. No.	Form	Name of Resource	Nature of Collection	Number of Documents App.
1.	Books	Internet Archive	Multidisciplinary	10 millions
2.	Books	Google books	Multidisciplinary	Over 30 million
3.	Books	The Universal Digital Library	Literary, artistic, and scientific works.	Over 1 million
4.	Books	HathiTrust Digital Library	Multidisciplinary	5.3 millions
5.	Books	B-ok	Multidisciplinary	2.5 millions
6.	Books	National Digital Library	Multidisciplinary	3 million
7.	Books	EBOOKE	Multidisciplinary	3.1 million
8.	Research Articles	Open Access Library	Multidisciplinary	4.2 million
9.	Research Articles	High Wire	Biological Sciences, Humanities, Medical Sciences	2.4 million
10	Theses & Dissertations	Global ETD Search	Multidisciplinary	4.3 million
11.	Theses & Dissertations	Open Access Theses and Dissertations	Multidisciplinary	3 million

It is evident from the above table that about 30 million books, 6.6 million research articles and 7.1 million theses and dissertations are accessible only through 11 links only and about all of them have the provision of search windows. Besides, a large number of resources, mainly reference tools subject gateways and audio and video are also accessible. A large number of books translated in many languages are available in varied formats such as audio and film.

3.4 Digital Resources Centre

The Digital Resources Centre of Maulana Azad Library discharges the function of identifying digital resources available in the University and in public domain to make them accessible through the links to the academic community. The resources are consulted by users on about 10,000 computers, in addition to a central facility in the Maulana Azad Library on 100 terminals. The digital collection of the Centre includes more than 42.2 million e-books, 6.87 million e-journals, three million journal articles and over 7.78 million e-theses and dissertations, besides a wide range of academic and statistical databases, subject

gateways. There are 24 reference sources covering a wide range of information. In view of the special need of users, collections of oriental resources and more than three lacs audio books have also been made accessible.

3.0 Usage of Resources

The physical and electronic resources of the Library are used extensively by its users, specially, the students and faculty with the online access to most of the resources.

4.1 Students' Attendance in Reading Halls

The figures-11 provided below shows the growing trend in the number of visitors to the Library but in addition to it, the users availing online facility outside also form a large strength.
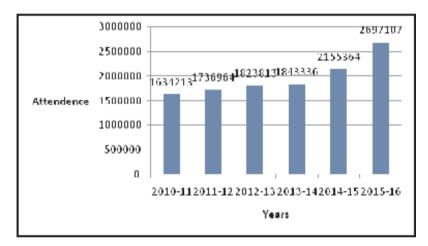
Figure-11 Students' Attendance in Reading Halls

4.2 Usage of Electronic Resources

During the financial year 2013-14, Library started subscription of research databases namely, ProQuest Dissertation and Theses, EBSCOHost and Scopus for the first tim. Publicity for their usage was done on a massive scale by arranging Workshops on usage, communicating the research community of the University through letter and establishing a help desk in the Library for the users.The usage of Infonet resources is illustrated in Figure-12 below:

Figure - 12
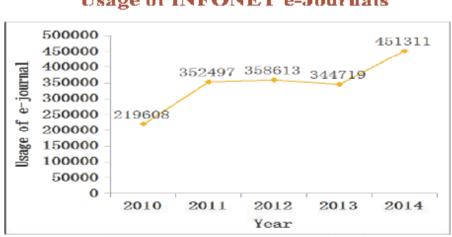
Source: INFLIBNET Centre, Ahmedabad

4.2.1 Usage of J-Gate Resources
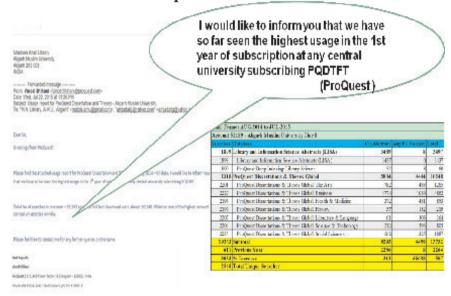
During 2013 and 2016, the usage of JGate Resources increased many fold as evident from the following figure:

Figure-13 Usage of J-Gate Resources Yearwise

Searches	Database	Cit/Abstract	Any FT Format		Total
741	Business	3068	446		3514
736	Health & Medicine	288	179		467
735	History	6	35		41
735	Literature & Language	6	63		69
739	Science & Technology	124	203		327
740	Social Sciences	291	371		662
735	The Arts	695	78		773
5750	Total	4478	1368		5846

(Source: ProQuest from 15th Oct. to 31st Dec. 2014)

5.0   Perception about the Library

Before implementing ICT at a massive scale from May, 2013 onwards, the Library was perceived as one of the departments which needed much attention and improvement but it is now beeing perceived as the beast in India. The following pressclipping published in The Hindustan Times on March13, 2015 indicates improvement in its services. The Library has also contributed to higher rank of the University

Peoples Says about Library...

The Library has been declared as the best amongst all Indian University Libraries (NAAC Peer Team March 2015).

* Library has contributed considerably to the University for achieving the 2nd top position in the country (Times Higher Education).

Conclusion

The Library of the Aligarh Muslim University has transformed recently in terms of its collection by accommodating huge electronic resources and implementing state of the art ICT for its day to day functioning. It happened mainly after purchasing computers, digitizing its in-house resources, subscribing to electronic databases and providing links of resources of public domain in large quantity. The nature of collections and techniques of management also changed over the last few years.

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Lewis, David W. (2016). From stacks to the web: The t**ransformation** of academic **library** Collecting. College & Research **Libraries**; Mar2013, Vol. 74 Issue 2, p159-176, 18p.

THE PROGRAM, PRACTICES AND ACTIVITIES OBSERVED BY THE LIBRARIES OF EMINENT INSTITUTIONS OF INDIA: A STUDY

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Abstract

The library and information science always have been the topic of research and development. The management, services, collection development some are the examples of further research and to be developed as they are still have the space to expansion at the part of the administration, whereas in the terms of the users, this field is still developing itself in multidimensional way. Therefore some of the eminent institutes of India are observing number of services which are for the betterment of the library and their users as well. It also concerns with strategic planning of LIS in present and future operations. Identifying and internalization of best practices in the management and administrative functions at regular interval would enhance the collection development process, services dissemination and use of the library as a whole. Appropriate planning and fore thinking is required in attaining the above mentioned with a detailed analysis of user base, objectives of the affiliating institution and its future strategies. Active participation and periodic meetings of library advisory committee, involvement of librarian in academic activities of the college/university, support from the management, participation of the users, standard facilities with innovative library buildings, regular flow of resource generation, skilled and qualified staff deployment with further training, capacity building in terms of information and communication technology, information dissemination facilities etc. are a few areas where best practices can be accommodated As the management and administration of the library is pivotal in collection development and delivery of information products and services to the end users, adoption of best practices in this area lead to continuous improvement in overall performance.

The below study shows the actual scenario of the programs, activities and the practices which are, in really, enhancing the performances of the library and information administration and the services. The information about the services and programs observed by the institutes is as below:

1. The Job During education

The Objectives: To employ research students to work in the Library 20 hours a week.

The Procedure: Library has several part-time jobs for the students to work in the Library under earn while learn program. The research scholars, who do not have any financial assistance, are selected to work in various sections of the library. Eight Student Assistantship Programs are available in the library to work for 20 hours a week without affecting their regular research work. They are paid Rs.3,000 per month. They are trained to assist the library staff members in different types of regular non-technical works.

The Outcome: Several students get financial support to meet their expenditure during their studies

in the University. The students expressed that the jobs in the library are interesting and useful to know the reading materials in their area of interest. They are able to understand the behind the scene works in the library, which is not visible to the users. This has improved the relationship between the library staff and the users in understanding the intricacies of services the library staff provide them.

Requirement; Budget allocation under Earn-While Learn Program. Selection of students and train them on the jobs to perform routine non-technical works.

The Source:
The University Librarian
University of Hyderabad
P.O. Central University
Hyderabad-500 046
Telefax: 040-23010318
e-mail: igmlnet@uohyd.ernet.in
Web: www.uohyd.ernet.in

2. Student Internship Programme

The Objectives: The main objective was to provide practical training in the different sections of the library to library and information science students and thereby get a clear understanding of library mechanics.

The Procedure: The students were divided into groups (two students per group) and a work and time schedule for posting the student groups in the different sections was prepared; a brief orientation of the work in different sections was given before the starting of the schedule. After the completion of every posting, an oral feedback was ensured. At the end of the schedule, a written report was prepared and presented by the student groups.

The Outcome: The practice provided hands on experience to students and thereby they could get a clear understanding of the functions/activities in each section of the library. In addition, there was confidence building in students, and there was an enhancement in the judgment and communication ability of students.

Requirements: Committed library and information professional staff who can conduct practical training programs for students.

The Source:
The Principal/Librarian and Head,
Dept. of Library & Information Science,
    Sarojini Naidu Govt Girls P. G. (Autonomous) College
    Shivajinagar, Bhopal – 462 016
    Tel: 0755 – 2763311, Fax: 0755 – 2552560
Email: snggpget_bpl@sancharnet.in
    Bkhanuja04@yahoo.com
Web: www.mp.nic.in\highereducation\snggpgcb

3. Student Participative Programme

The Objective: The main objective was to involve students in the maintenance of the library and thereby inculcate service mindedness in them on the one hand and library consciousness on the other.

The Procedure: The students are imparted knowledge about the library and it's functioning by trained staff before involving them in the activities of maintenance and up keep of the library.

The Outcome: Development of a positive outlook and attitude in students and awareness about the

value of a library and its services. In addition, the maintenance staff is benefited by the assistance of students.

Requirements : Dedicated professional staff to train students. A Minimum fund and the consent of the management is required.

Notes: A large number of students have opted for this programme and now the number is restricted to make the programme effective.

The Source:
The Principal/ The Librarian
Lady Doak College
Madurai – 2, Tamil Nadu
Tel: 0452-2530527/2524575
Email: ladydoak@md3.vsnl.net.in
Website: www.ladydoak.org

4. Development of Resources By External Membership:

The Objectives: The objective was to facilitate access of library services to students of affiliated colleges of the university for their studies, research as well as for exploiting their professional knowledge. As a consequence, to be able to generate financial resources and thereby supplement the monies received by the library so as to provide additional user services.

The Procedure: Library facilities are made available to the faculty members, administrators, students of the 108 affiliated colleges of Mangalore University on all working days. While individual members are charged Rs. 500/- per year, institutions are charged at Rs.1,000/- per year. For institutional membership, five cards are issued.

The Outcome: While a couple of lakhs are earned annually through external membership, more importantly, access is being provided to the users from affiliated colleges who do not have adequate library facilities.

Requirements: Committed library and information professional staff who can conduct practical training programmes for students. One professional to monitor the activities.

The Source:
The University Librarian
Mangalore University, New Administrative Bldg.
Mangalagangothri
Mangalore, Karnataka - 574 199
Tel: 0824-2287361(O), 2287289(D), 2287366(R)
Fax:0824-2287289
E-mail: mkb@mangaloreuniversity.ac.in
Web: www.mangaloreuniversity.ac.in

5. Development of Resource (through services using ICT)

The Objective: To avail the use of web/ online resources to the College and other University faculty and researchers, where the facility is not available and to generate funds through nominal fee to provide uninterrupted services.

The Procedure: Computers with printers made available to the external users from various colleges teachers of self-finance institutes, academic staff training colleges and other Universities. The following

services are provided free and with nominal charges:-

Free services:

Creating email id	Free
Infonet services (Online)	Free
Inter Library loan	Free
Document Location Service (Stack room & Periodical)	Free

Paid Services:

Downloading of review of literature from CD ROM Databases	Rs.10/- per CD
Internet Browsing Charges	Rs.10/- per hr
Photocopying charges	Re.1/- per copy
Email information Transfer	Rs.10/-
Use of Computer for personal work	Rs.10/- per hr
Password free eJournals per subject download charges	Rs.25/-
Identification and downloading websites clusters	Rs.10/-
CD Databases search per topic	Rs.10/-
Co-authors Finding	Rs.25/-

The Outcome: The practice made effective marketing of information and information products. The faculty and research students from other Universities and Colleges, institutions get benefit of accessing the information resources at right time. The library has earned a sum of Rs. 6.5 lakhs during the past 3 years and the fund has been used in providing better services.

Requirements: Deployment of committed library and information professional staff and trainee students who can help and monitor the users in using the facilities.

The Source:

The University Librarian
Madurai Kamaraj University, Madurai – 6250021
Tel. 0452-2458465, Fax: 0452 – 2459181/2458449
E – mail: sriwinsall@yahoo.com, Web: www.mkuniversity.org

6.Library science as optional course/paper

The Objective: The goal of the practice is to create awareness about the library and its functioning and to encourage students to opt for formal library science courses.

The Procedure: Library science optional course is offered as a semester course for both arts and science students at the graduate level. The curriculum includes basic knowledge of library management that helps the students in getting a general understanding of the importance and use of libraries in different contexts.

The Outcome: There is recognition / appreciation among the students of the library and its use in an academic environment. A positive impact is seen, in that these students have opted for full-time formal course in library & information science after their graduation.

Requirements : Course material and staff for conducting these optional courses.

The Source:

The Principal/ Librarian
Lady Dock College,
Maduari - 2, Tamil Nadu

Tel: 0452-2530527/2524575
e-mail:ladydock@md3.vsnl.net.in
Web: www. ladydock.org

7. Maintaining Hierarchy and Promotion of Staff:

The Objective: To develop a clear promotional policy to the library staff and thus enhance the performance level in University Library System

The Procedure: Designing and implementing a transparent promotion policy with requirements in terms of qualifications, length of service, expertise, regularity etc, with a time frame for promotion. A clear job description and responsibility has to be ensured.

The Outcome: The practice made the library staff in acquiring necessary qualifications and experience required to get a promotion to the next higher grade. As the transparent promotional policy informs the staff on their roles and responsibilities, it motivates and brings excellence in the information products and services of the library.

Requirements: The practice made the library staff in acquiring necessary qualifications and experience required to get a promotion to the next higher grade. As the transparent promotional policy informs the staff on their roles and responsibilities, it motivates and brings excellence in the information products and services of the library.

The Source:
 The University Librarian,
University of Hyderabad
P.O. Central University
Hyderabad – 500 046
Te: 040-23010121, Fax: 040 – 23011090
e-mail: vcad@uohyd.ernet.in
Web: www.uohyd.ernet.in

8. Observation of Other Library Practices by Institutional Visits

The Objective: the main objective of the activity was to refresh the library staff members and educate them about the prevailing work practices in other college/institutional libraries.

The Procedure: The library staff member are taken for a one-day visit to other College/ Institutional libraries to study their functioning, the purpose being to refresh them and also make them aware about the best practices followed elsewhere.

The outcome: There is qualitative improvement in the services offered to the students by the staff who have become enthusiastic and resourceful

Requirements: Library staff members who are open-minded and eager to know and learn the best practices followed in other libraries. Financial support from the management to organize such visits.

The Source:
 The Principal/ Librarian
St. Joseph's (Autonomous) College,
Tiruchirapalli – 620 002
Tel: 0431-2721417/2721418
Fax: 0431-2701501
Web: www.sjctni.edu

9. Staff Training Program

The Objective: The objective of study was to motivate professional staff to enhance their skill and expertise in conventional and e-library associated services and operations.

The Procedure: Staff members are given the opportunity to familiarize and expertise with library automation, e-library services by arranging in-house and external training programmes. By rotation of staff at various sections, on - job training is also given. Staff Development programmes organized on the areas such as Gardening, Yoga, Health and Team building.

The Outcome: The morale of the staff has been increased due to the training and expertise in recent areas of library operations. E-skills such as web hosting, automation have been acquired by the professional staff. As the out come, the quality of library services and usage has been enhanced.

Requirements: Training of the staff in use of new systems and techniques has to be arranged. Funds are required with the support of management.

The Sources:
The Principal/ Convener Library Committee
St. Agnes College, Mangalore -575002
Tel: Phone 0824-2218414
Email. stagnes@vasnet.co.in

10. Maintenance of Service Areas

The objective: To maintain cleanliness inside & and outside the library and provide suitable atmosphere for reading and searching.

The Procedure: Library is a place where many people visit to read, consult and borrow reading materials. It is necessary the atmosphere in the Library is inviting with cleanliness of areas in and outside of the library. Maintenance of calm and neat atmosphere in the reading and stack areas is a must for concentrated reading and searching of materials. IGM Library concentrated to achieve this to provide the users clean and green environment including dust free environment in the stack and reading areas.

The Outcome: Library Users are appreciative of the library efforts in keeping the entrance, reading and stack areas neat and clean. Green lawns in front and also in the courtyard within the library are a place of attraction for many users for reading in the evening and night. The lawn in front of the library is also used for academic group discussions on various topics by the faculty and students.

Requirements: Outsourcing the cleaning and mopping activities including maintenance of toilets. Dusting and Shelving of reading materials promptly on regular basis. Maintenance of reading tables and chairs etc.

The Source:
The University Librarian
University of Hyderabad
P.O. Central University
Hyderabad-500 046
Telefax: 040-23010318
E-mail: igmlnet@uohyd.ernet.in
Web: www.uohyd.ernet.in

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Swart, S. (2000, Oct. – Nov.) Marketing my corporate library on the web. Marketing Library Services, 20(2). Retrieved May 7, 2007, from http://www.infotoday.com/   mls/oct00/swart.htm

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www.bmsce.ac.in/naac-**best-practices**.

https://www.incommon.org/**library**/docs/**Best_Practices**.pdf.

eprints.qut.edu.au/28942/1/c28942.pdf as fetched on 30/07/2015.

TRANSFORMING LIBRARY SERVICES BY USING RFID TECHNOLOGY: A CASE STUDY ON IIT GUWAHATI AND RGU ITANAGAR

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Abstract

This paper gives brief idea about the emerging Radio Frequency Identification (RFID) technology, its importance in the library management system and its working. The paper covers the advantages and issues related to use of RFID technology in libraries. A case study was conducted in two libraries to gain better understanding of how RFID based library management works. Then the survey was conducted to find out whether RFID technology offers any actual value for the library patrons. There is a lack of standards for RFID technology. The emerging standard for library RFID solutions is to employ a frequency of 13.56 MHz. However, no formal standards are currently in place. Another major problem in North-East India is power failure. Unless a library has any generator facility or any other backup system; it is bound to close its circulation operations in case of power failure. This may cause uneven functioning of the RFID system in the library and grounds for inconvenience to user

For the case study the researcher has chosen, IIT Guwahat Central Library and RGU Itanagar Central Library as a sample. Data were collected by the way of interview, documented data and observations, and then they were analyzed according to their intended purpose. It is thought to be useful and pioneer for library services to develop their service process with RFID technology. Besides, it outlines various issues and possible solutions involved in the process of implementing RFID applications in libraries.

RFID is a highly advantageous technology for a wide variety of inventory tracking situations for a library.

Keywords: *RFID technology, Library services, IIT Guwahati Central Library, RGU Itanagar Central Library, Library management.*

1. Introduction:

Technology has evolved at an incredible rate in the past decade. It totally changes the way how librarians serve their patrons and perform their works. The proliferation of RFID (Radio Frequency Identification) technology and its successful application across different industry and business sectors has provided new innovations in the technology.

The great usage of Radio- Frequency Identification (RFID) technology has moved during the past decade from labs and niche uses into a broader range of application and derives from the tremendous expansion in computing power and in data captured for decision-making in various domains of retailing,

including library services, inventory and supply chain management, category management, dynamic pricing, customer segmentation, market basket analysis, and retail sales forecasting.

Appropriate deployment of technology can help improve service quality and provide efficient operations in the library services. RFID technology can facilitate innovative library and information services and in overall it would lead to better control of the library services. RFID technology carries value to libraries only when it becomes a genuine solution for service provision. Therefore, the choice of RFID technology is an important decision because it is the selection of a service transformation tool that is supposed to bring about benefits and improvements. There is a lack of standards for RFID technology. The emerging standard for library RFID solutions is to employ a frequency of 13.56 MHz; however, no formal standards are currently in place.

RFID technology is recognized as an ideal technology for managing academic libraries of the 21st century. It can be used to facilitate innovative cost-effective and efficient library and information services. RFID technology is the latest technology to be used in libraries to ensure security and facilitate innovative services. It is an automatic radio communications technology which functions through wireless radio communication to identify people or items.

2. Review of literature:

A literature review is an account of what has been published on a topic by accredited scholars and researchers. A good literature review, therefore, is critical of what has been written, identifies areas of controversy, raises questions and identifies areas which need further research.

Chanda and Sinha (2017), in their paper *"Introducing RFID Technology for Managing the Next-Generation Smart Library Systems and Services: An Overview"* describes about the RFID Technology, its components, services and also represents the most promising benefits from RFID Technology in library and information centres. The paper also highlights the present scenario of RFID Technology application in Indian libraries and information centres and proposal to introduce this technology in more and more academic libraries across the North East Region of India in particular and rest of India in general.

Chanda and Sinha (2015), has written a book on *"RFID Technology for Managing Next-Generation Smart Library Systems"*, in this book they have mentioned that RFID system may be a comprehensive system that addresses both the security and materials tracking needs of a library. The technology saves money too and quickly gives a return on investment. The RFID Technology is very new for library community and the use of RFID in libraries is very essential part of upcoming years. The major characteristics of RFID Technology are to provide high-speed inventory and identify items which are out of proper order. It is the responsibility of library community to conduct a comprehensive technology assessment of RFID as soon as possible to make the best possible decisions involving the implementing this technology. The implementation of this technology will change our personal and work lives in library and adorns the conventional library management with a new idea and usher for a future.

Sinha and Chanda (2014), in their jointly written paper on "*Exploring RFID Technology Application for Managing Library and Information Services in University and Institutional Libraries of North East India: An Overview"* discussed about the proposal to study the status of RFID implementation in University and Institutional Libraries of North-East India. As the RFID Technology application in libraries and other business organizations are gaining momentum, there is an urgent need for exploring the possibility for using RFID Technology in Library and Information Centres of North East India and discuss many issues and challenges to implement RFID Technology and University and Institutional Libraries of North East India. They also highlighted that the application of RFID Technology for managing housekeeping operations of university and institutional library services effectively. A brief outline of Research Project

for Implementing RFID Technology in University and Institutional Libraries of North East India has also been described in brief.

Aydin and Yildirim (2012), has conducted a case study about RFID System in Library Services. For the case study, Turkey was chosen as a sample by IRCICA library in Istanbul. IRCICA library is working with RFID technology and using UHF RFID system. It was thought that IRCICA library was a suitable sample for this case study because of IRCICA library's historical development and functional attitudes. Data were collected by the way of interview, archival data and observation, and then they were analysed according to their intended purpose. This study was designed to explain how RFID technology could be used in libraries and what the benefits of using this technology were. It is thought to be useful and pioneer for library services to develop their function system with RFID technology.

Ching and Tai (2009), has jointly written a paper on **"*HF RFID versus UHF RFID-Technology for Library Service Transformation at City University of Hong Kong*"** on their paper they have mentioned that since libraries first used RFID systems in the late 1990's, more and more libraries have identified the advantages of the technology. With advances in HF and UHF RFID, both alternatives are now viable in library applications. While some librarians are still sceptical towards UHF RFID as unproven in the library arena, the City University of Hong Kong implemented two pilot tests of the technologies. The Library formulated a set of criteria to evaluate UHF RFID against HF RFID as a possible library service transformation tool. This is to ensure that the selection of UHF or HF RFID is a rational one that is based on objective observation and analysis. The article provides background on the service transformation needs at the Library of the City University of Hong Kong. It reviews the use of HF RFID in the library arena and presents the latest development of UHF RFID. Results of the two pilot tests and how the University Library evaluated the two technologies are covered.

3. Objectives:

- ➢ To know the awareness about RFID technology among the students;
- ➢ To know the satisfaction level of the users to use the RFID technology;
- ➢ To identify the impact of RFID on theft of books;
- ➢ To examine the application of RFID in library operations & services; and
- ➢ To examine the level of acceptance of RFID among library users and staffs.

4. Methodology:

In the present study descriptive survey method was used to know the usage of Radio Frequency Identifier (RFID) system. The researcher wanted to know the usage of RFID system of some selected libraries of North-East India. A structured questionnaire was designed to collect the raw data and during data collection the researcher observed how RFID works in these libraries. This research employs the method of quantitative research to gather an in-depth understanding of the nature of usage of RFID system among these libraries.

Survey is one of the important methods of investigation of social problems. It helps both in identifying and problems solving of a group or community as well as of the area covered under survey.

The data has been collected from the RFID implemented libraries. The sample was selected to meet the purpose of the researcher.

5. About RFID technology and its history:

In today's information society the librarians have a great responsibility to organize and manage the knowledge centre due to exponential increase the volume of information which leads to the information

explosion. Libraries are moving towards adopting latest technological environment. As its name implies, the term RFID is generally used to describe any technology that uses radio signals to identify specific objects. RFID technology is primarily intended to reveal a current change in the library user service from the semi-automated to the fully-automated mode. It is a fast growing technology used in libraries for enhanced circulation capabilities, better inventory control, reliability, minimizing theft of documents (Golding and Tennant, 2008; Suman and Kumar, 2007), and provides batch access and storage of mass data. The implementation of RFID technology certainly improves service efficiency for libraries and enables more diversified applications and service modes. However, as stated by Yu (2008) *"regulating necessary standards, processes, and interfaces to fit in with current information systems and extend automatic library operations requires continuous effort"*. RFID technology promises to change our world. It has the capability of making our personal lives and our professional lives in the library more convenient. At present, when libraries of all kinds are facing economic hardship the overwhelming reason for considering RFID technologies is the most beneficial one, not only for improving the quality of service also for promising to relieve repetitive strain injury, speed patron self-checkout, and make possible comprehensive inventory. (Madhusudhan, 2010).

5.1 Historical development of RFID technology:

RFID was developed in 1948, but its implementations started in 1970s. RFID in India was developed in the 1940's for defense applications. First time it was used for commercial purpose in 1980 for cattle tracking applications. Recent interest is in making RFID Technology more ubiquitous in the global value chain. The first library suppliers started to market their systems in the mid 1990's. During the 1990's the proliferation of competing systems and radio frequencies employed created the need for standards and interoperability. Libraries need the higher frequency waves to allow for smaller, less powerful and portable readers. As complexities and uses increased, standards were developed to allow systems to work together. Development of standards is still going on with the latest standard being release late in 2004. (Somvir, 2011).

5.2 Components of RFID technology:

Generally a RFID system for library contain of eight (8) components:
- RFID tags;
- HF Handled Reader;
- a staff check-in/out station;
- a self check-in/out station
- a self-return book drop box;
- RFID Label Printer;
- a set of security gates; and
- RFID server.

But mainly and basic components RFID system contains of three (3) main components.

- **RFID Tags:**

The RFID tags have been specifically designed to be affixed into library media, including books, CDs, DVDs, and tapes. The tag is paper thin, flexible and approximately 2"x 2" in size which allows it to be placed inconspicuously on the inside cover of each book in a library's collection. The RFID tag has three sections: a lockable section for the item identification, a rewritable section for library specific use and security function for the item antitheft i.e. which can be activated and deactivated. The chip also has a multi read functions which means that several tags can be read at once.

- **Readers or Sensors:**

RFID readers or receivers are composed of a radio frequency module, a control unit and an antenna to interrogate electronic tags via radio frequency (RF) communication. These components are available in various shapes and sizes to suit respective applications within the library and are often integrated into one enclosure for that specific purpose i.e. patron self-check-in/out machines and inventory readers. The reader powers an antenna to generate an RF field. When a tag passes through the field the information stored on the chip in the tag is interpreted by the reader and sent to the server which in turn communicates with the integrated library system when the RFID system is interfaced with it.

➢ **Server/Docking Station:**

The server is the heart of some comprehensive RFID systems. It is the communications gateway among the various components. It receives the information from one or more of the readers and exchanges information with the circulation database. Its software includes the APIs - Applications Programming Interface, necessary to interface it with the automated library system. (Sinha and Chanda, 2014).

6. How RFID technology works in the library:

As a part of technology implementation, an RFID tag is implanted in each and every book and reading material of the library and complete book information is entered into the software installed in server or workstation. Now whenever a library member brings the book for issue return purpose, the RFID reader from the tag reads the information pertaining to that book and transmits the data into the software and books is smoothly issued in a few seconds with a minimum of manual intervention. As the member takes the book outside the library, the antenna placed at the exit gate automatically read the information contained on the RFID tag to verify whether the book is properly issued or not. In case the book is not issued to the member as per library norms or it is being stolen from the library the antenna senses it and gives an instant alert. Thus the technology resulted successful theft reduction of books. The same RFID Technology is also used for stock taking practice. Earlier, manual stock taking was an exhausting exercise as each and every book's detail had been manually entered into the system or registers. Now with the introduction of new technology it is very easy for the library staff to just place a scanner on the top of the book, the scanner automatically passed on scanned information to the common database or server. (Suman and Kumar, 2007).

6.1 Services provided by RFID technology in libraries:
➢ Self-check-in/out;
➢ Automatic sorting;
➢ Fine/Charge payment;
➢ Security;
➢ Stock management; and
➢ Accessioning.

6.2 The process of RFID library management system:
➢ Whenever a new book is acquired by the library, a RFID tag is attached into the book with the relevant information like, call number, accession number, book number, etc.
➢ The detailed information regarding the book is also captured in the computer/microcontroller database;
➢ The computer/microcontroller database also stores all information for individual users (patrons) of the library;

➤ Each patron is supplied with a smart card. These smart cards carry identification data for each patron;

➤ When a patron needs to get a book issued, he can get it done without any manual intervention. He walks to the issue kiosk, flashes his smart card and the system automatically shows his name and account details. He then places the selected books, one by one on the RFID scanner;

➤ The computer/microcontroller records all these data against his name;

➤ When a patron wants to return books, he simply places the books in the book drop counter and the books automatically are adjusted for return against the patron's name.

6.3 Advantages of RFID application in libraries:

➤ RFID improves library workflow by reducing non-value added work processes;

➤ Best tracking system for library theft control;

➤ Easy to find the misplaced books;

➤ Fast and exact stock verification can be done using RFID;

➤ Self-check in / out can be done using RFID by the users;

➤ Library staff can be used for other works instead for circulation;

➤ Allow better accuracy in book collection management, resulting in reduced book purchase;

➤ Users can pick books from shelves using PDA readers.

6.4 Disadvantages of RFID application in libraries:

➤ High Cost;

➤ Frequency Block;

➤ Chances of removal of exposed tags exit gate sensor problems;

➤ Reader collision;

➤ Tag collision;

➤ Interoperability.

6.5 RFID frequency breakdown:

LF (Low Frequency)	HF (High Frequency)	UHF (Ultra High Frequency)	
		Active	Passive
		(Battery Powered)	(Powered by RF Energy)
Frequency: 125 - 134 kHz	Frequency: 13.56 MHz	Frequency: 433 & 856-900 MHz	Frequency: 856- 900 MHz
Cost Range: Rs. 33.40 — Rs. 33490	Cost Range: Rs. 15.41 — Rs. 669.80	Cost Range: Rs. 1674.50 — Rs. 6698.00+	Cost Range: Rs. 6.71 – Rs. 1674.50
Read Range: contact - 10 cm	Read Range: contact - 30 cm	Read Range: 30 - 100+ meters	Read Range: near contact - 25+ meters

Examples: Animal tracking, Access Control, Car Key-Fob, Applications with high volumes of liquids and metals	Examples: DVD Kiosks, Library Books, Personal ID cards, Poker/Gaming Chips	Examples: Auto dealerships, Auto Manufacturing, Mining, Construction	Examples: Supply Chain, High-volume Manufacturing, Pharmaceuticals, Electronic tolls, Item Tracking, Race Timing, Asset Tracking
Pros: work well around liquids and metals, global standards	Pros: NFC (Near-Field Communication) protocol, larger memory, global standards	Pros: very long read range, lower cost readers, write extensive amounts of data, high data transmission rates (read more tags at one time)	Pros: longer read range, lower cost per tag, wide range of tag sizes and types, global standards, high data transmission rates (read more tags at one time)
Cons: very short read range, limited quantity of memory, low data transmission rate (read very few tags at once), high production cost	Cons: short read range, low data transmission rate (read fewer tags at one time)	Cons: very high tag cost, cannot be shipped via air transport (if tags are actively beaconing), complex software may be necessary, high amount of interference from metal and liquids, no global standards	Cons: typically higher associated infrastructure cost, write small amounts of data, high amount of interference from metal and liquids.

6. Transforming library services by using RFID technology:

At the time of introduction of any technology into the library or any other organisation we need to ask ourselves "why?" What is the motivation for libraries to get involved with the new technologies? The answer to this question may be fairly simple: libraries use new technologies because the conditions in the general environment that led to the development of the technology are also the conditions in which the library operates.

RFID is a highly advantageous technology for a wide variety of inventory tracking situations for a library. Library circulation is the primary function where RFID is using most by the libraries.

In the commercial world all things are measured by "return on investment". A company invests in a new technology that speeds up its delivery of widgets and cuts costs warehousing costs. The cost of the new technology is compared to the increase in profits and in the best of cases profits rise enough to both pay for the new technology and then some. This is the return on investment. When libraries measure their success, profit isn't part of the equation. Like other institutions that provide services, such as schools and city governments, the bottom line is less quantitative than the business case. Libraries "spend" their ROI on new services or on beefing up existing services. They also spend their ROI to respond to budget cuts or to loss of buying power when budgets do not keep up with inflation. This makes it hard to demonstrate that an investment in technology is worth the cost. The obvious gains are in checking out and checking in books, although the gains vary by the degree of automation. Additional investment can be made on a book return system that automatically checks in items as they pass along a conveyor attached to a book drop.

This system can be attached to an automated sorting machine that sorts the items into bins based on their call numbers. All of this saves time, but there is one thing to remember about this efficiency- the items still need to be shelved. The increase in circulation, which is often one of the few quantitative measures that libraries have to show that RFID has made their operations more efficient this has to be balanced against the cost of re-shelving more items.

It is generally agreed that the greatest return on investment depends on turning over the check-out functions to patrons, in essence practically eliminating the need for circulation staff. Some libraries intend to become 100% self-check-out. Others are content to allow patrons to choose between the staff check-out desk (which should operate more quickly), and the self-check stations. There are arguments for and against these approaches. On one hand, for many people who frequently visit the libraries for them the circulation desk staff is the only staff with whom they can have any interaction. Some librarians fear that self-check could eliminate what little human factor that libraries have for these patrons.

In a service sector like that of the library, satisfying users is one of the few measures of success. Library can intuit satisfaction from an increase in use statistics, but an actual survey of users, ideally both before and after a change is made in library operations would be the best evidence the library has that it is fulfilling its mission. Self-checkout could be seen by users as a mere shifting of the burden of check-out from the library to the users themselves, who will feel that they are being asked to do the work of the library. Just adding self-check stations will not be enough; libraries must be sure that the stations serve the needs of the users and perhaps even provide additional services to win over their hearts.

7.1 Analysis of survey statistics:

The survey questionnaire is guided by the research questions and is the data collection tool to gather the statistical data. The survey focuses on the library service and patrons satisfaction. A small quantitative survey questionnaire has been conducted with 35 respondents in IIT (Indian Institute of Technology), Guwahati, Assam during the time April, 2017, and 25 respondents in RGU (Rajiv Gandhi University), Itanagar, Arunachal Pradesh during the time March, 2017. The survey uses the convenience sampling method to gather the quantitative data from 60 library users, the researcher also collects information from library professionals separately, questionnaire has been collected from the library professionals from both the libraries.

Moreover, designing good questionnaire is really important because it often has an effect on the quality of data gathered. To design good questions in questionnaire in order to gather the information, first of all, the question objectives should be defined and the kind of answers need to meet the objectives of the question. Then, the key terms of the question should be understood as same as that intended by the person writing the question. Next, it is important to ensure that the respondents know the answer and are able to answer it and are willing to answer accurately. Thus, the answers can be aggregated to produce statistical data.

➢ **Case one: IIT Guwahati (Assam) Central Library**

The Library of the Institute was named after the renowned and much revered literary figure Sahityarathi Lakshminath Bezbaroa on 5th December, 2014. The Lakshminath Bezbaroa Central Library is housed on a four storied building having a floor area of about 7500 sq. meter. Being a major central service point, it provides necessary supports for teaching, learning, research activities of the Institute by creating state-of-the-art facilities and offering innovative services to the academic community. The Library currently has 1,54,564 printed volumes and 2291 subscribed current journals. Several e-books and online fulltext and abstract database, across all domain of academic pursuit through the campus network. Being a member of e-Shodh Sindhu: Consortia for Higher Education E-Resources and DBT e-Library Consortium (DeLCON), the

Library provides access to 12835 e-journals. The database for the entire collection is available through web-based On-Line Public Access Catalogue (WebOPAC).

The Central Library extends its facilities to about 5000+ regular members. Annually, on an average about 250 - 350 visitors also avail the facilities of the Library. Its annual transaction of documents is 3.5 - 4 lakh. The library is providing automatic circulation facility to its user by using RFID technology, the library have presently three circulation counter to serve the users. It also provides self-check-in facility to its users but no self-check-out facility is presently available in the library. The library was started RFID implementation in the year 2014 and completed its 1st phase of implementation in the year 2016. Circulation Timing: 9:30AM to 1:00PM and 1:30PM to 5:30PM (only on working days). (http://www.iitg.ernet.in/lib/)

➢ **Case Two: Rajiv Gandhi University, Itanagar (RGU) Central Library**

Rajiv Gandhi University (formally Arunachal University) is the premier institution for higher education in the state of Arunachal Pradesh. Late Smt. Indira Gandhi, the tenth prime minister of India laid the foundation stone of the university on 4th Feb, 1984. The Central Library was established with short number of books in the year of foundation of the University. Its two storage building has spacious reading halls and compact stack area. Presently the Library holds 65,400+ nos. of books and subscribes various national and international journals. The library also provides access to the different online journals under various consortiums from which more than 10,000 e- journals; full text article may be browsed and downloaded. The Library also subscribes 17 daily newspaper and 10 reputed magazines. The total of 343 Ph.D. thesis and 353 dissertations are displayed in the separate section for consultation. The Library is using open source library management software Koha and implemented RIFD technology in the year 2013-14 for its smooth functioning of circulation operations and theft detection. The Central Library serves its users from 9.00A.M. to 7.00 P.M. in all working days. (http://www.rgu.ac.in/Facilities/FacilityDetails/Library)

In this section, the collected data is presented in the table and then interpreted, which is used in the comparative study in both libraries.

The questionnaire has been developed based on the patron's satisfaction of service quality.

➢ **Respondents General Information**

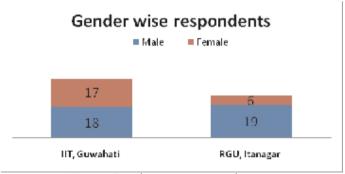| Name of the library	Gender	
	Male	Female
IIT Guwahati (Assam) Central Library	18	17
RGU Itanagar (Arunachal Pradesh) Central Library	19	6
Total	37	23

Fig 1: Gender wise respondents

Fig 1, represents the number of male and female who took part in the survey in IIT, Guwahati and RGU, Itanagar. In IIT, Guwahati Central Library, about half male and half female respondents were participated in the survey, however in RGU, Itanagar Central library male respondents were the main user group.

Table 2: The respondents' age in years (N=60)

Age group	IIT, Guwahati	RGU, Itanagar
Below 20	15	14
20-25	12	8
26-30	8	3
31 and more	0	0
Total	35	25
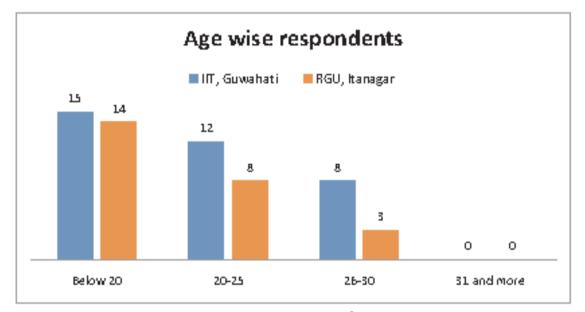
Fig 2: Age wise respondents

Fig 2, represents the respondents' age group in years in both IIT, Guwahati Central Library and RGU, Itanagar Central Library and the age group is divided so all ages are included e.g. bachelor students, masters students and research scholars.

Table 3: Frequency of visiting the library (N=60)

Name of the library	Daily	Multiple times in a week	Weekly	Monthly
IIT Guwahati (Assam) Central Library	10	7	13	5
RGU Itanagar (Arunachal Pradesh) Central Library	6	5	12	2

Frequency of visiting the library

■ IIT, Guwahati   ■ RGU, Itanagar
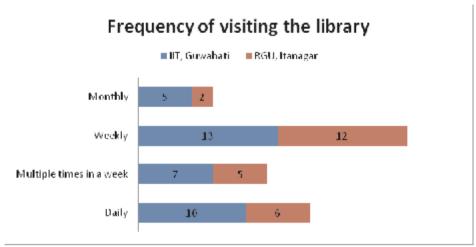
Fig 3: Frequency of visiting the library

Fig 3, shows the frequency of library visits by presenting the number of male and female in IIT, Guwahati and RGU, Itanagar, and from the collected data, it can be seen that more than half of respondents prefer to visit the library weekly.

Table 4: Frequency of using automatic lending machine (N=57)
(N.B: 3 nos. of respondents did not respond this part of questionnaire)

How often do you	Every time		Often		Seldom		Never	
	IIT	RGU	IIT	RGU	IIT	RGU	IIT	RGU
Use self-check-out station	0%	0%	0%	0%	0%	0%	0%	0%
Use self-check-in station	21%	0%	55%	0%	15%	0%	29%	0%
Use staff check-out station	100%	100%	100%	100%	100%	100%	100%	100%
Use staff check-in station	79%	100%	45%	100%	85%	100%	71%	100%

Frequency of using automatic lending machine

■ Use self-check-out station   ■ Use self-check-in station
■ Use staff check-out station   ■ Use staff check-in station
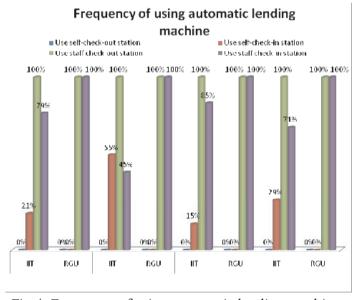
Fig 4: Frequency of using automatic lending machine

Measuring the frequency of using the automatic lending machine uses another approach as a proportion of time to get four response scales: Every time, Often, Seldom and Never. The scales of frequency are clearly defined and commonly understood instead of defining the middle or intermediate categories such as 'Usually' or 'Always'.

In addition, the percentage of total in each scale of frequency is calculated and presented in the table. For example, 55% respondents use self-check-in station often in IIT. As the figures can be seen from above table, all the respondents use staff-check-out services in both the library. There is no self-check-in facility available in IIT Central Library, and in RGU though self-check-in/out station is available but user cannot return the books properly as a result library authority stop the services. Result of that 100% users use staff-check-in and staff-check-out services, while the corresponding respondents in IIT is less. However, no users is using self-check-out services in both libraries.

Table 5: Measuring satisfaction (N=57)
(N.B: 3 nos. of respondents did not respond this part of questionnaire)

How satisfied are you with	Very satisfied		Somewhat satisfied		Neutral		Somewhat dissatisfied	
	IIT	RGU	IIT	RGU	IIT	RGU	IIT	RGU
Services provided by the library	82%	91%	12%	5%	6%	4%	0%	0%
Ease of use of self-check-out station	0%	0%	0%	0%	0%	0%	0%	0%
Ease of use of self-check-in station	79%	0%	10%	0%	5%	0%	6%	0%
Speed of self-check-in items	88%	0%	12%	0%	0%	0%	0%	0%
Staff-check-in/out service in general	95%	91%	5%	3%	0%	3%	0%	3%
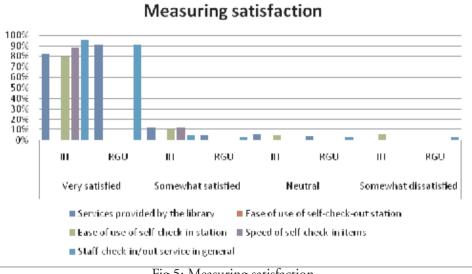
Fig 5: Measuring satisfaction

Measuring patrons' satisfaction of using the library is the core of this survey paper. As it can be seen from the above figure, the staff-check-in/out service in general in two libraries got almost the same score and services provided by the library also manages almost the same score for both the library. However, remaining three criteria's cannot be matched as RGU does not using self-check-in station right now, and both the libraries are also not using self-check-out station currently.

Table 6: Impact of theft detection (N=2)

(N.B: Respondents are library professional from respective library)

Name of the library	RFID Gate
IIT Guwahati (Assam) Central Library	No
RGU Itanagar (Arunachal Pradesh) Central Library	Yes

No libraries reported in detail about the theft detection of RFID systems. Indeed, the results reported about general benefits so far on security are disappointing. In IIT Guwahati Central Library, they are not using RFID gate till date, so they have to look after the patrons every time and there is no CCTV setup in the library where as in RGU Central Library, RFID gate is installed in the entrance point of the library which gives signal is someone take the book without issuing properly, again the whole system is depends on power supply, so power is also a main factor in this regard.

Table 7: Application of RFID in library operation and services (N=2)
(N.B: Respondents are library professional from respective library)

Applications	Name of the Library	
	IIT Guwahati Central Library	RGU Central Library
Shelf Check-in	Yes	Sometimes
Shelf Check-out	No	Sometimes
Automatic sorting	No	No
Staff Check-in/out	Yes	Yes
Increase security and reduce theft	No	Yes
Faster processing of new materials	Yes	Yes
Reduce overall library staff cost	Yes	Yes
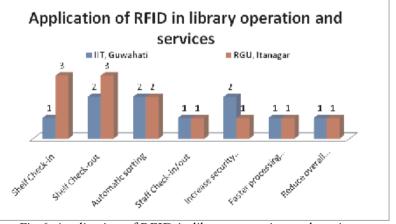
Fig 6: Application of RFID in library operation and services

(N.B: Yes=1, No=2, Sometimes=3)

The most reported benefit cited by libraries in this study are staff check-in/out, faster processing of new materials and reduce overall library staff cost. Self check-in facility is available is both the libraries but RGU is using this facility sometimes because they noticed that sometimes users put the book in the drop box without check-in properly, so every time a staff has to look after the process, this is similar to staff check-in process. Self check-out facility is not available in IIT Guwahati library and in RGU sometimes they are using self issue/return kisko when more number of patrons comes to the library at a single point of time, it reduces the line in circulation counter.

Table 8: Level of acceptance among library professionals (N=2)
(N.B: Respondents are library professional from respective library)

	Major Benefits		Minor Benefits	
	IIT	RGU	IIT	RGU
Self-check-in/out	x	x		
Reduce the work at circulation Section	x	x		
Return items to shelf more quickly			x	x
Reduce theft		x	x	
Increase security		x	x	
Better inventory control	x	x		
Faster processing of new material	x	x		
Track materials more accurately	x	x		
Reduction of overall library staff costs	x	x		
Staff satisfaction	x	x		
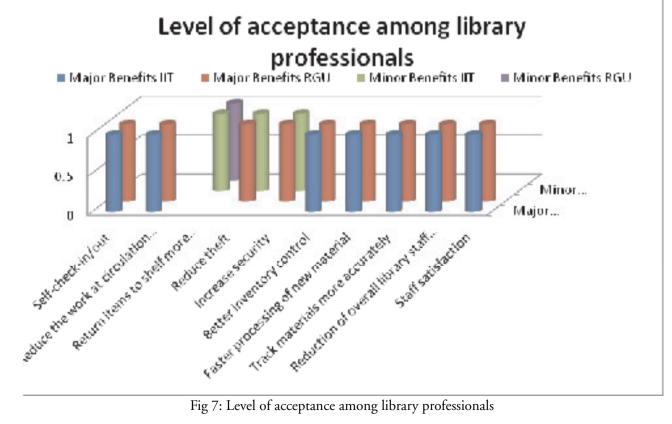
Fig 7: Level of acceptance among library professionals

Both the library considered Self-check-in/out, reduce work at circulation section, better inventory control, faster processing of new material, material tracking, reduction of overall library staff cost as a major benefits for the library, where as theft reduction is considered as minor benefit by the IIT Guwahati central library. Return items to shelf more quickly is considered as minor benefit for both the library.

7 Major findings:
- ➢ Most of the respondents visit the library either daily or weekly;
- ➢ Self check-in station is mostly used by the library users in IIT Guwahati central library;
- ➢ All the respondents uses staff check-out station for issuing books in both the libraries;
- ➢ Most of the users are very satisfied with all the services provided by both the libraries;
- ➢ Theft detection is only possible is RGU central library, as IIT Guwahati central library has not installed RFID gate in the library till date;
- ➢ Most of the RFID services are majorly beneficial for both the libraries accept items to put in the shelf more quickly.

8 Possible Barriers:
- ➢ RFID technology being new a technology lead to a situation of lack of expertise and professional advice as it is not yet implemented in many libraries in India.
- ➢ Transition phase when RFID will take over the Barcode system may lead to a chaos as using both system side by side may cause problem both for staff as well as user.
- ➢ There is a lack of standards for RFID technology. The emerging standard for library RFID solutions is to employ a frequency of 13.56 MHz. However, no formal standards are currently in place.
- ➢ The moisture present in the atmosphere, especially on rainy days, affects the RFID tag. A tag, which contains moisture, does not respond to the RFID system.
- ➢ Power failure in a major problem in India. Unless a library has any generator facility or any other backup system; it is bound to close its circulation operations in case of power failure. This may cause uneven functioning of the RFID system in the library and grounds for inconvenience to user

9 Conclusion:
A small quantitative survey was conducted and the objectives of the survey is to find out if RFID increase patron's satisfaction of using library by comparing with two libraries. The survey results show that the satisfaction level in two libraries remains the same. This study was designed to explain how RFID technology could be used in libraries and what are the benefits of using this technology.

Librarians are always known as early adopters of technology and the libraries have started using RFID technology to provide more effective and efficient circulation services as well as for security of library collections. Although the use of RFID technology by libraries over the last few years has grown dramatically, yet the major barriers of RFID technology adoption by more libraries is its cost factor, non availability of standards. As far as the cost constraints are concerned, once the libraries implement such a technology it's benefits can be realized in terms of "Return On Investments" as it will speed up the circulation process and the staff can perform other user centric services.

To sum up, the main contribution of this case study was to explain how the RFID technology could be used in libraries. According to the results which contain both interview and observation, it could be said that RFID technology usage provided some benefits such as efficient security system, time-saving in item-circulation in library, staff reduction and especially in counting inventory operation. It can be suggested

to the libraries to install RFID technology to perform better and satisfy the readers.

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THE SCOPE OF EDUCATIONAL SERVICES OVER SOCIAL MEDIA AND THE POTENTIAL OF TRANSFORMING MODERN LIBRARY SERVICES SUPPORTING IT

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Abstract:

The growth of social media in the current web is enormous. Social media have brought a significant percent of world population to the web and formed an invisible connected platform of people. Therefore, it has now become a platform for business, marketing and shopping even though its primary purpose was building communication. Libraries have already understood the possibilities of social media and now a days they use social media as a marketing tool for their resources and services. The current study actually tries to identify the potential of education and its related services which can be started over social media. The study also tried to find out usage level of social media by students in their study related activities and the skills that have been enhanced among the students by the use of social media. A questionnaire containing 16 questions related to the objectives of the study was prepared and two controlled groups were created for conducting the survey, one group of students and the other was a group of teachers. From the students, their level of social media uses for the identified 16 activities were collected and from teachers the recommended level of social media uses for the students for the same activities were collected using the Likert scale measure.The opinions of students and teachers were then correlated to show the significance level of findings against each objective identified for the study. From the findings, a service model for modern libraries is also proposed which will be needed to support the future educational services over social media.

Keywords: Social media, Educational service, Transforming library, Web2.0, E-learning

1 Introduction:

In today's era of connected world of web2.0, where learners are also the content producers and content consumer, it has become essential that education become a part of social media. With features of *learning on demand*(McGloughlin & Lee, 2010)in e-learning, Dabbagh & Kitsantas (2012) have called for integrating the formal and informal learning processes using web2.0 tools and thus building a Personnel Learning Environment(PLE) for everyone. Smith & Caruso (2010) have studied about the social media use of students and found that the use of socal media is on the rise among the students and the age gap between the students is shrinking which gives ample opportunities for creating a communitative learning environment in social media. Today's social media includes social networking sites, online audio/video streaming platforms, instant messaging services like whatsapp, messenger etc. Greenwood, Perrin, & Duggan (2016) of Pew Research Centre, published that out of total internet users of USA, 79 % uses facebook and out of that 88% are in the age group of 18-29. In global percpective, Statista (2017)published a report that

untill april 2017, facebook is the most followed social media platform with 1.9 billion active users, followed by Whats app (1.2 billion) and You tube(1 billion). This large amount of presence of global population in the social media platforms, have made it a platform for business, marketing and shopping, even though its primary purpose was communication. The scope of social media uses for information sharing and library marketing have already been studied, but its scope for implementation in higher learning scenario is still under studied. Positive infuence of social media uses in students learning activites have been found in the study of Helou (2014). Nee, Chee Ken (2014) opined that the influence of educational network over social media penetrates the convetional facets of curricula and opens up new paradigms for teaching and learning. Thus seeing the ample opportunities of social media in educational activities the current study was undertaken to check the co-rellative behaviour of social media uses by students and faculties in higher education scenario.

2 Objectives of the study:

The current objectives of the study is to evaluate the effect of social media on students study related activites and finding out future scope of educational services that can be started over social networking sites. When we say about education, two fronts of it always come *viz.* the students and the teachers. Therefore it is necessary that for this kind of study, both the party i.e. students and techers opines their views on the said topic. So to have a more concrete view of the current scenario of social media and education, the following objectives were chosen for the study-

    i.   To find out the uses level of social media in different study related activities by the students.

   ii.   To find out what are the qualitites that have been enhanced among the students by the use of social media.

  iii.   To know about the probable educational services that students wish to see over social media sites.

3 Methodologies:

For fulfillment of said objectives of the study, questionnaire method was adopted as a data collection tool. As the objective of the study was to- identify the study related activities where social media is used; qualities that have been enhanced in the students by the use of social media and the educational services that could be benificial for students if started over social media, the qustionnaire was devided into three groups*viz.* Questions on Educational Activities(QEA), Questions on SkillEnhancement (QSE) and Questions on Educational Service(QES). As students and teachrs both are two pillers of any education system, two controlled groups of students and teachers, both from university level containing 40 respondents in each group was created. Likert scale measure was used to collect the responses. The scale used was 1 to 5, where 1=least value to 5=highest value.

In the first group of QEA, we have identified five activites related to study and asked the students to rate the level of usage of social media for those activities in the identified likert scale. To the teachers we asked what should be the student's level of social media uses for those activities in the same likert scale. Then we co-rellated the students and teachers viewpoints.

For the second group of QSE, six such skills were identified and the students were asked to rate the level of enhancement in those skills by the uses of social media in the selected likert scale. For the teachers we have asked how much enhancement in the identified skills they have seen in their students by the use of social media in the same likert scale. Then we co-rellated the students and teachers viewpoints.

For the last group of QES, we have identified five such services that can be started over social media and asked the students to rate their level of requirement of those services in idntified likert scale for the study. Teachers were asked to respond the requirement level of those services for their students in the same

scale.Then both the students and teachers viewpoints were co-rellated. Table 1 represents the different response point supplied for each of the three group of questions. Each response point under each group of questions is given a question code for their easy representation in the data analysis part.(Appendix 1

Table 1: Response point for the three different group of questions	
Questions on Educational Activities (QEA) where social media is used most	
Question Code	Question
QEA1	Searching for audio/video and learning objects
QEA2	Sharing course material with teachers and friends
QEA3	Getting in touch with subject experts
QEA4	Establishing academic co-ordination with faculties/students of other institution
QEA5	Having constructive study related discussion with friends and teachers
Questions on Skill Enhancement (QSE) by the uses of social media	
QSE1	Social media uses have enhanced my critical thinking ability in different issues
QSE2	Because of social media I now often participate in constructive debates
QSE3	Increased knowledge of vocabulary and writing skill
QSE4	Enhanced communication skill
QSE5	Raising my voice for social and ethical issues
QSE6	It have enhanced my current awareness
Questions on Educational Services (QES) that can be started over social media	
QES1	Online class room over social media
QES2	Discussion forum of specific subjects
QES3	A group of subject experts where you can have open discussion of your doubts
QES4	A common platform for sharing audio/video/textual course material
QES5	Career guidance cell over social media

4 Data analysis:

Collected data from the questionnaires from the respondents of the two controlled groups were transferred to SPSS v20 of IBM and further analysis were done using that software. Table 2, Table 3 and Table 4 respectively represents the findings and analysis of QEA, QSE and QES data respectively. From table 4 students highest level of social media uses were found for "Sharing course material with teachers and friends" with a score of 4.2 out of 5 while lowest level of social media uses was found for "Establishing academic co-ordination with faculties/students of other institutions" with a score of 2.9 out of 5. But the highest recommended activity from teachers where social media use by students should be high was "Getting in touch with subject experts" with a score of 4.1 and lowest recommended activity was "Searching for audio/video and learning objects materials related to study" with a score of 3.6.(Details in table 2)

On skill enhancement, as opined by the students "Increased knowledge of vocabulary and writing skill"have enhanced highest among the students with a score of 4.23 out of 5. The least enhanced skill as opined by the students were "participation in constructive debate" with the least score of 3.23 out of five. On the teachers' opinions highest enhanced skill among the students by social media uses was "the current awareness knowledge of students." (Details in table 3)

A common opinion was obtained from both the teachers and students about the most required educational services over social media. "Career guidance cell over social media" was the most required educational services for the students. (Details in table 4)

Table 2: Analysis of QEA data							
Students Response							
Response point	Response scale					Total	Final Likert Value
	1	2	3	4	5		
Searching for audio/video and learning objects	0	8	20	4	8	132	3.3
Sharing course material with teachers and friends	0	2	4	18	16	168	4.2
Getting in touch with subject experts	0	12	12	14	2	126	3.15
Establishing academic co-ordination with faculties/students of other institutions	2	14	12	10	2	116	2.9
Having constructive study related discussion with friends and teachers	0	10	10	8	12	142	3.55
Recommended level by teachers							
	1	2	3	4	5	Total	Final Likert Value
Searching for audio/video and learning objects materials related to study	0	0	24	8	8	144	3.6
Sharing course material with teachers and friends	0	0	12	16	12	160	4
Getting in touch with subject experts	0	2	8	14	16	164	4.1
Establishing academic co-ordination with faculties and students of other institutions	0	2	8	20	10	158	3.95
Having constructive study related discussion with friends and teachers	0	2	8	16	14	162	4.05

Table 3: Analysis of QSE data							
Students own evaluation of skill enhancement by social media uses							
Response point	Response scale					Total	Final Likert value
	1	2	3	4	5		
Social media uses have enhanced my critical thinking ability in different issues	0	3	12	22	3	145	3.63
Because of social media I now often participate in constructive debates	1	5	20	12	2	129	3.23
Increased knowledge of vocabulary and writing skill	0	1	1	22	16	173	4.33
Enhanced Communication skills	0	1	1	28	10	167	4.18
Raising my voice for social and ethical issues	0	3	22	12	3	135	3.38
It enhanced my current awareness	0	1	3	22	14	169	4.23
Teachers evaluation of skill enhancement of students by social media uses							
	1	2	3	4	5	Total	Final Likert value
Social media uses have enhanced the students critical thinking ability	0	4	8	26	2	146	3.65
Because of social media students now often participate in constructive debates	0	2	12	20	6	150	3.75
Increased knowledge of vocabulary and writing skills	0	0	2	30	8	166	4.15
Enhanced Communication skills	0	0	4	24	12	168	4.2
Raising their voice for social and ethical issues	0	1	3	32	4	159	3.98
It enhanced students current awareness knowledge	0	0	2	24	14	172	4.3

Table 4: Analysis of QES data							
Students level of requirement of Educational services over social media							
Response point	Response scale					Total	Final Likert value
	1	2	3	4	5		
Online class room over social media	0	10	10	10	10	140	3.50
Discussion forums of specific subjects	0	4	10	16	10	152	3.80
A group of subjects experts where you can have open discussion of your doubts	0	6	4	16	14	158	3.95
A common platform for sharing audio/video/textual course materials	0	4	8	10	18	162	4.05
Career guidance cell over social media	0	4	4	12	20	168	4.20
Teachers suggested level of requirement of educational services over social media							
	1	2	3	4	5	Total	Final Likert Value
Online class room over social media	5	5	16	12	2	121	3.03
Discussion forums of specific subjects	1	5	8	18	8	147	3.68
A group of subject experts where students can have open discussion about their doubts	0	2	6	14	18	168	4.20
A common platform for sharing audio/video/textual course material with friends and faculties	0	3	5	14	18	167	4.18
Career guidance cell over social media	0	0	6	6	28	182	4.55

5 Correlation level between the student's and Teacher's opinions for QEA, QSE and QES data:

As already mentioned earlier in the paper, teachers and students are the two pillars of any specific education system, therefore to identify the potential of social media for educational services it is necessary that the opinions of both teachers and students' matches. Therefore,Pearson correlation measure was adopted for measuring the correlation between the final Likert value of each response point in the response scale of students and teachers, obtained for the QEA, QSE and QES data. Table 5, Table 6 and Table 7 represents the findings of correlation value of QEA, QSE and QES data respectively.

From table 5, Pearson correlation coefficient of 0.136 for the QEA data reflects the low insignificant correlation of students' level of usage of social media and the teachers' recommended level of social media usage for study related activities. This insignificant correlation suggests that students requires counselling and training for using social media as a supporting tool for their study related activities.

The correlation of QSE data is represented in table 6. The Pearson correlation coefficient obtained is 0.798 which is quite significant. This high level of significant correlation of students' and teachers' views only suggests that social media have really enhanced those identified skills in the study among the students. So more nourishment of those skills can be done by social media usage.

Pearson correlation coefficient of 0.987 between the students' and teachers' views for the QES data (Table 7) strongly signifies the need of identified educational services in the study that can be started over social media. This strong correlation of 0.987 signifies a common opinion of students and teachers for the educational services that should be started over social media.

A regression analysis of the QEA, QSE and QES data for students and teachers is also given in Fig 1. Regression analysis have also given the same result as Pearson correlation study.

Table 5: Correlations between students and teacher opinion for QEA data

		Student's level of usage	Teacher's recommended level
Student's opinion on QES	Pearson Correlation	1	.136
	Sig. (1-tailed)		.414
	N	5	5
Teacher's opinion on QEA	Pearson Correlation	.136	1
	Sig. (1-tailed)	.414	
	N	5	5

**correlation is insignificant

Table 6: Correlations between student's and teacher's opinion for QSE data

		Student's opinion	Teacher's opinion
Student's opinion on QSE	Pearson Correlation	1	.798*
	Sig. (1-tailed)		.029
	N	6	6
Teacher's opinion on QSE	Pearson Correlation	.798*	1
	Sig. (1-tailed)	.029	
	N	6	6

*. Correlation is significant at the 0.05 level (1-tailed).

6 Opportunities for transforming library services supporting educational services over social media:

The study finds conclusive evidences of importance of educational services over social media. As libraries have traditionally been the torch bearer supporting educational and R&D activities, it has ample opportunities for being part of the online social media educational services. Libraries have already exploited the opportunities of lib2.0 services in reaching the unreached users. Therefore, using the same philosophy of lib2.0, the modern libraries can adopt services which will be beneficial for the learners of social media educational services.

		Student's score	Teacher's score
Student's score on QES	Pearson Correlation	1	.967**
	Sig. (1-tailed)		.001
	N	5	5
Teacher's score on QES	Pearson Correlation	.967**	1
	Sig. (1-tailed)	.001	
	N	5	5

**. Correlation is significant at the 0.01 level (1-tailed).

Fig 1: Regression analysis of QES, QSE and QEA data

Library services model for QEA: Libraries can develop its social media pages as a guiding path connecting the students to learning activities available in social media. The current study finds low correlation of QEA data between the students and the teachers, which only reflects the wayward usage of social media by the student community for study related activities. Libraries may develop services that will guide students to use social media as a supporting tool for their education. The social media page of libraries can be a gateway to learning objects materials.

Library service model for QSE: The higher correlation of student's and teacher's opinion of skill enhancement (refer to QSE data table 6) is an encouragement for libraries for developing value added services for the users. Findings from table 3 shows that teachers have found increased knowledge of current awareness among their students by social media usage. So libraries may develop services related to current awareness which in turn help the students to enhance their current awareness skill more.

Library service model for QES: "Career guidance cell over social media" is the most wanted service for the students over social media from both the students and teaching community. While the higher correlation of QES data from the students and teachers reflects importance of educational services over social media, it also opens up opportunities for modern libraries to implement services related to them. Libraries can use their social media pages as a platform to establish academic co-ordination with subject experts. It can also use its social media pages for giving career counseling guidance to students. Libraries social media pages can be a place for open interaction for students and teachers.

7. Conclusion:

The current study was undertaken seeing the opportunities provided by social media as a teaching/learning tool. In the era where e-learning is becoming a part of formal education, educational services over social media can be strong medium for enhancing the learning processes. In the study the researchers tried to evaluate- the student's participation in social media for educational activities; skills enhanced in the students by social media uses and services that can be started over social media for education purpose. Total 16 questions were identified for the study and the responses were collected in a Likert scale. From the students, their level of social media uses for the identified 16 questions or activities were collected and from teachers we collected the recommended level of social media uses for the students for the identified 16 questions or activities. Then the correlation level of students and teacher's opinions were checked. The correlation level between the students and teacher's opinions were high (Pearson correlation coefficient of 0.987, see table 7) for the educational services which proves the significance and practical need of identified educational services in the study. "Career guidance cell over social media" is the highly rated service required for the students as opined by students (4.20 mark in students rating scale) as well as the teachers (4.55 mark in teachers rating scale). The correlation level was also strong (Pearson correlation coefficient of 0.798, see table 6) for the skill enhancement activities of the students signifying the benefit of social media uses among the students. In the students rating scale highest enhanced skill among them is "Increased knowledge of vocabulary and writing skill" with a score of 4.33 out of 5 and in the teachers rating scale highest enhanced skill in their students by social media usage is "Current awareness skill of the students" with a score of 4.55 out of 5. Insignificant correlation value (Pearson correlation coefficient of 0.136, see table 5) for students and teachers' opinion of social media usage in educational activities clearly suggests the need of guidance for the students for using social media for their study related activities. Students opined to be using social media highest for "Sharing course material with teachers and friends," but on teachers' recommendation scale the activity where social media usage should be high by the students is "Having constructive study related discussion with friends and teachers."

The proposed service model for modern libraries in the study can be a useful tool in surviving the

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TRANSFORMATION OF LIBRARIES

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Abstract

This paper introduces the stages of libraries which have gone through a massive change from being a Traditional library to a most advanced Information Communication Technology(ICT) supported libraries. This paper presents the efficient way of library service in acquisition, management and circulation due to transformation of libraries. It highlights the different mediums of disseminating resources through Shelf Issue/Return,access of e-resources through mobile application and the ICT infrastructurebuilt with special reference to Central Library of Central Institute of technology (CIT) at Kokrajhar in India.

Keywords: *Libraries, Traditional, Automation, Digital,Virtual, Information Communication Technology.*

1. Introduction

Traditional Libraries are the store house of materials and knowledge mainly in the form of books and other printed materials. But the Libraries whether they are traditional one or so called digital ones, they serve at least three roles in learning. They serve practical role in sharing expensive sources-both physical and human resources. Libraries serve a cultural role in preserving and organizing artefacts and ideas. Third libraries serve social and intellectual role by bringing together people and the ideas. Libraries serve as centres of interdisciplinary places shared by learners from all disciplines. Digital libraries extend such interdisciplinary approach by making diverse information resources available beyond the physical space shared by a group of learners.History tells us that the Bibliotheca Alexandrina of ancient times gathered within its walls the largest collection of scrolls ever assembled at that time and attracted scientists, Philosophers, Mathematicians, Historians, Critics and poets from the Hellenistic world. It created a school of thought that pioneered the concept of research as a collaborative effort and developed a tradition of weighing the evidence and testing theory by means of observation and experiment. Within the walls of the ancient library the circumference of the earth was calculated; the brain was identified as the focus of intelligence and the function of the heart was isolated; the natural sequence of disease was proclaimed; the technique of map drawing was developed; the continents and constellations were mapped; the rules of syntax were elaborated; and geometry was systematized. In it Archimedes displayed his genius in a whole series of mechanical inventions and Hero of Alexandria devised the first steam engine. Before Alexandria, Knowledge was regional, but with advent of the first universal library, knowledge became universal(Tocatlian, 2009).

2. Emerging Technologies in Libraries

The emerging technologies in Libraries are Computerisation, Automation, Digitization and Virtual. RichardWest and Peter Lyman have suggested a three-phase procession of the effects of Information Technology on organizations: Modernization (doing what you are already doing, though more efficiently); Innovation (experimenting with new capabilities that the technology makes possible); and Transformation

(fundamentally altering the nature of the organization through these capabilities)(Lynch, 2000). Libraries were forced to react to developments in Information Technology. The emergence of World Wide Web is perhaps the great change in the implications and transformation of libraries.The eminent Librarian Prof. Lancaster wrote, "The future of libraries will be by passed by the modern Electronic Libraries. All the technological developments will soon make paperless libraries in the world by 2000 AD".

The computerization of library in acquisition, circulation and management is known to be Library Automation. Library Automation entered its second era in 1960s with the advent of computers though it started with the Library of Congress used the unit record machine to produce catalogues in 1950. The notable ventures being MEDLARS and MARC. It was in the 1990s libraries created integrated text based systems using micro/mini computers in which traditional library housekeeping operations were computerised using the library's database as the foundation(Tiwari, 2010).Library Automation has undergone a huge transformation with the support of Information Communication Technologythat reflects in acquisition, processing and dissemination of the resources of the libraries by the library professionals. The greatest achievement ofperiod from 1960 to 1980 was the development of shared copy-cataloguing systems. The 1980 and early 1990s saw major investments in resource sharing, union cataloguing with the development of computer assisted inter-library loan. Then came the period the libraries shifted to electronic content of the existing library services and its activities. It was in the early 1990s the idea of Digital Library was popularized. The access to information consequent to the Information Technology revolution was a major landmark of the last century. Electronic resources have enabled libraries to improve services in a variety of ways. First most electronic resources come equipped with powerful search-and–retrieval tools that allow users to perform literature searches more efficiently and effectively than was previously possible(Verma, 2005). With current networking of computer resources on a worldwide basis now dependent on the TCP/IP protocol and the software associated with such networks, it is most common to find that the solutions for local institutions will be to support both a TCP/IP- based network and some popular local area network solution such as Novell Netware 3.12 or 4.0(kumar, Sunil, 2009). There is always a gap in understanding between technology and use. Technology developers tend to focus on the particular tools they are designing, and typically, they do not know in advance the myriad ways their tools will be used. Users, on the other hand, know their own settings but are unlikely to understand the capabilities of new tools as thoroughly as designers do(O'Day & Nardi, 2005).

Digital Libraries are the logical extensions and augmentations of physical libraries in the electronic information society. Extensions amplify existing resources and services, and augmentations enable new kinds of human problem solving and expression. As such, digital libraries offer new levels of access to broader audiences of users and new opportunities for the information science field to advance both theory and practice (Marchionini 1998)(Marchionini, Plaisant, & Komlodi, 2005). The U.S. Association of Research Libraries identified five elements common to all definitions of digital libraries:

- The Digital Library is not a single entity;
- The Digital Library requires technology to link the resources;
- Linkage between digital Libraries and Information Services are transparent;
- Universal access to Digital Library must be a goal;
- Digital Library Collections are not restricted to document surrogates but include digital artefacts that have no printed equivalent.

3. Central Library of Central Institute of Technology

John Dove defined Technology as 'things that do not work yet, things that may never work at all?'(Lake, 2009). The mainobjective of the establishment of the Central library of CIT was to cater the needs of the

engineering diploma, B. Tech students and the staff of the institute. But with its transformation, it has widened its objective by disseminating its resources to every users in need. The Central Library of Central Institute Technology (CIT) is among the most advanced libraries in the India. It is one of the first libraries in the entire North-East India to function with RFID technology enabling the users for shelf issue and shelf return services. SOUL 2.0 an integrated library management software developed by INFLIBNET centre Ahmedabad in India, has been installed for its management operations. Library Automation of the Central Library started in the month of April 2013, though the library was established in 2006. The library started with traditional way of acquiring, circulation and management of libraries in a temporary room, now Bodoland University.It took a span of ten years for Central Library to be shifted to its two storey permanent building of an area covering 19000 sq. ft. The interior has been designed to an extent to give the most possible way of afriendly environment to study in the library.

3.1. Print and Compact Disc (CD) Collection

The Central Library has 70388 (SOUL 2.0 database of central library, CITdated as 05/05/2017) + 30000 (in the process of data entry) i.e. 100388 (one lakh three hundred and thirty eight) print books, 1365 print magazines and 5000 CDs. These print documents include text books, reference books and competitive examination books. The library subscribes to 9 daily newspapers which include local and national newspapers.

3.2. E-Collection

The library has subscription to IEEE Explore, Science Direct, ASCE, ACM, ASME, Springer and Taylor &Francis. It has a collection of more than 60,727 e-books and 2200 e-journals in different relevant subject areas.

3.3. ICT infrastructure

The provision of latest information and communication technology infrastructure is state of art in the Central Library of CIT.

3.3.1. Data Communication

The library is provided with 7 data switches and 100+ input/output points throughout the building. The fibre optic cable of the library terminates in the server rack at the ground floor. The power for the library is provided through uninterrupted power supply of 60 KV capacity. The internet network runs with the National Knowledge Network, India with a speed of 2MB downloading and browsing of 500 KV.

3.3.2. User Terminals for accessing E-resources

There are two Digital library rooms in the library providing 44 numbers of computers with the latest features and touch sensitive screen for browsing purposes to all its users. It has a high speed connectivity of internet through the National Knowledge Network, India.

3.3.3. Radio Frequency Identification (RFID)

RFID has been installed in the library providing Shelf Issue/Return to its users. The shelf issue/return and browsing its account is done by a RFID card issued to every member of the library. Tagging of all the resources with the RFID tag and installation of two laneRFID gate for security of the resources has been done in the library.

3.3.4. Closed Circuit Television System (CCTV)

The Central Library has installed 76high density IP based CCTV system that used POE (Power over Ethernet) system with a capacity of 8 terabyte storage device.

3.3.5. Server and Storage
The library has an independent server with a storage capacity of 2 terabyte.

3.3.6. Reprography Devices
There are two Scanners and a photocopying device for scanning and photocopying the documentsrespectively.

3.4. ICT Applications

3.4.1. Library Housekeeping
Library Housekeeping operations such as cataloguing, circulation, Web-OPAC are all accomplished using the ICT applications.

3.4.2. Web based Services
Home page of the Central Library of CIT is the main interface between its users and services. The library website is hoisted on its own server http://14.139.218.222/CITLibrary/public/. All library catalogues of print books is available on its website.

3.4.3. E-resources Access
The e-journals and e-books subscribed by the library can be accessed within the campusby all its users through IP address which is authenticated by the system administrator of the institute. All resources are made available through campus wide network for 24x7x365.

3.4.4. Mobile Technology
The users of the central library are alerted with SMS to their mobile numbers while issuing and returning the books by themselves. The subscribed e-journals and e-books can also be accessed inside and outside the campus through the Knimbus mobile application with the permission granted by the Librarian. It is a single search across all subscribed e-resources of the Central Library of CIT.

3.4.5. Institute's Repository
The Central library has opened up an Institute's Repository to facilitate its users with the project reports and old question papers.

3.5. Library On-Demand
Library On-Demand is an innovative library service of the Central library which is an ICT enabled and manual form of delivering the required books at the door step of the users at its institute's campus.

4. Conclusion
The impact of the application of Information Communication Technology has transformed the libraries from its traditional library services to ICT enabled library services. There are at least four stages of libraries viz. Computerisation, Automation, Digitization and the Virtual libraries.The transformation of libraries has made a library to an easy access to all its users. The Central Library of CIT is a model

of the quick adoption of ICT based library services. The transformation of the central library from its traditional method of issue/return of books to shelf issue/return, the access of catalogue and e-resources on the internet has been a great change during its 10 years of existence. A further in-depth study with the break-up of periods for Computerised, Automation, Digital and Virtual libraries will throw more light on the transformation of libraries.

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TRADITIONAL HERBAL MEDICINAL PRACTICES:
A SURVEY OF FIVE POUMAI NAGA VILLAGES IN MANIPUR

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Abstract: This paper is a survey on the traditional medicinal plants use by the traditional medicinal practitioners of the PoumaiNagas in Manipur. During the investigation, 6 (six) different medicinal plants were recorded. The local and botanical name of the medicinal plants, their uses and method of application along with the photographs are documented.

Key words: Poumai Naga, medicinal plants, traditional medicinal practitioners, traditional herbal medicine

Introduction

Medicinal plants have been playing a crucial role in traditional health care system to prevent and cure various illnesses. Many indigenous communities around the world acquired rich heritage of traditional knowledge associated with medicinal plants through trial and error method which was orally passed on to the posterity. The traditional medicinal practices though vary from place to place depending on prevailing conditions and geographical areas, the underlying principles of employing plants for medicinal purposes remain the same. Herbal medicine, like the traditional medicine has a holistic approach towards health. It is a medicinal system in which only plants and its derivatives are used either in fresh or dried form. Literatures showed that in some countries, herbal medicines are still a central part of the medical system, such as Ayurveda in India and Traditional Chinese Medicine in China. Unani of Arabs, Jamu of Indonesia, etc. are some other globally recognised form of herbal medicine. Many cultures despite of having rich oral history, they lack written documents, as a result, much resourceful traditional knowledge or folk knowledge with regard to the medicinal practices has disappeared and some fast dwindling. Systematic documentation has therefore earned great importance in this field to give ways for further discoveries and inventions of new medicines. Documentation here is referred to the art of compiling, recording and presenting any intellectual activity as a result of an investigation, inquiry, research, etc. to printed or digital or audio-visual format. According to Hinding (1993), documentation would adequately represent the society and culture to the future generation. Therefore, this paper is an attempt to document some rare medicinal plants and their medicinal properties that are known and commonly used by the indigenous Poumai Naga tribe of Manipur. Several similar works have been carried out worldwide including in the North-eastern states of India, but the traditional herbal medicinal practices of the Poumai Naga tribe remain lesser known.

The PoumaiNagas predominantly inhabits in the Senapati district of Manipur and Phek district of Nagaland. The Poumai Naga is one of the major and oldest Naga tribes that spread across 94 villages. The

language spoken by the people is called 'Poula'. The PoumaiNagas in the Senapatidistrict of Manipur reside mainly in three sub-divisional zones- Paomata, Lepaona and Chilivai and the villages falling under Phek District of Nagaland are collectively called as Razeba Range. The tribe is well known to the entire tribal areas in Manipur and Nagaland since time immemorial due to its 'Pouli' (Poumai-made earthen pot) and 'Poutai' (Poumai salt) production. Fishing, hunting, and agriculture are the main occupation.

2. Literature Review

Shinwari and Gilani (2002) surveyed the Bulashbar valley of Astore, Pakistan, to explore the ethnobotanical wealth flourish in the region. The aim of the survey was to document plants having economic, medicinal and aromatic importance for the people of the valley. The data was collected from local people through prepared questionnaires. The collected information was cross-checked with several other literatures to identify the specimens. The recorded data and specimen were confirmed by the experts of Quaid-I-Azam University, Islamabad. The report of the study revealed that there were 33 plants used by the local communities for medicinal purposes, and specifically two species of plants were important for socio-economic upliftmentof the community.

Rabearivony et al. (2015) documented the knowledge on medicinal plants known to men in the commune of Ambalabe area of Vatomandry district in Madagascar. Community field visits were made in November 2008 to February 2009. They interviewed 177 men from 18 villages in Ambalabe commune. Two modes of inquiry were employed: group interviews (allowed flexibility in conversation) and individual interviews with men who were willing to share information. The ethnobotanical survey revealed 137 forest and weedy species with medicinal values. Leaves had highest percentage of use (68%), Followed by bark (10%) and stems (9%). In the study four methods of collecting medicinal plants were reported: barking, gathering leaves, cutting branches and uprooting the whole plant. They listed 30 diseases that were treated by the plants. In conclusion the authors further showed the concern for conservation of the medicinal plants.

Kibbuka and Anywar (2015) studied various plants used by the Traditional Medicine practioners in Central Uganda. The study documented plants specifically used for treating a disease called Hernia. The data was collected through questionnaire and semi-structured interview. A total of 30 traditional medicinal practitioners of Mpigi district in central Uganda, and mentioned plants species were collected with representative morphological feature from the surrounding forests. The result shows that a total of 51 plant species belonging to 28 families that were in used to treat Hernia. The report also stated the efficacy of these plants on patients as mentioned by the traditional practitioners, have much faster healing capacity than the synthesized medicine.

Hong et al. (2015) conducted an ethnobotonicalinvestigation that focused on the traditional medicinal plants used by the local Maonan people to treat human diseases. The study area covered 18 villages of Huanjiang County (the only Maonan autonomous County in China) in the northern part of Guangxi Zhuang Autonomous Region. A total of 118 (106 males and 12 females) informants were interviewed of which 80 were selected using snowball technique and 38 key informants were selected purposively and systematically based on the knowledge of the medicinal plants. The data was collected from June 2012 to September 2014. During the study, semi-structured interviews, discussions and guided field observation were employed. The study recorded 368 medicinal plant used medicinal plant species.

A study was conducted by Shukla, Rai and Nath (2003) in three districts of Madhya Pradesh, namely, Balaghat, Chhindwara and Jabalpur, to document the new species of medicinal plants. The ethnobotanical survey recorded five new medicinal plants which were not recorded in earlier studies. The people from these three districts used these plants not only for medicinal purposes but plants were also used for food. The study also revealed that extensive research and investigation is required in the state of Madhya Pradesh,

since the existing knowledge on medicinal plant is limited.

Ethnobotanical study carried out by Patale, Nasare and Narkhede (2015), focused mainly on the dependency of tribal people on plants for its medicinal qualities. The study was conducted at Dareseka located in the eastern part of Gondia district of Maharashtra. Locals and herbalists were visited for information on plants and their uses. Data was collected through structured questionnaire. The study revealed about 82 plants species used by the tribal people in order to cure diseases such as wounds, joint pains, jaundice,cough, piles, snake bites, tooth ache etc. The report also showed the importance of plants in treatment of various sicknesses but at the same time also mentioned that traditional knowledge on plants needed proper documentation to preserve the practice for future generation which would also enhance the plant conservation.

Rai and Lalramnghinglova (2010), in their paper entitled "Ethnomedicinal Plant Resources of Mizoram, India: Implication of Traditional Knowledge in Health Care System", dealt with the plants having ethnobotanical importance emphasising on the contribution of plants in the indigenous health practices of the Mizo society. Field trips were held to the study area, and also ethnomedicinal plants were collected from different types of forest, protected areas, home gardens and Vanaspati Van of Mizoram. During the survey people belonging to different tribes were interviewed. As a result 159 ethnomedicinal plant species were recorded. The study concluded that medicinal knowledge of plants were fast dwindling yet the contribution of medicinal plants in the health care system plays a major role within the people of Mizoram.

An extensive study was conducted by Shankaret al. (2012) on traditional healing practicesof the Mishing tribe of Assam and brought forth the identification of various medicinal herbs used by the traditionalhealth practitioners. The method used by the researchers for collecting information was field surveys, which included interaction with villagers, healers, and herbalists. The study revealed that the diseases like Malaria, Jaundice and female menstruation were more prominent. The reports listed 55 medicinal plants acknowledged in the different parts of the Mishing community used as medicine for treating different diseases. It was also found that in most of the cases the plant products are prepared with combination of some other plants. It was revealed that Mishing tribe's healing practices were insufficiently documented which might result in its extinction. Therefore, the article stressed on further researches to be carried out in order to identify and document the plants which have medicinal values.

Lokho (2012) studied and presented a list of folk medicinal plants used and practiced by the Mao Naga tribe in the northeast India. It was observed that many medicinal plants used by them have a broad spectrum for treating various diseases. The study showed that leaves were the most widely used part of the plant to treat ailments. A total of 61 species belonging to 57 genera and 39 families were identified of which family belonging to *Asteraceae*was the most dominant. The study however revealed the need for scientific study, conservation and management of these medicinal plants for there could be a possibility in developing new modern medicines for treating various diseases.

According to Sharma et al. (2015) Manipur is a rich repository of medicinal and aromatic plants, used by its people. The study was conducted to imply the importance of proper documentation of traditional knowledge and conservation of medicinal plants. The authors interviewed and interacted with the aged practitioners of folk medicine as a method of study during the year 2014 and 2015. The study was conducted mainly in East Imphal, West Imphal, Bishnupur and Thoubal districts of Manipur. The study revealed 100 species of plants used as medicines. In traditional healing practices, the people mostly used the leaves and young shoots of the plants.

A survey was conducted by Singh and Devi (2015) from November 2014 to September 2015, in Jiribam area of Manipur which falls under the East Imphal district. The survey was done in order to record and

document the medicinal plants used by the local people of the area for the treatment of Malaria and its associated symptoms. Semi-structured questionnaires were prepared, and interviews were also conducted to 70 local people between the age group of 35 to 89 years. The study identified and documented 21 plants species, out of which 19 plants were not being recognized and recorded by the International Union for Conservation of Nature (IUCN) Red List.

3. Methodology and Data Collection

The research site is selected keeping in view the researcher's familiarity with the people in terms of the language, tradition, culture, religion and geographical accessibility. The present study is a survey research using structured-interview-schedule conducted on five randomly chosen villages (Koide Makha, Liyai, Tungjoy, Purul and Oinam) of the Poumai Naga inhabited areas. Data was collected through one-on-one interactive communication process and field observation during November 2016. One respondent each from every village and two from Koide Makha village were interviewed. The respondents consisted of traditional medicinal practitioners and village elders equipped with the knowledge of medicinal plants.

During the data collection process, the local name of the plant, its uses, method of preparation and mode of application was compiled and documented along with the photographs of the medicinal plants. When this was done, botanical name of the herbal medicinal plants were assigned accordingly after thoroughly reviewing the literatures and cross checking it from the internet. The following are some medicinal plants used by the Poumai Naga tribe in traditional health care system.

1. Local Name: Japan Pou
Botanical Name: *Eupatorium adenophorum*
Parts used: Leaves and young shoots
Treatment for: Dysentery, Gastritis, Blood clotting agent.
Method of application: The tender leaves are boiled with little amount of water and they drink the decoction. Sometimes the leaves are even eaten raw. To treat cutsand wounds the leaves are crushed and applied to the affected area to help blood clot

Fig. 1

2. Local name: Nahtoumaitaa
Botanical name: *Oxalis corniculata*
Parts used: The whole plant
Treatment for: Conjunctivitis
Method of application: The tender leaves are crushed and one or two drops of the decoction are put into the eyes.

Fig. 2

3. Local name: Nahtoumaichutshi
Botanical name: *Dichrocephalaintegrifolia*
Parts used: Young shoots and leaves
Treatment for: Scabies, bacterial infection in feet and hands
Method of application: The young shoot and the leaves are crushed and the paste is applied to the affected area.

Fig. 3

4. Local name: Baiki
Botanical name: *Artemesia vulgaris*
Parts used: Leaves
Treatment for: Nose bleeding
Method of application: The leaves are crushed and the whole thing is inserted into the nostrils to stop bleeding.

Fig. 4

5. Local name: Pavuh
Botanical name: *Plantago major*
Parts used: The whole plant
Treatment for: Diabetes
Method of application: The leaves are cooked and eaten.

Fig. 5

6. Local name: Hyapeitei
Botanical name: *Bidenspilosa*
Parts used: Leaves
Treatment for: Cold and fever, Headache and Blood pressure
Method of application: One or two handful of fresh leaves is boiled in water and the decoction is taken orally for cold, flu, fever, headache and blood pressure.

Fig. 6

4. Results and Discussions

The rural societies still heavily rely on the traditional herbal medicine, though the use of synthetic drugs cannot be ignored as people opt for easy treatment giving them fast relieve. In recent years, the traditional medicinal practices around the world are gaining importance because of their reliability and efficacy in treating various ailments (Asiimwea et.al. 2014). And according to WHO, approximately

65% of the world population incorporate plants as a primary source of medicine and health care, where ethnomedical information plays a key role (Fabricant & Farnsworth, 2011).The present study revealed six (6) different medicinal plants used traditionally by the PoumaiNagasfor treating various ailments and illnesses. It was observed that leaves and young shoots of the medicinal plants were used by the traditional medicinal practitioners to extract the desired medicines (decoction taken orally or applied to the infected area/paste to apply externally). This study also brought out the significance of some rare medicinal plants and its medicinal values used traditionally by the indigenous Poumai Naga herbal practitioners. The young shoots and leaves of *Dichrocephalainterifolia* are crushed and used as paste to treat scabies and bacterial infections in the feet and hands. The tender leaves of *Oxalis corniculata* are also crushed and a drop or two of the decoction is used to treat conjunctivitis of the eye. The diabetic patients cook and eat the leaves of *Plantago major* to control the sugar level.This study also revealed the use of *Eupatorium adenophorum* in treating gastritis, dysentery and *Bidenspilosa* in treatment of cold, fever, headache and to control blood pressure. Although in the study conducted by Rai and Lalramnghinglova (2010) showed *Eupatorium adenophorum* as blood clotting agent and *Bidenspilosa*used as anti-rheumatic and anti-diarrhoeal. These medicinal plants are wild and not cultivated by the people. However, the numbers of plants are dwindling at an alarming rate due to various anthropogenic activities.

5. Conclusion

It is known that traditional knowledge on medicine using plants has laid the foundation for the discovery of various modern medicines but the cultural survival of many indigenous communities are threatened because the essence or the identity that makes them unique and indigenous is fast dwindling due to destruction of forests, advances in science and people's access to modern medicine and exposure to modern lifestyle.Considerable knowledge accumulated by the villagers and tribals on traditional herbal medicine remains unknown to the scientists and urban people. In recognition of this, World Health Organisation, in its Sixty Second World Health Assembly, 2009, passed resolution 62.13 urging national governments to respect, preserve, and widely communicate the knowledge of traditional medicine and practices, based on circumstances in each country, as well as on evidence of safety, efficacy and quality (http://apps.who.int/gb/ebwha/pdf_files/WHA62-REC1/WHA62_REC1-en.pdf).The Poumai Naga tribe inherit a rich knowledge on traditional herbal medicine using various medicinal plants which is fast dwindling because the mode of transmitting this knowledge is limited to oral tradition only. Therefore this study was conducted to bring out significance of the medicinal plants used by the traditional medicinal practitioners ofPoumaiNagas and to promote conservation of the medicinal plants.

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THE ROLE OF LIBRARY NETWORKS IN DEVELOPMENT OF LIBRARIES IN INDIA: AN EVALUATIVE STUDY

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Abstract

A library networks is a group of libraries or information centres that are interconnected to form a system with an aim to help each other with information needs of their clientele. The library networks deals with the development of software for library automation of the member libraries, retro conversion of records, cooperative acquisition, creating union catalogues, development of databases, conducting training, workshop and seminar, providing DDS, Email, CD-ROM, internet access facilities etc. Thus the paper presented and studied on the development of library networks in India and role of library networks in development of Indian library system. The paper also studied the aims and objectives as well as functions, services etc. of the various library networks.

1. INTRODUCTION

A network is a physical connection between / among the devices (autonomous computer) that are distributed widely in different geographical location. It is the computer and communication link that permits computer to communicate with each other and to share program, facilities, data and knowledge base. It is a group of devices that are linked to one another by data communication system. In a computer network two or more computers are linked together with a medium and data communication devices for the purpose of communicating data and sharing of resources.

According to Martin "a network is a group of individuals or organizations that are interconnected. The linking must include a communication mechanism, and many networks exist for the express purpose of facilitating certain types of communication among their members. In the library world, institutions from network primarily to achieve better sharing of resources – resources consisting of bibliographic information and of collection – and better services to patrons."

A library network is a collective or cooperative activity of linking members/users to the resources members/users to the resources hosted oncomputers by means of telecommunication connections or Library networking is an arrangement or a structure that links a group of libraries which have agreed to work together and / or share their resources in an organized basis to a certain degree. It can be defined as a "two or more libraries engaged in a common pattern of information exchange through communication for some functional purposes". It is meant to promote and facilitate sharing of resources available within a group of participating libraries. The basic purpose of a library network is to share resources and services amongst member libraries. A library network is broadly defined as group of libraries or information centres that are

interconnected to form a system with an aim to help each other with information needs of their clientele. Thus the library networks deals with the development of software for library automation, automation of member libraries, retro conversion of records, cooperative acquisition, creating union catalogues, conducting training, seminar, workshop, providing DDS, Email, CD-ROM, internet access facilities etc.

Definition: The National Commission on Libraries and Information Science (NCLIS) in its National Programme Document (1975) defines a network as: "two or more libraries and/or other organizations engaged in a common pattern of information exchange, through communications, for some functional purpose. A network usually consists of a formal arrangement whereby materials, information and services provided by a variety of libraries and other organizations are available to all potential users. Libraries may be in different jurisdictions but they agree to serve one another on the same basis as each serves its own constituents. Computer and telecommunications may be among the tools used for facilitating communication among them".

Reynard C. Swank defines library networks as a "Concept that includes the development of cooperative system of libraries on geographical, subject or other lines, each with some kind of centre that not only coordinates the internal activities of the system but also serves as the systems outlet to an inlet from the centre of other sys-tem".

UNISIST II working document, defines Information network as "a set on interrelated information systems associated with communication facilities, which are cooperating through more or less formal agreements and institutional agreements in order to jointly implement information handling operations with a view to pooling their resources and to offer better services to the users. They generally follow identical or compatible rules and procedure".

2.   OBJECTIVES OF LIBRARY NETWORKS

- Provide help to member institutions in computerisation of their libraries, retro conversion of bibliographic records and development of standardised databases for shared uses
- Encourage interlibrary cooperation and resource sharing at all level amongst member of the library and information networks
- Develop union catalogues of various resources so as to provide reliable access to document collection available in member libraries.
- Provide document delivery services to member libraries
- Provides training to member of library staff of participating libraries for effective use of libraries in the networks
- Facilitate communication amongst users of members institutions
- Provide access to information resources at reduced rates through consortium arrangement
- Develop and promote collaborative digitisation projects
- Evolve protocols and standards guidelines methods and procedure for bibliographic records, storage, ILL, software and hardware etc.

Some of the Functions of the library networks are:
- Information services to the users
- Technical services to member libraries
- Management of network administration

3.   HISTORY EVOLUTION OF LIBRARY NETWORK

Library networks have their roots in library cooperation andresources sharing being practices for centuries. The use of computers for automated generation of indexing and abstracting services in early

1970s and subsequent idea of sharing such massive information through the communication networks gave birth to the concept of online databases. These initiative led to growth and development of computerised databases and online search services like DIALOG, BRS and DIMDI. The American Library Association and US office of education co-sponsored a landmark National Conference on Inter Library Communication and Information Networks held in Warrenton, Virginia, USA in 1970. The conference recognised the need of networks amongst libraries in USA for effective utilisation of combined information resources available in American Libraries. Sustained interest in the library networks lies in the opportunity that they provide for centralised services that are highly economic. A long standing example of such services is the production of catalogue cards by the Library of Congress in 1968. Centralised technical processing of documents started by Library of Congress was replicated in individual states and localities in USA and later in several European countries. Besides, centralised processing the library networks have greater potentials to increase resource sharing. Recognition the value of sharing rather than duplicating resources resulted in the development of the existing inter library loan system, cooperative arrangement such as Farmington Plan and the National Union Catalogue in USA. Some of the most important library networks at a International levels are OCLC, RLG, CURL, JISC etc.

4. THE NEED OF LIBRARY NETWORK

The term Network is increasingly used in place of "resource sharing" or "Cooperative system". Networking and modernisation are becoming very important in all types of libraries as they enable the users to have access to the resources of many other libraries in addition to their own. The development in information technology have made it possible for libraries to network. But today library networks are must because:

- **Increasing amount of information is in electronic form.**
  Information is stored in print, film, magnetic and optical storage media. The information produced

Media	Percentage of information stored
Hard disks	92%
Films	7%
Paper	0.01%
Optical Media	0.002%

- **Bibliographic access to information is also in electronic form**
  Access to information is provided through databases produced online and offline which require libraries to be networked.

- **Internet**
  The existence of internet is a major factor that has changed the way information is produced, published, stored, transmitted and used. This requires libraries to be networked for accessing their information.

- **Timely access to information**
  It is difficult for an individual to lay hands on his specific information in the large mass of information available. Computer helps to process and easily access the required information. Networking is essential to access when the information is available at a distance.

5.   THE DEVELOPMENT OF LIBRARY AND INFORMATION NETWORK IN INDIA

In the mid 1980's that the telecommunication boom came to India and networking was given thrust by the Government of India. In India Department of telecommunication is responsible for maintaining national telecommunication infrastructure which is the backbone for network architecture of country. The major breakthrough was establishment of NICNET by National Informatics Centre in the year 1975. In library parlance NISSAT was a major development, which was established in the year 1977 under Department of Scientific and Industrial Research with the objectives of development of national information system and services. It played a major role in development of Ahmedabad Library Network (ADINET), Bombay Library Network (BONET), Calcutta Library Network (CALIBNET), Developing Library Network (DELNET), Mysore Library Network (MYLIBNET), Bangalore Library Network (BALNET), and Pune Library Network (PUNENET).

Development of Information and Library Network (INFLIBNET) in 1988 facilitated a nationwide effort to improve information access and transfer, initiated by University Grants Commission (UGC). Besides there were several networks developed for resource sharing among organisation like SIRNET of CSIR.

The development of some most important Library networks are given chronologically in the following table:

Year of establishment	Name of Networks	Supported by
1977	NICNET	NIC
1986	CALIBNET	NISSAT
1991	INFLIBNET	UGC
1992	DELNET	NISSAT
1994	ADINET	NISSAT
1993	MALIBNET	INSDOC
1994	MYLIBNET	NISSAT
1995	BALNET	NISSAT

6.   A STUDY ON SOME MOST IMPORTANT LIBRARY NETWORKS IN INDIA

NICNET: Title: National Information Centre Network

Sponsor: Planning Commission Government of India

Membership: Four national and regional nodes, 32 states and union territory nodes, seventy cities and towns.

Services: Bulk file transfer, teleconferencing, full text and bibliographic retrieval services.

Application: ICMRNIC Centre; MEDLARs in India; Chemical abstract database.

CALIBNET (Calcutta Library Network)

It was the first library network visualised and started by NISSAT. At a meeting ijn1986 in Calcutta, CSIR initiated action for preparation of a feasibility study for networking about 40 libraries in Calcutta. CALIBNET now is a society under West Bengal Society Registration Act 1961 and responsible for Calcutta Library Network a project sponsored and supported by NISSAT. NISSAT also contributed to the development of MAITRAYEE software package. At present CALIBNET has become a centre for CD-ROM databases.

Services: CAS, SDI, Union Catalogue, Partial database, editing retrieval of records, global information search, full text document delivery, library automation, calibnet information services.

Application: Cataloguing, serial control, acquisition, circulation.

INFLIBNET (INFORMATION AND LIBRARY NETWORK)

Ithas played an important role in automation and modernisation of university library system in India. It provides universities and research institutions the bandwidth for accessing E-journals. It has become a major player in enhancing scholarly communication in India. INFLIBNET was set up by UGC in 1991. Initially it was started as a project under Inter University Centre for Astronomy and Astrophysics to be converted later into full-fledged program of UGC, headquarter is located at Gujarat university campus, Ahmedabad.

Objectives: The main objectives of the INFLIBNET are:
- To promote and establish communication facilities to improve capabilities in information transfer and access, that provide support to scholarship, learning, research and academic pursuit through cooperation and involvement agencies concerned.
- To establish a computer communication network for linking libraries and information centres in universities, deemed to be universities, colleges, UGC information centres, institutions of national importance and R&D institutions etc.

Services:
- Document Delivery Services
- Open journal access system
- Library automation
- Human resource development
- Databases: UGC has developed following bibliographic databases
  Serials holdings
  Current Serials
  Secondary serials catalogue
  Theses
  Books

Non bibliographic: Vidwan

Programmes:NLIST

National Libraries Information Services Infrastructure for Scholarly Content is a project of Ministry of Human Resource Development under National Mission on Education through ICT being jointly executed by UGC-INFONET Digital Library Consortium, INFLIBNET centre and INDEST-AICTE Consortium. The NLIST project provides access to E-resources to students, researchers, and faculty from colleges and other institutions. The authorised users from college now access e-resources and download articles required by them directly from the publishers websites once they are duly authenticated as authorised users through deployed a the INFLIBNET Centre.

Projects:

*E-pathsala:*It is a project of MHRD, under its National Mission on Education through ICT for development of e-content at Postgraduate level. At present it caters to 77 subjects in different subjects across all disciplines of social sciences, arts, fine arts and humanities, natural and mathematical sciences, linguistics and languages.

UGC's E-journal Consortium: The UGC's E-journal consortium aims at providing online access to electronic journal and databases in all disciplines to the Universities in India. All Universities which comes under the UGC will be beneficiary members of the program. The scheme would be gradually extended to colleges as well. The program is being executed by Information and Library Network Centre Ahmedabad.

Conferences and Workshops:

INFLIBNET conduct an annual event called Convention on Automation of Libraries in Education and Research Institutions (CALIBER) in different places of India. The topics covered in conference are recent and related to library automation.

INFLIBNET also supports workshops all over India which are related to library automation and digital libraries. Currently UGC is supporting I series of workshops on Dspace software in collaboration with DRTC, Bangalore.

INFLIBNET is playing a major role in modernisation of university libraries. It is supporting creation for infrastructure by providing financial support besides it is running several courses as well as conducting workshops for training of library professionals.

DELNET (DEVELOPING LIBRARY NETWORK)

DELNET has been sponsored by the National Information System for Science and Technology (NISSAT), Department of Scientific and Industrial Research, Government of India and currently is being promoted by the National Informatics Centre, Department of Information technology, Ministry of Communication and IT, Government of India and India International Centre, New Delhi. DELNET was originally established as Delhi Library Network and subsequently the name was changed to Developing Library Network. The Headquarter of DELNET is in New Delhi.

Objectives: Some of the most important objectives are:

- To undertake scientific research in the area of Information science and technology, create new systems in the field, apply the result of research and publish them.
- To coordinate with other regional, national and international networks and libraries for exchange of information and documents.
- To offer technical guidance to the member libraries on collecting, storing, sharing and dissemination of information.
- To coordinate efforts for suitable collection development and reduce unnecessary duplication wherever possible.
- To establish/facilitate the establishment of referral and/ or research centre and maintain a central online union catalogue of books, serials and non- book materials of all participating libraries.

Services:

- Inter Library Loan Online
- Reference Service

Online databases:

- Union catalogue of books
- Union list of current periodicals
- CD-ROM databases
- Union list of video recordings
- Union list of sound recordings
- Union list of newspapers
- Databases of theses and dissertations
- Databases of e-books

Training programmes

DELNET organises monthly training program with NIC on topics like Web page design, internet search strategies and other resources etc. It also conducts courses of Machine Readable Cataloguing and

bibliographic standards like MARC21.

Conferences, Lectures and Workshops

National Convention on Library and Information Networking (NACLIN) is an annual conference of DELNET which is organised different parts of the country. Besides DELNET regularly organises workshops lectures in different parts of the country and abroad.

Newsletter

DELNET publishes Newsletter called "DELNET Newsletter" in communicate the activity of DELNET t professionals.

Research

DELNET has actively played an important role in imparting knowledge of international standards applying them in libraries particularly MARC21. Recently it has been advocating the open source software's and teaching their use by conducting training programs in KOHA and D-space.

ADINET (AHMEDABAD LIBRARY NETWORK)

ADINET was established for developing cooperative mode of working amongst the libraries and information centres in and around Ahmedabad. It was established in 1994 with the help of NISSAT. ADINET promotes sharing of resources and disseminates information among member libraries by networking them. It is stationed in INFLIBNET centre, Ahmedabad.

Objectives: To bring cooperation among its regional libraries; to develop databases; to integrate scientific and technical information system.

Services:
- Document delivery and Inter Library Loan
- Current content for Library and Information Science
- Library Automation etc.

Thus, ADINET performs several professionals activities round the year. It runs course for fresh graduate of library science in Internet surfing and CDS/ISIS. It also maintains a database of available jobs in and around and help professionalsin finding suitable jobs. It is consultant to several institute for their requirement of suitable staff. It conducts lectures of imminent scholars and professionals from time to time. Besides, ADINET provides several services on demand like computerisation of library, cataloguing, classification of library documents, labelling and shelving of books, stock verification of library documents, staff training, planning for library development etc.

MALIBNET (MADRAS LIBRAY NETWORK)

MALIBNET was established in 1993 with the support of Indian National Scientific Centre (INSDOC). Now it is registered society of Tamil Nadu Government. It provides information to the users in and around Chennai. Nearly 83 libraries in Madras are members contributing actively to the creation of various databases on MALIBNET. It has around 37 educational and research institutions as members.

Objectives: Some of the most important objectives of MALIBNET are:
- To foster growth in the field of information science and technology
- To undertake scientific research in the field of library and documentation
- To evolve a network of libraries and information centres in India

- To establish appropriate links to national and international libraries and networks
- To facilitate resource sharing and information disseminations through knowledge.

Services

- Content search service.

This service allows a search of journal database of MALIBNET having 7747 journals. It can be searched online through journal title, volume, year and issue number options.

- Documents procurement service.

MALIBNET provides full text of articles from the journal available in its database. One needs to provide journals, year, and volume issues along with page numbers. The service is available on payment of Rs. 3 per page for members and Rs. 5 for non-members.

- Internet Service.

MALIBNET provides facility of Internet search for which it charges the users for the time spent on searching. It is preparing Directories of current journals available in Madras city different areas like Engineering Sciences, Basic Sciences, Medical Sciencesand Social Sciences.

MYLIBNET (MYSORE LIBRARY NETWORK)

MYLIBNET was initiated in the year 1994 with the support of NISSAT. It is stationed in Central Food Technology Research Institute (CFTRI) Mysore. About 116 Colleges/Institutions are members.

Objectives: Developing software tools, conducting seminar, workshops/training programs, conduct surveys etc.

Services: E-journals, MYLIB Databases, Food Patents, CFTRI Library Bulletin, Public services.

BALNET (BABGALORE LIBRAY NETWORK)

The Bangalore Library Network was sponsored by JRD, Tata Memorial Library in the year 1995. The Bangalore Library Network has 100 members. The organisation was also doing for the development library and information science.

6. CONCLUSIONS

From the study of library networks we can come to conclusions that the main objectives of every library network is for resource sharing among the libraries and easy access of information as well as for the development of library and information system with the help of IT or Modern technology. Thus, development and management of library networks involves high commitment and tenacious work, particularly in the Indian environment where majority of the libraries do not have qualified and skilled manpower and also the financial resources to introduce automation and the current information technologies. Cooperation, not only among libraries, but also among library networks is essential for the success of these networks in the country. So, to develop the library system the library network is most important one and we need to make strength because what we are today is only due to the efforts of library networks.

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E-Resources.

TOWARDS MODERNIZATION OF LIBRARY SERVICES IN COLLEGE LIBRARIES UNDER BANKURA SUB-DIVISION, WEST BENGAL: AN ANALYTICAL STUDY

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Abstract:

In 21st century , libraries not only concerned with traditional materials towards they are taking a emphatic step towards digital information sources. Application of science and technology in our society and libraries made a dustrict change, which is not in four walls, how it is moving towards global prospect. College library is not only a academic institute but also social institute which enhance the users to find their goals. In this context, we have tried to discuss how the college libraries of Bankura sub-division are accepting the digital environment for modernizing their services. The present studies discuss about the usage of ICT equipments in the college libraries.

Keywords:- Academic Library, College Library, ICT

Introduction:-

The emergence growth of Information and Communication technology gives a massive impact on the society. Including ICT in any information service field has brought out many changes. In this way, ICT plays a vital role for modernizing the field. Therefore, the use of ICT in academic libraries is also beneficial for the libraries as well as the users. College libraries are the most important part of a academic system. In this changing environment, we see the changes of information sources and the impact of globalization user's information seeking behavior changed, changed their demand of information and information sources. Adapting ICT in the various college libraries various job of the library i.e. from housekeeping to administrative, managerial parts and various computer aided works are effectively and efficiently done by the ICT. So the college libraries are always tried to give the best way to find more appropriate information and information sources to provide their best services to the users. ICT helps to develop the college libraries.

About Bankura Sub-division:

Bankura district is an administrative unit in the Indian state of West Bengal. It is part of Medinipur division—one of the five administrative divisions of West Bengal. Bankura is surrounded by Bardhaman district in the north, Purulia district in the west and Paschim Medinipur district in the south and some part of Hooghly district in the east. Damodar River flows in the northern part of Bankura district and separates it with the major part of Burdwan district. The district head quarter is located in Bankura town.

Bankura is a subdivision of Bankura district in the state of west Bengal, India. Population 1.439 million from Indian census report 2011.

Educational Aspect of Bankura Sub-division:

Bankura Sadar subdivision had a literacy rate of 69.56%, as per the provisional figures of the census of India 2011.

Given in the table below is a picture of the education scenario in Bankura sub-division for the year 2013-14. It may be noted that primary schools include junior basic schools; middle schools, high schools and higher secondary schools include madrasahs; technical schools include junior technical schools, junior government polytechnics, industrial technical institutes, industrial training centers, nursing training institutes etc.; technical and professional colleges include engineering colleges, medical colleges, para-medical institutes, management colleges, teachers training and nursing training colleges, law colleges, art colleges, music colleges etc. Special and non-formal education centers include sishu siksha kendras, madhyamik siksha kendras, centers of Rabindra mukta vidyalaya, recognised Sanskrit tols, institutions for the blind and other handicapped persons, Anganwadi centers, reformatory schools etc.

Table of various Educational Institutions under Bankura Sub-division:

Primary School	Middle School	High School	Higher Secondary School	General College	University	Technical / Professional Inst.	Non-formal Education
1371	144	90	91	10	1	14	2228

The following institutions for higher education are located in Bankura Sadar subdivision:
- Bankura University was established in 2013.
- Bankura Sammilani Medical College at Bankura was started as a medical school in 1922 and was upgraded to a medical college in 1954. The Government of West Bengal took over the institution in 1961. The 131-bedded Bankura district hospital was merged with it in 1964.
- Bankura Unnayani Institute of Engineering at Puabagan, Bankura was established in 1998. It is affiliated to Maulana Abul Kalam Azad University of Technology. It conducts B,Tech. and M.Tech. Courses. (official website not working)
- Bankura Christian College at Bankura was established in 1903 by Weslayan Missionary Society.
- Bankura Sammilani College at Bankura was established in 1948.
- Bankura Zilla Saradamani Mahila Mahavidyapith at Bankura is a women's college established in 1973.
- Gobindaprasad Mahavidyalaya was established in 1985 at Amarkanan.
- Barjora College at Barjora was established in 1985.
- Jamini Roy College was established at Beliatore in 1986.
- Saltora Netaji Centenary College at Saltora was established in 2001.
- Chhatna Chandidas Mahavidyalaya was established at Ghoramuli, Chhatna in 2007.
- Onda Thana Mahavidyalaya was established at Murakata in 2007.
- Government General Degree College at Gopalpur village, PO Mejia, was established in 2015.
- The College of Agriculture, at Chhatna, an extended campus of Bidhan Chandra Krishi Vishwavidyalaya was started in 2015.

Academic Library:

A library attached to any educational institution to support its educational programmes is known as academic library. It is an important intellectual resource of the academic community. It helps to an academic institution members for their self development to fulfill the curriculum requirements and to promote studies and research.

The primary characteristic of a good academic library is to make complete identification with its own institution. The main objective of academic library is to function as an auxiliary to parent institution in carrying out its teaching program.

Academic library are mainly three type such as School Library, College Library & University Library.

College Library:

College performs an important function in the educational process. College education provides a totally different environment for boys and girls who go for higher studies. Usually the classes comprise a. large number, of students and unlike school education, the students of college get much less individual attention from the teachers. The students, therefore, have to etc end much more on self-learning. Therefore, the college library is the automatic choice for students to supplement their class room teaching. In these sections we shall discuss the objects, functions of a college library, the collection of documents that are built up for users, the different categories of users and the services to be rendered to them.

Library-Keystone in the College Arch:

A good and efficient library will certainly help students to meet the new challenges they start facing at college: They -can, within the four walls of the library, use their leisure more usefully and meaningfully, discover their own inherent potentialities,- launch upon instructive ~ and absorbing hobbies and generally lay the foundations of a good and more responsible life in the future. The libraries will therefore become equally, if not more, important than the classrooms. The libraries will become students' workshops. It is in this context that a college library has to play a very responsible role, vis-a-vis, the academic needs of young students.

Key Components of an Ideal College Library:

We shall now acquaint ourselves with the ingredients that go towards making an efficient college library system. These ingredients are:

- A collection of books and other learning and teaching material;
- The user community, comprising students, teachers, the college management and others getting standard library services;
- Physical facilities like building, furniture, equipment;
- Professional staff of the library;
- The college management; finance and budget.

Objective of the Study:

1. To know the present scenario of college libraries under Bankura sub-division.
2. To find out ICT based facility in college libraries.
3. To identify the various information sources (Both print and non print).
4. To identify the various services for users.
5. To give suggestion for the modernize library services and all over all development.

Methodology:

The present study was conducted in degree college libraries of Bankura sub-division, West Bengal.

There are ten-degree colleges in the study area. In this Study we have applied questionnaire-cum-interview method. During data collection through Questionnaire we conducted interview (Face to face and telephone). So, ten questionnaires were distributed to the libraries of respective colleges. Out of ten college libraries, seven libraries get back duly filled in questionnaires. In this way, seven respondent college libraries were selected for analytical purpose. The survey was conducted during May 2017.

Present Scenario of the College libraries

Name of the college	Address	Est. year	Type	Affiliate By
Bankura Christian College	Bankura	1903	Autonomous	Burdwan University
Bankura Sammilani College	Bankura	1948	State Govt. Sponsored	Burdwan University
Bankura Zilla Saradamani Mahila Mahavidyapith	Bankura	1973	State Govt. Sponsored	Burdwan University
Jamini Roy College	Beliatore, Bankura	1986	State Govt. Sponsored	Burdwan University
Barjora College	Barjora, Bankura,	1985	State Govt. Sponsored	Burdwan University
Saltora Netaji Centenary College	Saltora, Bankura	2000	State Govt. Sponsored	Burdwan University
Onda Thana Mahavidyalaya	Murakata, Onda , Bankura	2007	State Govt. Sponsored	Burdwan University

Table :1

From the above table it is seen that Bankura Christian College is the oldest (1903) college of this. The newest college of this subdivision is Onda Thana Mahavidyalaya and was founded in the year 2007.

b. Total No. of users of various college libraries:-

Name of the Colleges	No of Users
Bankura Christian College	3600
Bankura Sammilani College	2000
Bankura Zilla Saradamani Mahila Mahavidyapith	2162
Jamini Roy College	1700
Barjora College	3050
Saltora Netaji Centenary College	1600
Onda Thana Mahavidyalaya	1650

Table:2

From above table it is seen that Users strength of Bankura Christian College is High and lowest one is Saltora Netaji Centenary College.

c. Staff Pattern of Different Colleges libraries:

Name Of the College Library	Staff Pattern						Total No of Staff
	Librarian/Library in charge	Asst. Librarian	Library Asst.	Library clerk	Library Attendant	Others	
B.C.College	1			2	3	1	7
B. S College	1	1			3		5
B.Z.S.M.M	1			1	1		3
J.Roy College	1				1	1	3
Barjora College	1					1	2
S.N.C.C					1	1	2
Onda Thana Mahavidyalaya	1				1		2

Table:3

From above table it is seen that, one colleges approximately good position for library professionals . But the picture of other libraries are not quite good enough.

d. I.T Based Infrastructure :-

Name Of the College Library	Hardware Configuration									
	Computer	C.C T.V	Scanner	Server	CD / D.V.D Writer	Barcode Reader	Printer	Modem	Projector	Xerox
B.C.College	28	13	1	2	6	4	3			2
B. S College	7	1	1	1		2	2	1		1
B.Z.S.M.M	6	2	1	2		1	1	2		1
J.Roy College	4	1	1	2			1			1
Barjora College	2		1							
S.N.C.C	2					1	1			1
Onda Thana Mahavidyalaya	2	1			2	1	1			1

Table: 4

From above table it is seen that IT base infrastructure is not enough for all librarie

e. Library access:-

Name Of the College Library	Library Access System
B.C.College	Open access
B. S College	Partially open access
B.Z.S.M.M	Partially open access
J.Roy College	Partially open access
Barjora College	Partially open access
S.N.C.C	Close access
Onda Thana Mahavidyalaya	Close access

Table:5

From the above table it is seen that Only Bankura Christian College provide the open access facility for their users and 4 Libraries are provide open access facility only for teachers and staff but close access for students users. And another two colleges are provide close access.

d. Automation:-

Name of The College	Name of the Library Management Software	Automation Status
B.C.College	SOUL 2.0	Partially Automated
B. S College	SOUL 2.0	Partially Automated
B.Z.S.M.M	SOUL 2.0	Partially Automated
J.Roy College	SOUL 2.0	Partially Automated
Barjora College	From Local Agency	Initial stage
S.N.C.C	From Local Agency	Initial stage
Onda Thana Mahavidyalaya	N.A	Initial Stage

Table :6

From the above table it is seen that Only four libraries are use Integrated Library Management Software (SOUL 2.0) another two libraries are use library management soft ware from local agency and another one is initial stage for ILMS.

f.   Information sources of Different libraries:

i. Traditional collection:

Name of the Colleges	Various type of Info. Sources										
	Text Book	Reff. Book	Dicti onary	News Papers	Encycl opedia	Year book	Hand Books	Jour nals	Alma nac	Pirodic als	Direc tories
B.C.College	39117	26000	12	8	10	40	10	32	4		
B.S.College	24000	16000	30	6	8	02	05	04	01	02	06
B.Z.S.M.M.	13500	8500	25	7	5	20	5	9		5	
J.Roy College	8710	5806	20	6	06	03		05			02
Barjora College	8200	455	10	04	01			03			10
S.N.C.C	10106	6738	06	03	10	10	05				
Onda Thana Mahavidyalaya	6000	4000	10			08			01		

Table :7

ii. E-Collection:

Name of The Colleges	Various type of E Collection		
	CD/DVD	E-Books	E-Journal
B.C.College	126	_	Access From N-List &Others
B.S.College	100	_	Access From N-List &Others
B.Z.S.M.M.	66	_	Access From N-List &Others
J.Roy College	05	_	Access From N-List &Others
Barjora College	-	-	-
S.N.C.C	-	-	-
Onda Thana Mahavidyalaya	-	-	-

Table: 8

From table 7 and 8 it is seen that the collection of traditional information sources of these college libraries are good position but collection of E-Documents is not quite good.

g. **Advertising of Information Product/Sources:**
  i. **Tradition Methods For advertising Information Product/Sources:**

Name of the colleges	Various Tradition Methods For advertising Information Product/Sources							
	Poster	Display	Exihibition	Per. Contacts	User's meet	Annual report	Presentation	Others
B.C.College	✓	✓	✓	✓	✓	✓	✓	✓
B.S.College	✓	✓	✓	✓	✓	-	✓	✓
B.Z.S.M.M.	✓	✓	✓	✓	✓	-	-	✓
J Roy College	✓	✓	✓	✓	✓	-	-	✓
Barjora College	-	✓	-	✓	✓	-	-	✓
S.N.C.C	-	✓	-	✓	✓	-	-	✓
Onda Thana Mahavidyalaya	-	✓	-	✓	✓	-	-	✓

Table 9

  ii. **Modern Advertising Methods:**

Name of the colleges	IT Base Advertising for Info. Products/Sources								
	SMS Alert	E-mail	Blog	Online Social Network Site	Web 2.0 Tech	News group	News letter	Slide show	Others
B.C.College	✓	-	-	-	-	-	✓	-	-
B.S.College	✓	-	-	-	-	-	-	-	-
B.Z.S.M.M.	-	-	-	-	-	-	-	-	-
J.Roy College	-	-	-	-	-	-	-	-	-
Barjora College	-	-	-	-	-	-	-	-	-
S.N.C.C	-	-	-	-	-	-	-	-	-
Onda Thana Mahavidyalaya	-	-	-	-	-	-	-	-	-

Table: 10

Above tables shows that almost all college libraries depends on traditional method of advertising for their information product / sources but use of modern technology for advertising is very bad condition.

h. **Information Services:**
  i. **Tradition Services:**

Name of The Colleges	Verious Services for Users								
	Doc. Delivery	CAS	SDI	Reff. Service	Abstracting services	Newspaper clippings	Reading Room Facility	Notifi.of Con. Sem & others.	Inter Lib.Loan
B.C.College	✓	✓	✓	✓	✓	✓	✓	✓	-
B.S.College	✓	✓	✓	✓	✓	✓	✓	✓	-
B.Z.S.M.M.	✓	✓	✓	✓	✓	✓	✓	✓	-
J.Roy College	✓	✓	✓	✓	✓	✓	✓	-	-
Barjora College	✓	✓			-	✓	-	-	-
S.N.C.C	✓	✓		✓	-	-	✓	-	-
Onda Thana Mahavidyalaya	✓	✓		✓	-	-	-	-	-

Table: 11

ii. Modern Service :-

Name Of The Colleges	Various Modern Services Users								
	Internet access	Database search service	Photocopy ing Service	Reprography Services	Translati on services	Literature search	On line Lib. Access.	Mob. Serv.	Oth ers
B.C.College	✓	-	✓	✓	✓	✓	-	-	✓
B.S.College	✓	-	✓	✓	✓	✓	-	-	✓
B.Z.S.M.M.	✓	-	✓	✓	✓	✓	-	-	✓
J.Roy College	✓	-	✓	✓	-	-	-	-	✓
Barjora College		-	✓	-	-	-	-	-	✓
S.N.C.C		-	✓	-	-	-	-	-	✓
Onda Thana Mahavidyalaya		-	✓	-	-	-	-		✓

Table: 12

Above tables shows that which services provided by the college libararies

i)   **Networking Status:**

Name of the College	Member of any library Network (Yes/No).	If yes Name of the Network.
B.C.College	Yes	INFLIBNET
B.S.College	Yes	INFLIBNET
B.Z.S.M.M.	Yes	INFLIBNET
J.Roy College	Yes	INFLIBNET
Barjora College	No	N.A
S.N.C.C	No	N.A
Onda Thana Mahavidyalaya	No	N.A

Table: 13

This table shows only 4 colleges are members of library network (INFLIBNET) and others are not yet.

FINDINGS:
1. College libraries faces insufficient and skilled personnel so, all college libraries face the problems of their day-to-day works.
2. Some colleges have separate library building. It is good aspect for better library service. However, all colleges has no this type of facility.
3. We see that college library has no separate Web-site.
4. Lack of awareness about modern library system .
5. No any library is fully automated.
6. Limited ICT base infrastructure was found.
7. These college libraries are mainly uses traditional information sources. E- Resources are not available in their collection.

8. Some libraries using SOUL 2.0 ILMS for their better implement. And others libraries are using another local softare.
9. Some libraries are give Internet access facility for their users. and others can't provide this facility for some issues.
10. some libraries provided OPAC facility for their users to get advance search.
11. Some libraries are member of INFLIBNET .
12. Only four libraries are member of e-journal consortium. Like N-LIST.
13. Only one library is provide Open access facility for their users . Some are partially open access .and one is totally closed access .

Suggestions:-
- College libraries should recruit skilled personnel for their libraries so the best services given to the users.
- College libraries can requite LIS students volunteer (for project work basis) to do t their day –to-day work , It can solve staff problems and LIS students can learn in hand on practice and develop their skill .
- Organization should increase their fund in budget allocation for library development.
- Colleges should create separate buildings for libraries and planned for digital libraries.
- If college libraries transformed from traditional to digital form then the uses of library and the library personnel get the idea of digital library or the modern library system.
- Automation policy should be formed with the expert opinion
- Scope is too opened to the Library professionals for the efficient implementation of the automation work.
- Libraries should always up to date their information sources and must develop the IT infrastructure.
- To adapt ICT base services purchases library management software as required.
- Increases the collections of E-documents.
- They can started resources sharing. It solves the staff problems and increases the material availability.
- Libraries should build computer hub as soon as possible to their users for access their required information free of cost.
- College libraries should subscribe E- journal, E-Books etc.
- Open Access system should start.

Conclusion:-

College libraries play an active role of an academic system. Already, Govt. and UGC has introduced some initiatives for developing and adapting ICT for provides better library services. After studying this paper, we see that college libraries of Bankura Subdivision few numbers of libraries are partially ready to accept digital environment. To advancement of science and technology in the libraries, authority should have to take some initiatives for the library services. It should expand the space, infrastructural facilities and recruit trained staff to provide better ICT based services.

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IGNOU Study Materials.

TRANSFORMING LIBRARY INFORMATION SCIENCE EDUCATION IN 21ST CENTURY

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Abstract: Library and information services in the changing information scenario have taken a sea change providing innovative and value added services. There is a complete transformation of libraries and reorientation of library professionals associated with this. The back bone of this development has necessitated the schools of library and information studies to create appropriate human resources to meet the challenges of emerging knowledge society. The paper discussed the library and information science education and training that need to develop the knowledge and skills of the prospective professionals keeping in view the demand from national and global job market. The author explained the various areas of expertise required for library professionals to develop their skills and create their own demand in the job market. The paper further raised some issues and concerns in Indian context for the qualitative development of library and information science education so as to meet the global standards.

Keywords: Library and Information Science Education, Transformation, Knowledge and Skills

Introduction

A great transformation of library and information activities have taken place due to the growth and emergence of knowledge society in the form of library resource sharing networks, digital library, content development and content management. Institutional repository, RFID, Web learning, MOOC, information/digital literacy and web based library services like social networking so as to supplement global reforms in education system as innovative and value added library services. Impact of information and communication technology have further compelled to develop the information management skills of the library and information professionals in the areas of Library Automation, Networking, Design and Development of Information System, Networking and Internet technology, Digitization, Content Development, Managing and Organizing Information Resources and Services, Applying Information Tools and Technologies and more importantly web based library and information services (Library Web 2.0) open source and open access initiatives.

Internationalization, reforms and maintenance of standards in higher education is top most priority of Government of India aiming to improve the quality of higher education at par with global standards. Infrastructure development alone (Physical, human, financial including ICT infrastructure) do not create best manpower of a country, equally important is an up to date, need based curriculum and syllabus combining both latest knowledge and skills, innovations, best practices which will provide an opportunity to a post graduate student to stand alone in the national and global job market. This has necessitated a radical change in LIS curriculum and syllabus keeping in view the need of information work force required in the international/global market. This will eliminate the wide disparities of LIS education, practice and research between the developing and developed countries. The goals of these efforts are to facilitate mobility of

students and to increase employability. An emphasis on quality assurance on LIS education internationally cloud give the opportunity for improving the skills of individual students and to increase the standards of LIS education in the country. This will further help in nation building through application of knowledge and skills to cope with the expectation of 21st century teaching, learning and capacity building.

Impact of ICT on LIS Education-Challenges

The impact of information and communication technology has a direct impact not only on the library and Information profession but on the LIS education as well. So far the emerging technologies and their applications have not been paid proper attention in imparting practical training to the LIS education. The LIS schools are finding it difficult to design inter-disciplinary curricula for education and training. Unless the professional education adopts the topics on changing technologies and their related techniques like databases, online retrieval, records management archives and marketing of information, it would become obsolete. The professional experts visualize a threat from the computer professionals, systems, analysts, communication specialists, scientists and technocrats who are slowly encroaching upon our profession.

The LIS curriculum is expected to provide trained personnel capable of handling information, managing information and dissemination functions from libraries and information centers more effectively even in a technological environment. To cope with the changing environment there is a need for revising the existing curricula in LIS schools. The curriculum Development Committee (UGC) on Library and Information Science (2002) in its report made several recommendations. The main recommendations include,

❶ The LIS courses should improve their quality, in particular by the incorporation of advancing information technology.

❷ Paraprofessional training courses may be undertaken by other appropriate agencies but care must be taken to ensure uniformity and quality of such training all over the country.

❸ LIS professionals must be given every facility to refresh his/her expertise, so as to keep abreast of advancing knowledge by a planned development of continuing education programmes in the field.

❹ There should be an accreditation agency to ensure the standard and quality of the training in LIS field.

❺ There is a national need for furthering higher education and research in LIS, which may be undertaken by a National Centre to be established for the purpose.

Balancing Knowledge and Skills

Library and Information Science being a professional course needs much emphasis on emerging concepts and its application thereby combining both tradition and technology. Since the international developments in library and information areas have moved much faster in terms of technological advancements, it has become the need of the hour to develop the skills and competencies. Therefore it is imperative on the part of the schools of Library and Information Studies to balance the knowledge and skills as illustrated below as a model.

Core Courses	T/L + T/P/S/C (No. of Credits)
Fundamentals of Library and Information Society	3+1
Knowledge Organisation (Theory and Practice)	2+2
Management of LICS	3+1

Information Sources and Services	3+1
Information and Communication	3+1
ICT Fundamentals: Theory and Practice	2+2
Information Systems and Networks	3+1
Personality Development in LIS	2+2
ICT Application in Libraries	3+1
ICT Application in Libraries (Practice)	0+4
Research Methods	2+2
Library Internship	0+4
Digital Library– Theory and Practice	2+2
Information Retrieval	2+2
CSST/Study Tour	0+4
Dissertation/Project or Content Management and Web Design (Practice)	0+4

(T/L-Theory/Lecture, T/P/S/C/- Tutorial/Practical/Seminar/Colloquium and number of Credits allotted for each course)
Electives –Soft Courses (Illustratative)
Academic Library System
Public Library System
Special Library System
Technical Communication
Informetrics and Scientometrics
Health Information Systems
Agriculture Information Systems
Industrial Information Systems

Open Electives (Illustarative)
Community Information Service
Information Literacy/Digital Literacy
E-Resources
IPR and Copyright
Electronic Publishing

Capacity Building /Skill Development
      Adopting best Practices and providing innovative and value added services, can only be rendered when library and information professionals could achieve both managerial skills and ICT skills in the changing information environment. The 21st century libraries are turning in to smart libraries and inspiring librarians. The library and information professionals need to acquire certain skills and competencies combining both traditional and technological skills (multi-skills) which have a great impact on library and information

Managerial Skill	ICT Skill
• Vision- "Looking ahead • Leadership- To build and lead a team with foresightness and ability to transform • Innovations and Best Practices- "Think outside the Box" and set example by adopting healthy practices • Public Relation and Marketing • Project Management • Problem Solving • Resource Generation and Mobilisation • Collaboration and Partnership • Appreciation /Tolerance • Comfort and Humour	• Library automation, Networking and Digitization • Website development and maintenance • Content creation, development and Management • Digital resource Management • Institutional Repositories • RFID and Library security Technology • Digital Reference Service • Current Awareness Service • Information Literacy/Digital Literacy • Open Educational Resources • WEB 2.0/3.0 Social networking • Copyright and IPR

LIS Education in 21st Century: Issues and Concerns in Indian Context

LIS education in India has completed its 100 years .Schools of library and information studies and faculty members are constantly facing challenges to improve its quality due to global developments .Some of the issues and concerns that LIS schools need to be addressed are stated below.

• **Internationalization of LIS Education:**

Changes at work place in a digital/virtual environment have compelled library and information professionals to reorient themselves and compete in the global market as well. This has necessitated a radical change in LIS curriculum and syllabus keeping in view the need of information work force required in the international/global market. This will eliminate the wide disparities of LIS education, practice and research between the developing and developed countries. IFLA Education and Training Section is also emphasizing much on issue of equivalence and reciprocal recognition of academic qualifications. The goals of these efforts are to facilitate mobility of students and to increase employability. An emphasis on quality assurance on LIS education internationally cloud give the opportunity for improving the skills of individual students and to increase the quality of national LIS higher education system. Measuring courses in terms of Credits, Credit transfer, Choice Based Credit System are some of the measures to contribute to internationalization of higher education.

Adoption of Choice Based Credit System

The credit system followed in higher education is defined as a fixed number of teaching/study hours required for completion of a particular course/programme in a given period or duration. These include class room teaching, tutorial and practical, field study, academic study tour, internship, project/dissertation, seminar and colloquium etc. Reforms in higher education initiated by Ministry of Human Resource Development (MHRD) and University Grants Commission (UGC), recommendations of National Knowledge Commission in general and Examination Reforms in particular provided for introduction of Semester System, Continuous and Comprehensive Internal Assessment, Choice Based Credit System and

mobility of students through effective mechanism of credit transfer across institutions of higher education. It was mandated that the curricula be revised at least once every 3 years and the syllabi be made relevant in tune with job market dynamics as also in tune with advances in research and development. Institutions were also expected to evolve appropriate pedagogical processes for effective transaction of instructional material.

The Choice Based Credit System allows flexibility of learning and freedom to students to choose courses from other Departments which enable them to bridge the gaps and deficiencies which they may have, in order to meet the requirements of core courses. The introduction of Choice Based Credit System (CBCS) shall enable the students to obtain a degree by accumulating required number of credits prescribed for that degree. The number of credits earned by a student reflects the knowledge and skill acquired by him/her .Each course is assigned with a fixed number of credits based on the contents to be learned. A student has also the choice in selecting course out of those offered by other departments. The credit/grade points earned for each course reflects the student's proficiency in that course .The CBCS enables the students to earn credits across departments and provides flexibility in duration to complete a programme of study. The Choice Based Credit System allows flexibility of learning and freedom to students to choose courses from other Departments which enable them to bridge the gaps and deficiencies which they may have, in order to meet the requirements of core courses.

- **Need Based Curriculum**:

There is a worldwide phenomenon of convergence of library, documentation, information and knowledge areas and a new curriculum design needs to take this fact in to account. An up to date curriculum integrating professional knowledge, skills (managerial, technological and communication) and specializations reflects much on the learners to compete in a national and international potential job market. The appropriate teaching learning pedagogy is planned at this stage to provide and an effective learning environment to the learners.

- **Competent Faculty**:

Faculty members play an important role in capacity building (creativity, innovations, transfer of knowledge and capacity to use high technology). Faculty members as innovators could create innovative organizations, competition in the global market and more over the success of the students is considered as testimony of faculty members.

One of the major targets that we have to achieve is to make our profession more attractive to lure and induct best brains in to it. Teaching and Learning must be laboratory and library oriented. Faculty and student exchange programmes among the leading universities of national and international level shall allow both teachers and students be exposed to latest trends and developments. In the changing information environment, web based education is an added advantage which all the teachers and students should be motivated to access, store and retrieve vast amount of information pertaining to their area of teaching and research.

- **Instructional Technology Support:**

The technology which can support the effective delivery of LIS courses including new media technology. The present day Information Science discipline incorporates a variety of software requirements to teach Library Automation, Networking and Internet Technology, Multimedia, Digitization, Content Development and other areas of information management.

Both print, electronic and web based information resources supplement the teaching curriculum, students, faculty members and researchers. The LIS educators require keeping themselves up to date with

latest publications including e-books and e-journals available in the subject. Learning resources through Library Website could provide unlimited access to all categories of users with wide variety and less cost.

- **Research**

Innovative, original and scientific research in library and information science not only increases the quality of services but solves the practical problems of library and information profession. The emerging areas of research in an electronic and digital environment have posed serious challenges to library and information profession paving a way to entirely transform and meet the challenges. More number of Research Fellowship need to be awarded by UGC, CSIR, DRDO, and ICSSR. Some of the well established LIS departments having required infrastructure and expertise may be recognized as Advance Research Center.

- **Open and Distance Education**

It has been opined by many experts that LIS education through distance mode by open universities and correspondence course institutes are engaged in over production LIS graduates and post graduates and diluting the quality of both the courses and products. There is an immediate need to streamline proliferation of such courses through distance mode. Norms, Standards and Guidelines developed by Distance Education Council should strictly be followed.

- **Need for National Accreditation Agency:**

For quality assurance and maintenance of standards, there is a need for national accreditation agency in India to achieve standards of excellence at national and international level. An accreditation body will ensure adopting best practices by developing norms, standards and guidelines for schools of library and information studies to offer LIS courses at par with national and international standard. This will further allow the LIS degree holders of one country to be accredited by another country. Presently a number of such councils are in operation in other disciplines like Medical Council (legal education), Bar Council (legal education), National Council of Teacher Education (teacher education), and AICTE (technical education). A similar national body namely National Council for Library and Information Science is the need of the hour to maintain standards and assuring quality in library and information science education in India.

Although National Assessment and Accreditation Council (NAAC), an autonomous body inder the University Grants Commission is responsible for institutional accreditation (Universities and Colleges),has recognized the functioning and assessment of "Library" as an essential component and vital sub-unit in assuring quality in higher education. For this purpose NAAC has developed "Guidelines on Quality Indicators in Library and Information Services: Affiliated/Constituent Colleges". But hardly NAAC plays any role in department accreditation.

Conclusion

Schools of library and information studies will continue to face the challenges of digital era. These challenges can be met only when the educators, practitioners and researchers of library and information profession work together and bring qualitative improvement through curriculum which has a great impact on work places. The LIS schools not only to aim at balancing traditional librarianship and technology but to do a lot to make the students exposed and develop expertise on different areas of information and communication technology and its application in library and information centers. The emerging areas of ICT are compelling the library and information schools to revamp LIS education in the country, draw a road map to achieve its mission and prepare a vision for 21st century. UGC in this regard have a very limited role, but many things depend on the individual departments to keep themselves up to date with

changing information scenario, understanding the fact that the present national and global job market require a different kind of LIS professionals what it was supposed to be earlier.

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USAGE OF INTERNET ACCESS BY STAFF AND STUDENTS OF FIRST GRADE COLLEGES AT YADAGIR CITY

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Abstract

The Internet is the global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to link billions of devices worldwide. It is a networks that consists of millions of private, public, academic, business and government networks of local to global scope, linked by a broad array of electronic, wireless and optical networking technologies. The Internet carries an extensive range of information resources and services, such as the inter-linked hypertext documents and application of the World Wide Web (WWW), electronic mail, telephony and peer-to-peer networks for file sharing.

*A well-structured questionnaire was distributed among the 90 teachers and students of the five colleges in the **Yadagir city**. Out of which 80 questionnaires were received back duly filled in. The response rate was 72 per cent. The study revealed that the level of student's access to the Internet was low and the major reason was that at the time of the study, computers with Internet facilities were inadequate. The findings also revealed that the rate of Internet use was more among the teachers and students of Commerce and Science faculty as compared to the faculty of Arts. However, majority of the students of expressed their interest in the use of Internet and its resources and were enthusiastic in improving their skills in the use of the Internet. The study recommends the provision of more computers with Internet facilities, better access speed and providing more orientation/training programmes in the use of Internet in these institutions.*

Keywords : Internet, Email, Network, Electronic, Telephone, Academic, Commerce, Arts and Science Colleges.

INTRODUCTION

In today's world internet has grown immensely over the years in this landscape, internet is considered as an affluent sources of information. The potential impact of this technology an academic and research scenario is not an exception, as it greatly affects the teaching and research environment in higher education system. In the present situation higher education is bound to opt for the unavailable shift from culture of print to a culture of digital technology affects the teaching learning and research but also the whole of higher education.

The college libraries are currently largely committed to the use of electronic information resources, because they are required to provide high quality services to large number of faculty and students. Who must access to information services which in practical terms can now only be provided with the aid

of electronic information resources. Users to know their level of awareness about available electronic information resources, which support their day today activities.

OBJECTIVES

The study was conducted with the following specific objectives

· To study the use of Internet by the teachers and students in the degree college under study.

· To identify the different purposes of using Internet by the academic community.

· To identify the constraints encountered by the respondents while using the Internet.

· To assess the satisfaction level of the Internet facilities provided by the under graduate colleges under study.

· To suggest ways of providing better Internet services to the users.

METHODOLOGY

The five under graduate colleges of **Yadagir city** having arts, commerce and science faculties were selected for the study and were visited personally by the investigator to collect data from the respondents. A total sample of 90, 55 teachers and 35 undergraduate students, was taken up for the study. For sampling, random sampling process was followed for data collection. The teachers and students were randomly selected, in equal proportion, from the science, humanities and commerce faculties. Out of 90 questionnaires, 80 were dully filled and returned accounting to 72 per cent. That data collected from the teachers and students was further computed and interpreted using simple statistical techniques like frequency, percentages as well as other statistical tools such as weighted mean and standard deviation to analyses the data.

SCOPE AND LIMITATIONS OF THE STUDY

The research study is confined to the colleges in the **Yadagir city** having permanent affiliation from the **Gulbarga University** all the combined of science, Arts and Commerce faculty. The following colleges were selected for the study :

1. Government First Grade College, Yadagir

2. Lingeri Konnappa Degree College, Yadagir

3. Jawahar Arts, Commerce, Science & B.C.A

Degree College, Yadagir

4. Mahatma Gandhi Degree College, Yadagir

5. Chandrashekhar Degree of Arts, Science College, Yadagir

ANALYSIS

Characteristics of Study Population

Status	No. of respondents	Percentage	No. of male respondents	No. of female respondents
Teachers	50	62.5	30	20
Students	30	37.5	20	10
	80	100	50 (62.5)	30 (37.5)

Table 1 shows that more than one-third, 62.5 % of study population comprised teachers and 30 (37.5 percent) students. The respondents comprised 50 (62.5 percent) males and 30 (37.5 percent) females.

Internet Use

Table 2. Faculty-wise breakup of the respondents showing internet use

Faculty	No. of respondents using the Internet	No. of respondents not using the Internet	Total respondents
Arts	10 (16.12 %)	05 (27.77 %)	15 (18.75 %)
Commerce	20 (32.25 %)	05 (27.77 %)	25 (31.25 %)
Science	32 (51.61 %)	08 (44.44 %)	40 (50.00 %)
	62 (100)	18 (100)	80 (100)

Table 2 shows that of the total 80 respondents, 62 used Internet. To ascertain the Internet use by the teachers and the students, a faculty-wise breakup of the respondents is shown in table 2. It shows that fluctuation in the use of Internet among different faculties. Nearly half (27.77 percent) of the arts faculty did not used the Internet, while among the science faculty only 27.77 percent of the respondents were non-users of the Internet. Among the Internet users, it was found that 32.25 percent of the commerce faculty and 51.61 percent of the science faculty were Internet users while only 16.12 percent of the arts of faculties were Internet users. 18(22.5 percent) respondents, who were not using the Internet, were further queried to understand the reasons for their not using the Internet.

Table 3. Reasons for not using internet by the respondents

Reasons for not using	No. of responses	Percentage
No interest	5	27.77 %
Need training	2	11.11 %
Do not feel it necessary	2	11.11 %
No proper Internet facility in the institution	6	33.33 %
Other reasons (e.g. language problem, etc.)	3	16.66 %
Total	18	100 %

Table 3 shows that 22.5 percent of the respondents did not used the Internet because they needed training, 27.77 percent had no interest in using it whereas 33.33 percent were not using since the institution was not having proper Internet facility. Also, 11.11 percent of the respondents did not felt its necessity and 16.66 per cent had other reasons such as language-related problems, etc.

Table 4. Experience of Internet Use

Years	No. of responses	Percentage
0 – 6 Months	5	8.06 %
6 – 1 Year	12	19.35 %
1 – 2 Years	13	20.96 %
2 – 4 Years	16	20.80 %
4 and above years	16	20.80 %
Total	62	100 %

Table 4 shows that out of the 62 Internet users, 20.80 % of the respondents were using Internet for more than four years. Whereas 19.35 % percent of the academic community were using it for 1-2 years and 20.80 percent were using Internet for 2-4 years. Rests of the respondents were using it for less than a year. The analysis indicates that half of the respondents were using Internet on an average for more than 2 years.

Table 5. Frequency of Internet Use

Frequency of Internet Use	No.of responses	Percentage
Daily	15	24.19 %
2 – 3 times a week	20	32.25 %
2 – 3 times a month	20	32.25 %
Once in a month	05	08.06 %
Total	62	100 %

To access the frequency of using the Internet services, the time was classified into four different categories: daily, 2-3 times a week, 2-3 times a week and month and once in a month. It was found that 32.25 % percent used Internet 2-3 times a week and month, respectively and 24.19 percent of the academic community used it daily. The analysis clearly indicates that on an average majority of the respondents used Internet once in a week and month.

Table 6. Purpose of Internet Use

Purpose	Frequency	Percentage
Finding relevant information	60	96.77
Accessing online journals	53	85.48
E-mail	58	93.54
Research work	59	95.16
Searching Job Opportunity	43	69.35
General information	35	56.45
Social networking	43	69.35
E-books	44	70.96

Table 6 shows that different purposes for which the respondents used the Internet. Table 6 shows that 60 (96.77 percent) of the respondents used Internet to finding related information. 85.48 percent used for accessing online journals, 93.54 per cent for communication mainly through e-mail, 95.16 per cent for their research work and almost equal percentages (69.35 percent) and 42.2 percent) for searching jobs and social networking 70.96 percent for e-books it is encouraging to note that the respondents were making maximum use of the Internet and were of its benefits for educational purposes as well as other purposes.

Table 7. problems Encountered in Using Internet

Problems encountered while Internet Services	Frequency	Percentage
Slow Internet access speed	62	100
Too long to view / download	59	95.16
Electricity failure	57	91.93
Difficulty in finding relevant information	56	91.35
Limited number of computers	53	85.48
Important sites in subject area not known	55	88.70
Time slot insufficent	64	87.09
Internet connectivity always off	53	85.48
Poor computer using skills	52	83.87

The respondents were asked to state whether they faced any problems while using the Internet. It was observed that, 100 per cent encountered difficulties while using slow Internet access speed. In continuation of the query on whether they faced any problems in the use of the Internet.

CONCLUSION AND SUGGESTIONS

Based on the findings of the study, the following suggestions are recommended to improve the use of Internet among the teachers and the undergraduate students of the Yadagir city colleges :

❖   There is a need for extensive training programme organized at regular intervals so that all categories of users can improve their proficiency in the use of the Internet.

❖   The Internet and allied technologies should be included in the curriculum.

❖   More computers with latest specifications are required in the library as well as the computer centre.

❖   To solve the slow downloading problem, the colleges should acquire high speed Internet connection with maximum bandwidth.

❖   Information regarding the popular and the latest websites with their addresses should be displayed on the notice board in the library and in the computer centre.

❖   Printing facility should be provided so that the users can get printout of their study materials and other important documents.

❖   The Internet facility should be familiarized to all.

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USERS' PERCEPTION TOWARDS THE LIBRARY SERVICES: A CASE STUDY OF NEHU CENTRAL LIBRARY, SHILLONG

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Abstracts:

Library is the heart of every institution. The main purpose of the library is to provide information services that are useful and accessible to the users. However, it should be determined if the users use such services. The main purpose of this study is to study the users' purpose of visiting the library and their perceptions towards the services provided by the library. The findings of this study suggest that the library has to do more things for the benefits of the users.

Keywords: *User perception, Library, Library users, Library Services*

Introduction

Library is the heart of every institution. The main purpose of the library is to provide information services that are useful and accessible to the users. However, it should be determined if the users use such services (Gunasekara, 2014). One of the main goals of any information system is to provide pinpointed, exhaustive and expeditious information service to its users. In order to achieve this goal, various types of recorded information are gathered in information centers and qualified personnel are recruited to established purposive contact between the users and the information embodied in variety of sources of information (Lihitkar & Rajyalakshmi, n. d.). The university library must necessarily have the benefit of adequate information sources of the heritage of mankind's accumulated knowledge and wisdom. These information sources must be adequate in size and quality (Ranganathan, 2012). Users are the most important components that every library should satisfy their needs. Library should provide better and quality services to its users.

NEHU Central Library:

The North-Eastern Hill University (NEHU) Library, which started with a collection of 600 books in 1973, is now a premier university library of the North-Eastern Region of India with a collection of over 2.9 lakh volumes of books and bound periodicals supplemented by the enormous information resources now available through the e-ShodhSindhu Consortium for Higher Education Resources and the links to global information resources and services provided on its webpage. The NEHU Central Library is now equipped with high-end computers and other electronic and audio-visual equipment to provide seamless in-house and online services. Following the University Grants Commission's selection of North-Eastern Hill University as a "University with Potential for Excellence", the NEHU Library has launched a major effort to provide the best services through internal reorganisation, optimisation of available resources, launching of innovative services, and by taking the initiative to reach out to the user community through various programmes. (http://www.nehu.ac.in/library/)

Literature review

Lihitkar, S. R. and Rajyalakshmi, D. (n. d.) conducted a study on "User perceptions and utilization of library and information services of Information centers in Nagpur city". The study shows that maximum number of users expressed that user orientation programme is not needed while few users felt the need for library orientation programme. Almost all the respondents expressed that it would help them to meet their information needs better if the centers could provide computerized, library services more E-resources and more staff trained in Information communication technology. Maximum number of users thinks that networking of libraries, sharing of resources, membership of local library consortium and databases in areas of interest and digital library are also equally needed. On the other hand, Ranganathan (2012) conducted a study on Perception and expectation of the users of Bharathidasan University Library: A Study. The study revealed that majority of the respondents are regular uses of the library, they visit once in a week. Users use to visit to the library daily two or three times of a week. It is found that the 21.6 per cent of the respondents are using the library at every day. 37.6 per cent of the respondents are using the library for only one hour. The main purpose of visit to library is for browsing internet (30%) and to reading newspapers/magazine (20%). Majority of the respondents are used to get help from the library staff to locate the particular information in the library. It is found that nearly 50 percent of the library users focused the library rating are very good. It is found that more than sixty percent of the library users focused library very tidy. It is found that more than 60% of the library users focused the quality of journals are good. It is found out that the most of the respondents (47.2%) of the library users focused quality of the books are good. It is founded the most of the respondents are responses the library services are excellent. According to the study conducted by Gunasekera (2014) on "User perception towards academic library services: A case study at University of Peradeniya, Sri Lanka", it was found that inadequate communication between the library and its users as well as lack of knowledge and the low state of awareness of certain services and resources and inadequate training to use the services are the main factors responsible for the ways users perceive the services offered by the library. The study concluded that users were not receiving the full benefit of the library services and that some of the services were underutilized.

Objectives

The objectives of the study are as follows

To study the users' purpose of visiting the library.

To study the users' perceptions towards the services provided by the library.

Methodology

For the purpose of the primary data collection, a structured questionnaire was distributed to 60 students of Library and Information Science Department, NEHU, Shillong. Out of which, 52 i.e., 86.7% questionnaires were received from the respondents. The purpose of selecting the above sample is because of the fact that students of Library Science will have more knowledge about the library and it is expected that they will be able to give more suggestions for the betterment of the library.

Data Analysis

All the collected data were analyzed by using simple percentages and interpreted as follows.

Total number of questionnaires distributed = 60

Total number of questionnaires received = 52

Table 1 : Gender wise Distribution of Respondents (N=40)

Gender	No. of respondents	Percentage
Male	22	42%
Female	30	58%
Total	52	100%
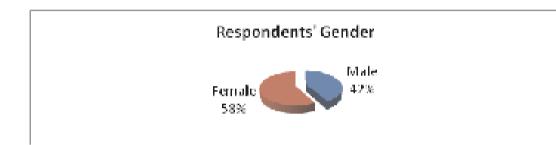
Fig. 1: Gender wise Distribution of Respondents

Table 1 and Fig. 1 shows the gender wise distribution of the respondents which indicates that 42% of the respondents are male and 58% are female.

Table 2. Age wise distribution of respondents (N=40)

Age	No. of Respondents	Percentage
20-25	51	98%
26-30	1	2%
Above 30	-	-
Total	52	100%
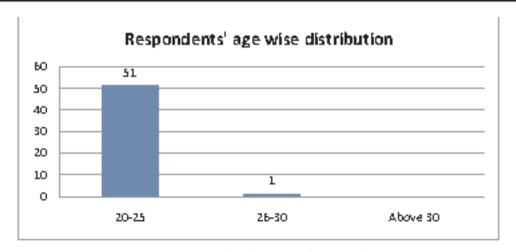
Fig. 2 Age wise distribution of respondents

Table 2 and Fig. 2 represent the age wise distribution of the respondents. It shows that most of the users (98%) fall between the age group of 20-25 years and only 2% of the user are in the age group between 26-30 years. None of the users are above the age 30 years.

Table 3. Frequency of visits (N=52)

Frequency of visits per week	No. of respondents	Percentage
Daily	15	29%
Twice a week	26	50%
Once a week	10	19%
Once in a month	1	2%
Total	52	100%
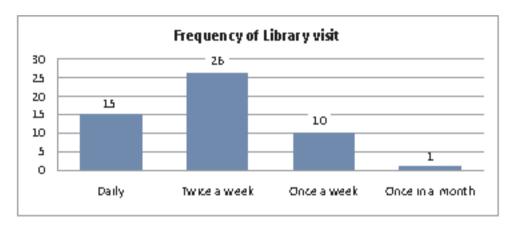
Fig. 3: Frequency of visits

From the above table and Fig., it clearly shows that the users have different timings of library visits. Majority of the users visit the library twice a week (i.e., 50%) followed by daily (29%), ten users visit the library once a week (19%) and only one user visit the library once in a month(2%).

Table 4. Preference of timing for library visit in a day (N=52)

Time	No. of respondents	Percentage
Morning	-	-
Afternoon	40	67%
Evening	12	23%
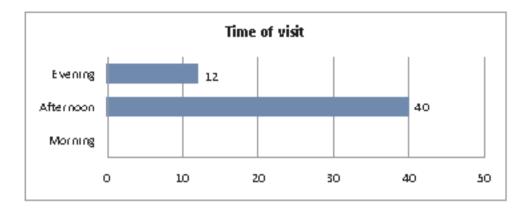
Fig. 4: Preference of timing for library visit in a day

Table 4 and Fig. 4 above shows that most of the users visit the library in the afternoon (i.e., 67%) followed by evening (23%) and none of the users visit the library in the morning time.

Table 5. Purpose of library visit (N=52)

Purpose	No. of respondents	Percentage
Assignments	32	61.5%
Internet	8	15.5%
Reading Newspapers	12	23%
Total	52	100%
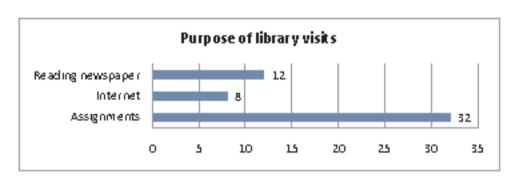
Fig. 5: Purpose of Library visit

The users visit the library for various purposes for assignments, internet, reading newspaper and so on. It may be seen from the above table that the library users most frequently visit the library for assignments (61.5%), reading newspaper (23%) and for using the internet (15.5%).

Table 6. Use of computers in the library (N=52)

Option	No. of respondents	Percentage
Yes	34	65.4%
No	18	34.6%
Total	52	100%
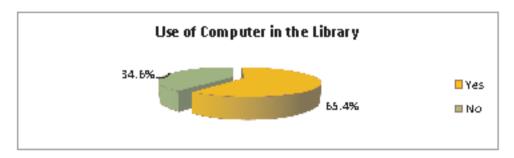
Fig.6: Use of computer in the Library

The above table and Fig., represent the respondents' use of computers in the library. Most of the users (65.4%) said that they used the computers in the library and eighteen users (34.6%) said that they are not using the computers in the library.

Table 6.1. Purpose of using computers in the library (N=34)

Purpose	No. of respondents	Percentage
Access to online database/journals	14	41%
Using Microsoft office	-	-
Browsing the internet	20	59%
Total	34	100%
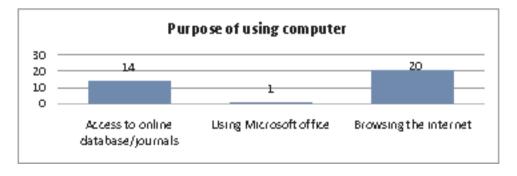
Fig. 6.1: Purpose of using computer in the library

The users used the computers in the library for various purposes. It is clear from the above table and Fig. 6.1 that most of the users used it for browsing the internet (59%) and for database/journals accessing (41%). None of them used it for Microsoft office.

Table 6.2. Reasons for not using computers in the library (N=18)

Reasons	No. of respondents	Percentage
Not enough Computers	9	50%
Difficult to use	1	5.6%
Too slow	3	16.7%
Insufficient Training	2	11%
Not interested	3	16.7%
Total	18	100%
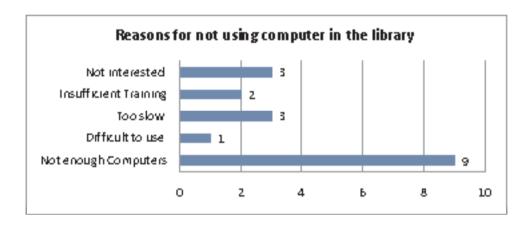
Fig. 6.2: Reasons for not using computers in the library

The above table shows that users have different reasons for not using the computers in the library. The main reason is because of less computer available (50%), three users said that the computers are too slow for use and three users said that they have no interest for using it. Two users said that they don't have sufficient training and only one user said that it is difficult to use.

Table 7. Accessing of library from outside (N=52)

Option	No. of respondents	Percentage
Yes	11	21%
No	41	79%
Total	52	100%
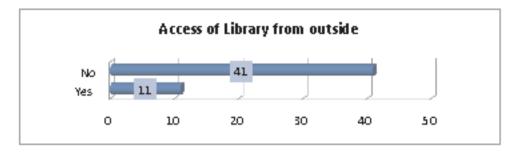
Fig. 7: Accessing of library from outside

Table 7 and Fig. 7 shows that only eleven users (21%) out of 52 users access the library from outside and majority of the users (79%) don't have any access from outside the library.

Table 7.1. Frequency of accessing library from outside (N=11)

Time	No. of respondents	Percentage
Regularly	-	-
Occasionally	4	36.4%
Rarely	7	63.6%
Never	-	-
Total	11	100%
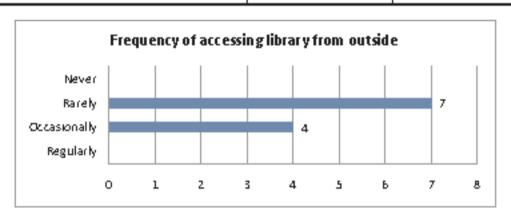
The above table and figure shows that four users (36.4%) access the library from outside occasionally and seven of them accessed it rarely (63.6%). None of them accessed the library from outside regularly.

Table 7.2. Reasons for not accessing library from outside (N=41)
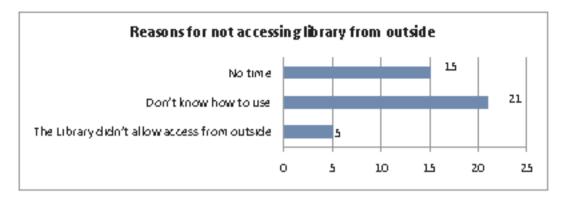
Reasons	No. of respondents	Percentage
The Library didn't allow access from outside	5	12.2%
Don't know how to use	21	51.2%
No time	15	36.6%
Total	41	100%

The above table and Fig. shows different reasons that users are not accessing library from outside. Most of the users (51.2%) are not accessing the library from outside because they don't know how to use it. Fifteen (36.6%) users said that they never access the library from outside is because they have no time. Only 5(12.2%) users claimed that the library don't allow access from outside.

Table 8. Library rating by users

	Excellent	Good	Fair	Poor	Don't Know
Staff helpfulness	3(7.5%)	24(60.0%)	6(15.0%)	6(15.0%)	1(2.5%)
Staff Friendliness	2(5.0%)	24(60.0%)	10(25.0%)	3(7.5%)	1(2.5%)
Staff Competence	-	25(62.5%)	7(17.5%)	3(7.5%)	2(5.0%)
Noise level	8(20.0%)	21(52.5%)	9(22.5%)	-	1(2.5%)
Cleanliness	3(7.5%)	24(60.0%)	10(25.0%)	2(5.0%)	-
Security and Safety	6(15.0%)	29(72.5%)	5(12.5%)	-	-
Computers with internet	2(5.0%)	9(22.5%)	16(40.0%)	10(25.0%)	3(7.5%)
Wireless Connectivity	3(7.5%)	19(47.5%)	9(22.5%)	8(20.0%)	1(2.5%)
Library Collection	3(7.5%)	24(60.0%)	10(25.0%)	1(2.5%)	-

The above table shows the users' rating for the library. The numbers outside the parenthesis represents the number of response and the ones inside the parenthesis are the number of percentages taken out of the total respondents which is 56 in total.

Table 10. Users' satisfaction level with the overall services provided by the library (N=52)

Satisfaction Level	No. of respondents	Percentage
Highly satisfied	6	11.5%
Moderately satisfied	26	50%
Partially satisfied	13	25%
Not satisfied	7	13.5%
Total	52	100
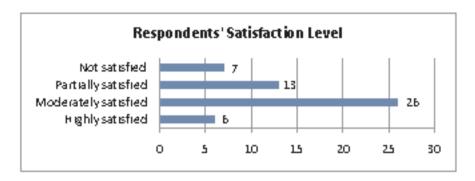
Fig. 10: Users' satisfaction level with the overall services provided by the library

Table 10 and Fig. 10 shows that majority of the users i.e., 50% are moderately satisfied with the overall services provided by the library, whereas 25% of the users says that they are partially satisfied with the overall services. Only 6 (11.5%) users are highly satisfied with the services and 7 (13.5%) users claimed that they are not satisfied with the overall services provided by the library.

Feedback and suggestions

The followings are some of the feedbacks and suggestions given by the respondents

- Clear directions should be there for faster access.
- Increase the copies of books that are less in numbers.
- Installation of Microsoft office.
- Internet facility should be improved.
- Issue and return should works properly.
- High demands documents should be more in numbers. Like for example Library Science books are less as told by the students. More computers should be there for the users to use and better internet service.
- Lack of latest edition.
- Less staff in the Library to complete the tasks.
- Minimize server breakdown.
- OPAC are not working in all sections.
- RFID machine should also be use so as to make the work faster when there are more users.
- Shelves are not well organized.
- Some of the sections are very dusty.
- Staffs are slow in rearranging the books in the shelves after the books are returned.
- The bookshelves are too high to reach for the book kept on top of the shelves.
- The new arrival books should be place opposite the entrance so that users can easily indentify and attract them.
- Toilet facilities of the sections are very dirty.
- Torn books are not bind.

Conclusion

From the above analyzed data it can be concluded that the services provided by the library is neither good nor bad. More improvement should be made in order to meet the needs of the users for the better services. Microsoft Office should be installed in all the computers of the library so that it will help the users to work easily. Ranganathan's law stated that the reader's time should be save, therefore the library should provide a clear direction like signs and symbols so that users will not waste their time in searching for the documents or any other things. Some tools should be there for some users who could not reach the height of the shelves when looking for documents. More computers with internet facilities should be made available for the users. OPAC should works in all the sections of the library for easy access and more staffs with more knowledge about library must be recruited. After all it is the duty of the library to look after the ever changing needs of the users and for the library improvement.

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USE OF SMART GADGETS FOR M-LEARNING OR M-LEISURE A STUDY AMONG NEW GENERATION

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Abstract

Smart gadgets generally and mobile phones particularly are treated one of the indispensable device of modern man. It is used for m-learning and m-leisure. This study focuses the born digital generation. They are the addict of smart devices and most of them are using the latests gadgets for non-informative purpose. Here the authors have tried to understand the frequency and use pattern of smart devices among the new generation. A study among the employees of University of Calicut has been take for studying their children. It was found that majority of the new generation are using smart devices for leisure purpose.

Keywords : M-learning, Mobile apps, M-leisure

1. Introduction

Portable electronic gadgets, like – mobile phone, tablets are an inevitable part of the present life, irrespective of his/her status. It is common among professionals, businessmen, officials, labourers, housewives and even among children. Presently, most of the applications which were only possible through desktop and laptops computers are possible through mobile phones. Mobile apps (applications) made these applications possible. In short, presently learning and acquisition of knowledge is mainly occurred through mobile phones and other such portable gadgets.

Just like the digital resources, the generation can be divided into two. They are converted digital generation and born digital generation. The converted digital generation represents those who are more than twenty five years. During their course of time they witnessed the ICT revolution. The other one is born digital generation. They were born in this digital environment. This study has been focused the use of smart gadgets by born digital generation in leisure perspective.

2. Mobile applications (apps)

A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smart phone or tablet computer. Mobile applications frequently serve to provide users with similar services to those accessed on PCs. Apps are generally small, individual software units with limited function. This use of software has been popularized by Apple Inc. and its App Store, which sells thousands of applications for the iPhone, iPad and iPod Touch. (Divestopedia & Institute, 2016).

During the initial period of 'mobile' revolution, the apps were developed only by the mobile companies. But later app creation became an industry, software companies started to develop apps for different functions.

The reasons behind the popularity of apps is contributed to various factors of which the most important among are(Grover & profile, 2014 and Smith, 2013) -

- Affordable

The most important reason for the popularity of mobile apps is its affordabiltiy. Most of the apps are freely available in the internet and others are having cheap rates. The other thing is that, only the negligible amoung of space is needed to store the apps.

- Speed and ease

In this patience less world, no body wants to wait before computer for getting one particular information. Apps are great relief to the moder men in this regard. Apps are developed user-friendly and it is available within a click. Once app is installed no internet connectivity is needed for using this.

- Evolving Technology

Some sort of addiction has been affected the new generation in using moblie apps. So hundereds of apps are mashrooming constantly day by day. Presently people are searching initaly apps for different activities and depneds the other alternatives only if it is hardly seen.

- Functional and Entertaining

Most of the mobile apps are entertaining, so its usage is very interesting for its users. Some apps just like clock, Calendars, organizers, etc. are all functional mobile apps and they are presently became the part of our daily life.

- Advertising media

The number of Smart phone users has greatly increased over the years and businesses have taken advantage of this by creating user-friendly apps. So in the businesses environment, it is the novel and effective means of advertisement and a source of revenue.

3. M-learning

Mobile learning or m-learning is that type of learning, enabled through electronic gadgets such as – mobile phones, i-pads, tablets etc with the help of Internet connectivity. M-learning made it possible the education beyond the boundaries of the classroom and past the fixed time periods of the academic institutions. Here students can access e-resources from their homes. Communicate with teachers and work with other people together.

M-learning is more than or beyond the use of certain facets of mobile phones. It is a philosophical approach to the possibility of learning any time anywhere knowing that you can find information when your need it.(Woodil,2011). The other definition of m-learning is "any sort of learning that, happens when the learner is not at a fixed predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies (O'Malley, etal, 2003). Kadirire (2009) defines m-learning , which can take place any time,anywhere with the help of a mobile communication device such as mobile phone, a personal digital assistant (PDA), ipod,or any such small portable device.

According to Ally (2009), "M-learning is he process of using a mobile device to access and study learning materials and to communicate with fellow students, instructors or institution". Traxler (2005) defined m-learning as "any educational provision where the sole or dominate technologies are hand held and palmtop devices."

M-leisure

Mobile leisure or M-leisure is the spending of leisure time by using mobile gadgets. Presently billions

of mobile phone users are spending their time by chatting, gaming and using social networks for leisure purpose. Studies explore that majority of school and college students are using their mobile gadgets for leisureliness their time and not academic purpose. The recent researches (Hsu (2012), Lepp (2013), Lepp, etal (2015)) revealed that , most of the college students use the smart phones for social networking, chatting, gaming and watching videos.

4. Objective of the study

- to know the mobile-literacy of children (new generation)
- to know the frequency of usage of smart devices among children (new generation)
- to know the purpose of usage of smart devices among children (new generation)
- to examine whether the uncontrolled usage of smart devices affect badly to the education of new generation.
- To understand the remedial measures taken by parents to control the unlimited smart device usage.

5. Methodology

The sturdy was conducted among the administrative staff of the university of Calicut. The study is purely based of primary data. Interview method is used for the study. Total 30 staff were interviewed for the study. Primary data collected by interview method is analyzed here. The analysis is made by using simple percentage, mean weightage and likert scale. The data has been presented by using tables, diagrams and chats.

6. Analysis and Interpretations

6.1 Smart phone/smart device availability

Smart phones are presently an inevitable device for daily life of human being. The below table shows the availability of smart gadgets among parents and their children.

Table No.1 Smart phone/ smart device availability

Smart phone possess	Yes	No
Parents	30 (100%)	0
Children	16 (53.4%)	14 (46.6%)

Source: Primary data

The table says that, all of the respondents have smart devices and more than fifty percent of the children of the employees possess their own smart devices.

6.2 Smart phone / smart device usage frequency and time by children

The usage of the smart devices of new generation is very high. The below table says the frequency details and usage of mart phones.

Table No.2 Frequency and time of Smart phone / smart device usage by children

A. Usage Frequency		B. Usage hours / week				
Daily	Week holy days	Below one Hour	1 - 2 Hours	2 - 5 Hours	5 - 8 Hours	More than 8 Hours
17 (56.6)	13 (43.4%)	6 (20%)	5 (16.6 %)	9 (30%)	10 (33.3%)	0 (0)

Source: Primary data

The table says that around the half of the respondents are using daily any of the smart gadgets. Looking to the whole using hours, 33 percent are using 5-8 hours and 30 percent 2-5 hours per week.

6.3 Usage Preferences

The uses of smart phones are enormous. It can be used for informative and leisure purpose. The preference of the usage of smart devices are relative. It varies from user to user. The following table shows the preferences of the usage of smart devices by children.

Table No.3 Usage Preferences

Uses	N=30				
	1st preference	2nd preference	3rd preference	4th preference	5th preference
1. Playing games	17 (56.6%)	10 (33.3%)	3 (10%)	0 (0%)	0 (0%)
2. Watching images	0 (0%)	7 (23.3 %)	10 (33.3%)	13(43.33%)	0 (0%)
3. Watching videos	13 (43.33%)	10 (33.3%)	0 (0%)	7 (23.3 %)	0 (0%)
4. Hear songs	0 (0%)	3 (10%)	17 (56.6%)	10 (33.3%)	0 (0%)
5. Phone calling	0 (0%)	0 (0%)	0 (0%)	0 (0%)	30 (100%)
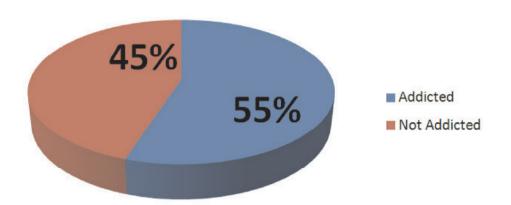
Source: Primary data

From the above table it is clear that, Most of the children (56.6%) are using smart devices for playing games. The rests (43.33%) have opted watching videos as their first option. The conventional usage of phone call has been opted as their last preference by all of the respondents.

6.4 Mobile/ Gadget addiction

Presently, the new generation has become some sort addiction of smart device. As far as they are concerned, it is one of the basic needs of their daily life. The question was asked the parents about their children that whether the children are the addict of smart gadgets or not. The answers have been presented

Gadget Addiction

Majority of the respondents have the opinion that, their children are the addict of smart devices.

6.5 Mobile Addiction versus studying .

There is a concern that, the over usage of smart devices of new generation will definitely be affected badly their studies and education.

Table No. 5 Mobile Addiction versus studying

Sl No.	Opinion	Total weightage	Weighted Mean
1	Strongly Agree	7X5=35	1.16
2	Agree	13X4=52	1.7
3	Neutral	0X3=0	0
4	Dis agree	9X2=18	.6
5	Strongly Disagree	1X1=1	.03

Source: Primary data

The weighted means of the options "agree" and "strongly agree" are 1.7 and 1.16 respectively. It means that Most of the respondents have the opinion that, mobile addiction is harmful to the reading and studying of the new generation.

6.6 Remedial Measures taken

The over usage of smart devices of new generation has to be controlled. Because the usage that type of smart devices take much time of their reading and studying. The following table shows the details of the remedial measured taken by the parents to control the over usage of smart devices.

Table No.6 Remedial measures of over usage

Sl No	Opinion	Remedial measures taken
1.	Yes	17(56.66%)
2.	No	13(43.4%)

Source: Primary data

Most of the parents are worried about the over usage of smart gadgets by their children. Out of the respondents 57 percent are taking any of measures to control the over usage of smart devices of their children.

Table No.7 Remedial Measures

Sl No.	N=17	
	Remedies	No. & %
1.	Time limiting	16 (94.1%)
2.	Deletion of software	12 (70.5%)
3.	Password protection	15 (88%)
4.	Encourage Informative apps	8 (47%)
5.	Encourage outdoor games	2 (11.7%)

Source: Primary data

It is clear that, most of the parents (94.1%) are controlling the over usage of their children by limiting the using time. In addion to this protecting with password is utilized by 88% respondents and deletion of game software has been used by 70.5% respondents. It is very interesting that, a few among are persuading the children out door games and informative apps.

7. Findings

1. The new generation children are computer literates.

2. Most of them are trying to get their own smart devices.

3. Most of the children of educated parents are daily users of smart devices.

4. The prime preference is game playing followed by watching videos.

5. Informative apps usage is very less among children.

6. Most of the educated parents believe that, the usage of smart devices by children will badly affect studies and education.

7. Time control is the best practicing method for controlling the over usage of smart devices by children.

8. Conclusion

Computer addiction or over usage is the dangerous problem affected to the new generation. It is badly affecting the creativity of new generation. Because of the addiction in game and other entertaining programmes, their interest in studies and other informative activities are getting decreased. Banning of these gadgets are not a practical and ideal solution. Parents have to take strong decision regarding this for

making the new generation in a way to fruitful to the society.

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USE OF E-JOURNALS AVAILABLE UNDER DBT E-LIBRARY CONSORTIUM: A CASE STUDY OF ASSAM UNIVERSITY

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ABSTRACT

Information explosion, the rising cost of information resources and the increasing demands of user community forces the academic as well as research and development libraries to form consortium at various levels for subscribing the access rights of electronic resources. As Assam University is member of DeLCON consortium, the users of the university can access the various e-journals and online databases available in biological sciences which are subscribed by the consortium. A survey has been conducted with a well designed questionnaire to know the awareness and usage of DeLCON e-journals by the students and research scholars of Assam University, Silchar. The study also highlighted the various problems encountered by the users while accessing online resources and provides few recommendations for optimum usage of these information resources and to reach the benefits of the consortium to the target users.

Keywords: Use pattern, E-Journals, Consortia, DeLCON, Assam University

1. INTRODUCTION

In the arena of paperless society, the numbers of information resources are growing in a very fast manner in every field of knowledge and simultaneously the price of these information resources also rises. The user community also demands more access to these scholarly information resources. Now it is impossible for a single library to subscribe all these scholarly resources to meet the varied user requirements. To cope up with the situation and satisfy the over escalating demand of the users, there is a strong need for effective collaboration between libraries and information centers for shared subscription of these resources. E-journal consortium is a boon to the academic libraries to meet all these requirements. Online Dictionary for Library and Information Science (ODLIS) defines Library Consortia as "an association of independent libraries and/or library systems established by formal agreement, usually for the purpose of sharing. Membership may be restricted to a specific geographical region, type of Library (Public, Academic, and Special) or subject specialization". DeLCON is one such consortium which subscribes mostly the scholarly information resources in biological sciences and provides access to its member libraries. The present study has been undertaken with a view to assess the usage pattern of e-journals available under DeLCON by the students and research scholars of Assam University, Silchar.

2. DBT E-LIBRARY CONSORTIUM: AN OVERVIEW

Department of Biotechnology e-Library Consortium (DeLCON) is a unique electronic journal consortium which is operational since January 2009. Currently the consortium includes 16 Department of Biotechnology (DBT) institutions and 18 North Eastern Region (NER) institutions including Assam University, Silchar. A total of 1171 selective journals and a database (SCOPUS) are covered under DeLCON. These all information resources are accessible to the consortium members through the DeLCON portal (http://delcon.gov.in).

Table 1: E-Journals Subscribed under DeLCON

Sl. No.	Publishers	URL	No. of Jrnls
1.	American Association for Advancement of Science	http://www.sciencemag.org	3
2.	American Association for Cancer Research	http://www.aacr.org	8
3.	American Society for Biochemistry and Molecular Biology	http:///www.jbc.org	2
4.	American Society For Microbiology	http://www.asm.org/	12
5.	Cold Spring Harbor Laboratory Press Journals	http://www.cshl.edu	4
6.	Informa Healthcare	http://www.informahealthcare.com	41
7.	Marry ANN Liebert	http://www.liebertonline.com	7
8.	Nature Publications	http://www.nature.com	42
9.	Oxford University Press (OUP)	http://www.oxfordjournals.org	18
10.	Springer India	http://www.springerlink.com	237
11.	Society for General Microbiology	http://mic.sgmjournals.org	3
12.	Society for Hematology	http://bloodjournal.hematology library.org/	1
13.	Wiley-Blackwell	http://onlinelibrary.wiley.com	87
14.	Elsevier Science (ScienceDirect)	http://www.sciencedirect.com	421
15.	American Society of Plant Biologist	http://www.aspb.org/	2
16.	American Association of Immunologist	http://www.aai.org/	1
17.	Proceedings of the National Academy of Sciences	http://www.pnas.org/	1
18.	The New England Journal of Medicine	http://www.nejm.org/	1

3. REVIEW OF LITERATURE

E-resources are always a keen area of interest between researchers and library professionals. There were many studies carried out in India and abroad since after the birth of e-resources and evolution of the concept of joint subscription of e-journal through consortia.

Lal (2012) clearly and in a very systematic way documented the various aspects of the Department of Biotechnology e-Library Consortium (DeLCON). It is must read article for those who wants to know almost everything about the consortium. It describes the inception of the consortium, its objectives and features. The article clearly mentioned the subject coverage of the consortium as all the disciplines and subject come under life science. The procedure for selection and subscription of the information resources under DeLCON are also mentioned in the article.

Naushad Ali and Nisha (2011) examined the extent of awareness and usage of e-journals among the research scholars at Central Science Library, University of Delhi. The study revealed the popularity of printed journals over electronic journals among the researchers and identified the infrastructure problems pertaining to the use of e-journals. The study recommends the library to teach its users about advanced search strategies and to organise orientation programmes regularly.

Sinha, Singha and Sinha (2011) evaluated the usage of electronic resources provided by the Assam University Library under the UGC- Infonet Digital Library Consortium. The study revealed that most of the respondents were aware about the availability of e-resources under UGC-Infonet consortium and uses these e-resources mainly for the purpose of study, publishing journals, research and project works. The study highlighted the various problems faced by the users and provide few recommendations for the improving the access to internet and e-resources.

Madhusudhan (2010) studied the usage of e-resources by research scholars of Kurukshetra University and concluded that electronic resources have become an integral part of the information needs of research scholars of the university. The study also highlighted the problems faced by research scholars in accessing e-resources and provides some constructive suggestions for improvement of electronic resources and services.

Veenapani, Singh and Devi (2008) conducted a survey to identify the usage pattern and impact of UGC-Infonet Digital Library Consortium among teachers and research scholars in Manipur University. Their survey revealed that around half of the respondents were not aware of the UGC-Infonet consortia and majority of the respondents felt that they are in need of regular training programme to make effective use of these resources. The study also revealed that all the respondents who are aware of UGC-Infonet expect more number of e-journals to be included in the consortium.

The review of literature reveals the wide acceptance of e-resources among the user community along with conventional resources.

4. OBJECTIVES OF THE STUDY

The objectives of the study are:

- To assess the awareness of DeLCON among the students and research scholars of Assam University
- To determine the frequency of using the e-journals available under DeLCON by the users
- To study the various purposes of using e-journals by the users
- To know the various e-journal publishers preferred by the users

- To know the satisfaction level among the users with the infrastructure facilities available for accessing e-journals and to highlight the problems encountered by them while accessing these resources

5. SCOPE AND LIMITATIONS OF THE STUDY

As the DeLCON subscribes and provides access to the electronic information resources available in the subjects related to biological sciences only, the study population has been restricted to the users of related disciplines. The questionnaires have been distributed to the students and research scholars Assam University, Silchar belongs to the departments related to biological sciences only. Only four academic departments of the university which are taken into consideration for conducting the survey are mentioned below:

- Department of Life Sciences & Bio-Informatics

- Department of Biotechnology

- Department of Microbiology

- Department of Ecology & Environmental Science

6. RESEARCH METHODOLOGY

Survey technique has been used for conducting the study. A questionnaire has been designed keeping in view of the objectives of the study and distributed to the target users. Simple random sampling has been followed while administering the questionnaire. The secondary data required for the study have been collected by visiting the website of DeLCON consortium. The data collected through the survey have been analysed and interpreted by using simple percentage techniques. The results of the study are presented in tabular and graphical format.

7. DATA ANALYSIS

7.1 Response Rate

A total of 100 questionnaires were distributed among the students and research scholars, out of which

Table 2: Response Rate

No. of Questionnaire Distributed	No. of Questionnaire Received Back	Percentage of Response
100	80	80%

7.2 Characteristics of the Respondents

Table 3 indicates that the sample selected for the study consists of 60 (75%) students and 20 (25%) research scholars. It also shows that 47 (58.75%) respondents are male and the rest 33 (41.25%) are female respondents.

Description	Male	Female	Total
Students	35	25	60 (75%)
Research Scholars	12	8	20 (25%)
Total	47 (58.75%)	33 (41.25%)	80 (100%)

7.3 Awareness of DeLCON E-Journals

An attempt has been made to know the awareness of the respondents regarding the availability of e-journals under DeLCON. Table 4 reveals that majority of the respondents i.e. 65 (81.25%) are aware of it where as 15 (18.75%) respondents are not aware of it.

Table 4: Awareness of DeLCON E-Journals

Aware	Not aware	Total
65 (81.25%)	15 (18.75%)	80 (100%)

7.4 Frequency of Using DeLCON E-Journals

Table 5 shows the e-journal usage behavior of the respondents. It reveals that majority of the respondents i.e. 45 (56.25%) use the e-journals available under DeLCON on daily basis followed by 10 (12.5%) who use these resources as and when they need it. The 15 (18.75%) respondents who not responded to the question are those who were not aware of the DeLCON e-journals.

Table 5: Frequency of Using DeLCON E-Journals

Particular	Frequency	Percentage
Almost daily	45	56.25
Every alternate day	2	2.5
Once a week	6	7.5
Once a month	2	2.5
As and when required	10	12.5
No response	15	18.75
Total	**80**	**100**

7.5 Purpose of Using DeLCON E-Journals

Table 6 represents the various purposes of using e-journals by the respondents. It shows that majority of the respondents i.e. 55 (68.75%) use the DeLCON e-journals for their research work followed by 32 (40%) respondents who use these resources for updating knowledge. For writing papers (31.25%) and for preparing for seminars (20%) are the other key purposes of using the e-journals by the respondents.

Table 6: Purpose of Using DeLCON E-Journals

Purpose	Frequency	Percentage
For Preparing notes	8	10
For Writing papers	25	31.25
For projects	12	15
For seminars	16	20
For research work	55	68.75
For updating knowledge	32	40
Other purposes	0	0

7.6 Usefulness of DeLCON E-Journals

The respondents were asked to rate the usefulness of e-journals available under DeLCON and their opinions are presented in Table 7. It shows that 50% of the respondents opined that the e-journals are extremely useful to meet their academic needs and 25% respondents rate these as very useful. 18.75% of the respondents had not provided their opinion as they were not aware of the resources.

Table 7: Usefulness of DeLCON E-Journals

Opinion	Frequency	Percentage
Extremely	40	50
Very	20	25
Somewhat	5	6.25
Not very	0	0
Not at all	0	0
No response	15	18.75
Total	**80**	**100**

7.7 Problems in Accessing E-Journals

Table 8 reflects the various problems encountered by the respondents while accessing the e-journals. It reveals that non availability of full text (40%) and internet connectivity issue (37.5%) are the main problems highlighted by the respondents. It also reveals that 27.5% respondents don't know how to use these resources and 35% find difficulties in downloading the articles.

Table 8: Problems in Accessing E-Journals

Problems	Frequency	Percentage
Inadequate infrastructure	20	25
Internet connectivity problems	30	37.5
Unawareness to use	22	27.5
Non availability of full text	32	40
Problems on downloading articles	28	35
Other problems	0	0

8. CONCLUSION AND RECOMMENDATIONS

DeLCON is great initiative of Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India to support and promote research and development in Life Sciences in the country. The users of Assam University especially the researchers of biological sciences are very fortunate to have the access of various scholarly electronic information resources at their fingertips. But the benefits of the consortium are not reaching to the target beneficiary to its full extent due to various reasons such as unawareness of availability, not aware of how to use and the problems of accessibility. The study recommends for some key measures need to be taken care of by the concerned authority and the library personnels of the university. The orientation programmes provided by the university library should be conducted in frequent manner to create more aware among the users regarding the availability of

scholarly information resources under various consortiums. User studies must be conducted from time to time to know the user needs and the problems faced by them while accessing online information resources. High quality campus wide Wi-Fi facility should be provided so that the users can access the various web resources according to their suitability. More number of full-text articles should be subscribed to meet the user requirements. Trainings and workshops should be conducted to guide the users and to enhance their technological knowledge so that they can use these information resources in their academic and research work so as to achieve the objectives of subscribing the scholarly electronic resources through the consortium.

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WEBSITES VISITED

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USE OF SOCIAL NETWORKING SITE WHATSAPP AMONG THE USER OF STATE LIBRARY, SHIMLA: A CASE STUDY

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Abstract:

WhatsApp is one of the popular medium for sharing and connecting with the peoples. This study highlights the user perception towards use of WhatsApp in students learning. For this study 80 filled questionnaires has collected and analyzed. The paper highlights the use of WhatsApp in day today activities, what kinds of problems they face, and what kind activities they do in WhatsApp. How much time spent? The results of the study reveal that the majority respondents 35 male and female 24 use WhatsApp in daily basis out of 80. 90% of respondents think that WhatsApp is very much useful for finding and sharing of information related to the his/her subjects. Low internet speed is major issue for connecting WhatsApp with 44 (55%) of respondents. The study also indicate that majority of respondents do many activities on WhatsApp likefor group discussion 67 (85%), 63(80%)Sharing resources, informing educational agenda 56 (71%) and sharing job vacancy 56 (71%)

Keywords: WhatsApp, Social Networking Site, State Library, Shimla, Social Networking Site tool, Case study on WhatsApp

1. Introduction

Earlier by the word internet we meant surfing different information related to various fields, but the present scenario of internet has been changed due to the advancement of science and technology. Now-a-days the internet has given a common platform for sharing various information, views, and opinions of the happening arising around them. Internet gave birth to social media which has made the livelihood of the world more easy and compatible. Social media is a tool of communication in the societies.

In this fast moving world, we can see the rapid change every moment and to walk with this fast moving and rapid change world, people are running towards better technology driven media like computers and smart phone. Through these technologies social media has made communication too easy through

internet. Social media includes various social networking sites where people can get connected with each other any time everywhere. The social networking sites like Facebook, Twitter, WhatsApp, Hike, Linkedin, YouTube and many more are easily available in the market free of cost. Among them WhatsApp is widely used by most of the people in the world. It has become cross platform in the world. WhatsApp incorporates various features like group chatting, video calling, voice calling, group creating.

1.1 Social Networking Tools

Social networking sites is an online platform that is used by people to build social relations with other people who share similar personal or career interests, activities, backgrounds or real life connections. The variety of stand- alone and built-in social networking sites currently available in the online space introduces challenges of definition. Frequently used social networking sites are briefly discussed below:

WhatsApp Messengerisa proprietary, cross-platform instant messaging subscription service for smartphones and selected feature phones. It uses the internet for communication. In addition to text messaging, users can send messages, images, video and audio media as well as their location. WhatsApp Inc. was founded in 2009 by Brian Acton and Jan Koum, both former employees at Yahoo!. The company is based in Mountain View, California and employs 55 people. As of October 2014, WhatsApp is the most globally popular messaging app more than 600 million users. (**Wikipaedia.org**)

2. Literature Review

There is not much scholarly publication available in these areas undertaken by the scholars. However an attempt has been made to provide information on WhatsApp on different field.

Bhatt, Anshu (2016) reveals that WhatsApp is a medium of making communication easier and faster thereby by enhancing effective flow of information, idea sharing and connecting people easier. Examining it empirically, it is found that WhatsApp has also a profound negative impact on youth and adversely affects their education, behaviour and routine lives. It messes up much of study time of students and spoils their spelling skills and grammatical construction of sentences. This app has been found to be highly addictive, which leaves a trace that becomes difficult to control. The impact is so powerful that users give up their real world interest their entire emotional quotient is restricted to the app. Their happiness or sadness depends on the reply which they receive from other users. They cannot control themselves from constantly chatting, replying and sharing of ideas.

Bajpai, Munesh Kumar (2016) explores that WhatsApp messenger is one of the popular social networking tool among the students, professionals, and household. The paper analysed that at what extent LIS professionals are using WhatsApp messenger, and activities in which they have involved. An effort is made to understand the impact of the WhatsApp messenger on LIS professionals.

Yeboah, Johnson (2014) unveils that WhatsApp takes much of students study time , results in procrastination related problems, destroys students' spellings and grammatical construction of sentences, leads to lack of concentration during lectures, results in difficulty in balancing online activities (WhatsApp) and academic preparation and distracts students from completing their assignments and adhering to their private studies time table.

Kalia, Gitanjali (2013) concludes that our education system needs change and social media should be widely utilized for the educational purposes. It is mainly used for the purpose of making presentations followed by assignment updates, better research and connectivity.

3. Research Methodology

The data was collected from the State Library, Shimla during Mach, 2017.The data was collected through survey among the different user'sage group to understand their perception of using the socialmedia as an educational tool. For this, questionnaire was used as a tool andwas filled by 80 respondents which were picked up randomly. The data has analyzed using SPSS software using different test.

4. Objectives of the study

The study is confined to the users of State Library, Shimla. The users who are using WhatsApp on their smartphones are included in this study.

The objective of the study delineated on the title "Use of Social Networking Site WhatsApp among the user of State Library, Shimla: a Case Study". The main objectives of the study are cited below:

- To explore the time frequency of WhatsApp used by the library users daily.
- To identify the purpose of using WhatsApp messenger by the library users.
- To explore their views regarding the use of WhatsApp in education field.
- Toanalyze the perception, attitude, benefits of using WhatsApp in students' learning.
- To study the problem faced by the users in using WhatsApp.

5. Data Analysis

The below table indicates demographic presentation of collected data, majority of the respondents come under graduate category 46(57.5%) followed by post graduate students 32(40%) and MPhil students 2(2.5%).From the below table revealed that 23-26 age category followed by 18-22 age group 29 (36.3%) likewise 27-30 age group 5(6.3%) and 31-35 age group 1(1.3%). The data also indicate that Majority of respondents comes under Male category 50(62.5%) and female 30 (37.5%)

Education Level		
Education	No of Respondents	Percent
Graduate	46	57.5%
Post Graduate	32	40%
MPhil	2	2.5%
Total	80	100%
Age Group		
Age	No of Respondents	Percent
18-22	29	36.3%
23-26	45	56.3%
31-35	1	1.3%
27-30	5	6.3%
Total	80	100%
Gender		
Gender	No of Respondents	Percent
Male	50	62.5%
Female	30	37.5%
Total	80	100%

Table-1

5.1 Frequency

The data inform that majority of the students use WhatsApp in daily basis both male 35 and female 24 and it is followed by weekly basis male 6 and female 6.On monthly basis only male category of user 6 are user. Other 3 by male user group.
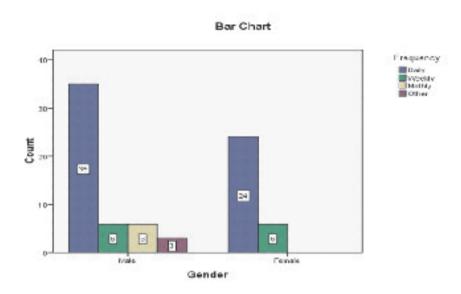
Figure-1

5.2 Experiences on WhatsApp

The user experience on WhatsApp used by the user of Statelibrary Shimla finds that, majority of the respondents 71 (89 %) areuse WhatsApp fall under the category of 1-2 years whereas 8 (10 %) respondents use WhatsApp having experience less than 1 year. Only 1 respondents use WhatsApp having experience more than 2 years.

Experience on WhatsApp		
Experience	Frequency	Percent
Less Than 1 year	8	10 %
1-2 Year	71	89 %
More Than 2 years	1	1 %
Total	80	100 %

Table-2

5.3 Sharing Information

An assessment of sharing and finding of information related to his/ her subject area on WhatsApp.From the collected data it indicate that, most of respondents answered with yes with 90% only 10% of respondents say with no.
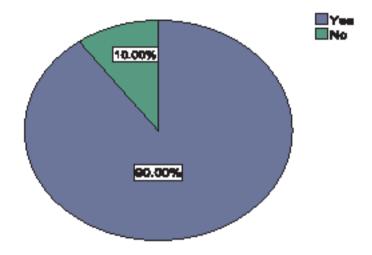
Figure-2

5.4 Education Purpose

According to the analyzed data reveal that the user71 (89%)of State Library Shimla answered that WhatsApp should be use for educational purpose whereas 9 (11%) respondents answered with no.

Education purpose		
Response	Respondents	Percent
Yes	71	89%
No	9	11%
Total	80	100%

Table-2

5.5 Purpose

The table indicate purpose of user of WhatsApp by the respondents. It is find that majority of the respondents of user are user 49 (61%)WhatsAppfor educationpurpose whereas for Instant Message (Chat) 48(60%). Similarly for entertainment purpose 43(54%) followed by Express feelings 23 (29%), Job hunting 15(19%) and 14 (18%) because WhatsApp is free of charge.

Purpose		
Purpose	No of respondents	Percent
Education	49	61%
Instant Message (Chat)	48	60%
Entertainment	43	54%
Express feelings	23	29%
Job hunting	15	19%
Free of charge	14	18%
Total	192	240%

Table-3

5.6 What kinds of education activities do you conduct with the use of WhatsApp?

The above questions asked to the respondents. From the analyzed data it is find that thereare 67 (85%) no of users conducted on WhatsApp for group discussion followed by Sharing resources 63(80%) similarly Informing educational agenda 56 (71%), Furthermoresharing job vacancy 56 (71%) and for other activities conduct on WhatsApp are user 3 (4%) no of respondents.

Activities		
Activities	No of respondents	Percent
Group discussion	67	85%
Sharing resources	63	80%
Informing educational agenda	56	71%
Sharing Job vacancy	56	71%
Other	3	4%
Total	245	310%

Table-4

5.7 Problem face
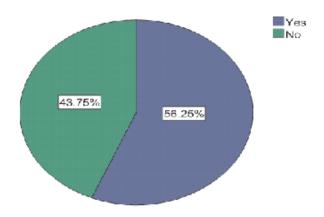
The study revealed the different problems face by the user of the state library Shimla. It is found that low internet speed is major problem while connecting with WhatsApp with 44 (55%) respondents. 22(28%) respondents express those technical Issues when connecting with WhatsApp, similarly Lack of Knowledge 11(14%).It is also find that 16 (20) respondents face other problem .

Responses		
Problems	No of respondents	Percent
Low Internet Speed	44	55%
Technical Issues	22	28%
Lack of Knowledge	11	14%
Other Issues	16	20%
Total	93	116%

Table-5

5.8 If the WhatsApp will be paid, would you like to continue the use of WhatsApp?

To measure what extend WhatsApp are using in day to day life by the user of state library Shimla. The above question asked to the respondents. It is depict from the below figure that, 56.25% of respondents will be use even if the WhatsApp will be subscription basis whereas 43.75 % of respondents express their view that they will not continue if the WhatsApp will be paid subscription.

5.9 Perception

Thetable show the students perception on WhatsApp. The 60 (75%) respondents agree that, WhatsApp is important for educational learning whereas as 20 (25%)disagree, similarly The 71 (89%) respondents agree with for question "chatting on WhatsApp helps me to maintain social relationships" whereas 9 (11%) respondents disagree. 57 (71%)respondents disagree that WhatsApp learning is a waste of time whereas 23 (29%) that WhatsApp learning is a waste of time.

Perception			
Perception	Agree	Disagree	Total
I think WhatsApp is important for educational learning	60(75%)	20(25%)	80(100%)
Chatting on WhatsApp helps me to maintain social relationships	71(89%)	9(11%)	80(100%)
I feel WhatsApp learning is a waste of time	23(29%)	57(71%)	80(100%)

Table-6

In order to further investigate the following question were asked to the respondents. The data inform that most of respondents 61 (76%) agree that,WhatsApp in students' learning it improve technology proficiency whereas 19 (24%) disagree. For second question the respondents 58 (73%) agree that by use the WhatsApp it is helping them to collaborative problem solving of the problem and 22 (28%) disagree. Similarly 68 (85%) respondents agree that communicate in new ways with new people by the use ofWhatsApp in students learning whereas 28 (15%) disagree. Majority of the respondents 64 (80%) agree that by the use of WhatsApp learning can extend beyond classroom only 16 (20%) respondents are disagree.

What are the benefits of using WhatsApp in students' learning?			
Benefits	Agree	Disagree	Total
Improve technology proficiency	61 (76%)	19 (24%)	80 (100%)
Collaborative problem solving	58 (73%)	22 (28%)	80 (100%)
Communicate in new ways with new people	68 (85%)	28 (15%)	80 (100%)
Learning can extend beyond classroom	64 (80%)	16 (20%)	80 (100%)

Table-7

6. Findings

The major findings of the study are given as below:

- The study finds that low internet speed is the major cause while using WhatsAppfor 44 (55%) respondents.

- 90% of the respondents think that the use of WhatsApp they can share information related to his/her subject area.

- Among the respondents 35 male   and 24 female are using WhatsApp daily

- It has been found that according to the respondents WhatsApp should be used for educational purpose also.

71 (89%) whereas 9 (11%)answered with no.

- Majority of the respondents 71 (89 %) having experience with WhatsApp is from 1-2 years.

- Most of the respondents use WhatsApp for the purpose of Education49 (61%) and Instant Message (Chat) 48(60%).

- The user of the State Library Shimla who are doing activities in WhatsAppamong them67 (85%) for group, Sharing resources 63(80%), Informing educational agenda 56 (71%) and sharing job vacancy 56 (71%)

- If the WhatsApp will be paid subscription 56.25% of respondents willcontinue the use of WhatsApp onlyand 43.75 % respondents will not continue.

7. Conclusion

The case study of the use of social networking site WhatsApp among the user of State Library, Shimla is a step towards examining the number of user of State Library, Shimlausing WhatsApp and also evaluating the frequency, purpose of using WhatsApp was studied on the basis of checklist.

The conclusion of the study is that till date majority of the users are unable to use WhatsApp for low internet speed. The study has also shown some positive impact on users who are using WhatsApp. The users are spending their time in forming various groups on WhatsApp through which they can share information related to their subject areas. The user of the State Library Shimla who are doing activities in WhatsApp createsgroup, share resources, provides information on educational agenda and shares job vacancy also.

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USES OF DIGITAL RESOURCES IN THE COLLEGE LIBRARIES OF KAMRUP (M) DISTRICT: ASURVEY

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Abstract: Digital resources are those resources which are accessible through computer. Now a day, traditional libraries are converted to digital because of user demand. Advancement of technology, the needs of digital resources is very important because of some advantages is there such as no physical boundary, 24 hours availability, multiple access, preservation, minimise space problem etc. My research topic is *"Uses of Digital Resources in the College Libraries of Kamrup (M) District".*In this regard, I have been surveyed 15 college libraries of Kamrup (M) which have digital resources. I have been distributed questionnaire among users and collected data pertaining to the topic. In objectives part I have been included frequency of uses of digital resources, the purpose of using digital resources, amount of time spent by the users in digital resource, the problem faced by the users while using digital resources, the satisfaction level of users of accessing digital resources. In last, I have been provided findings, suggestion and concluded by conclusion and reference part.

Keywords: Digital resources, College libraries, Kamrup (M), Computer, Technology.

1 Introduction: Rapid advances in computer, communication, storage and network technology have made the whole world a global village. This study shows the uses of digital resources among different types of college libraries in Kamrup(M).The revolution of ICT has made the transfer of information from one place to another place andeasy accessible from any corner of the globe with the help of computer networks.Now a days, traditional libraries are replaced by digital resources because of multiple access, easy retrieval, minimise storage problem, preservation. In the present study, the term electronic resource and digital resource are synonymously used. Digital resources are those resources which are stored and accessible through computer. In libraries, resources are integrated material consisting of documents, ebooks, e-journals, links to other resources and multimedia materials.

Some advantages of digital resources are as follows-

a) **No physical boundary**: Digital resources have no physical boundary because people from all over the world can be access to the same information through internet.

b) **24 x 7 availability**: Any one can access digital resources at any time.

c) **Multiple accesses**: Any one cam access same resources at same time by no of users.

d) **Information Retrieval**: Any one can search digital resources very easily by searching method.

f) **Preservation and conservation**: Multiple copy of document can be made from digital resources. So, it helps in preservation and conservation process.

g) **Space**: Digital resources required very little space.

2. Objectives: Objectives of my study area are as follows-

a) To study the frequency of uses of digital resources.

b) To study the purpose of using digital resources.

c) To find out the amount of time spent by the users in digital resource.

d) To find out the problem faced by the users while using digital resources.

e) To find out the satisfaction level of users of accessing digital resource**s.**

3. Methodologies

The methodology for conducting the study mainly consists of library user survey throughprescribed questionnaire method, personal interview, observation, verification of resourcesand literature survey. In all such surveys, statistical methods have been applied fordrawing inferences.

4. Literature Review:

Mittal(2005) in his book *"Digital Library Resources"* discussed about digital library concept, digital library objects, usability criteria of digital library and resource of digital library.

Sujatha &Mudhal (2008) conducted a study under the title *"Use of electronic information source at the college of Fisheries Mangalore, India"*. Objective of the study are to know the use of different types of electronic information sources by the teachers/students, research scholars and postgraduate students, and to analyse the different purpose for which the electronic information sources in used by the respondents the study was conducted using questionnaire based survey method along with observation and informal interviews.

Vrana, Badurina, & Golub (1999) in their article *"Advantages and Disadvantages of Use of Digital Collections in the Process of Education"* illustrated about digitization, output format and copyright access to the collection. They concluded by accepting digital collections as one of their crucial information sources, students accept new technologies introduced tothem on everyday basis and also learn how to use the online content for their study.

Manjula&Padmamma, S (2016) in their article *"Knowledge and Practice of use of Digital Resources by faculty members at BLDE University, Vijaypur. Karnataka India"* discussed about practice of the use of digital resources, majorly used digital resources, the purpose of using digital resources and level of satisfaction about the library digital resources collection and services.

5.General Information about the Surveyed the Colleges of Kamrup (M)

At present the city of Guwahati has a total number of 20 colleges including government, provincialized and non-provincialized colleges. Besides there are a good number of junior colleges, law colleges, B.Ed. colleges, technical colleges, which has not been taken into consideration in this study

The study covers data collection on the topic *"Uses of Digital Resources in the College Libraries of Kamrup (M) District"*, survey work have been done in 15 colleges of Kamrup (M) which have digital resources. Based on responses received from the College Libraries, an attempt has been made to analyse the data to present the findings thereof. The questionnaire was disseminated to all fifteenth College Libraries of Kamrup (M) and their user. The name of the Colleges are-

i.   Arya Vidyapeeth College

ii. BholanathBorooah College (B Barooah College)

iii. Cotton College

iv. Dimoria College

v. Guwahati College

vi. Guwahati Commerce College

vii. Handique Girls' College

viii. Kesab Chandra Das Commerce College (K C Das Commerce College)

ix. Kamakhya Ram Barooah Girls' college (K R B Girls' College)

x. Lalit Chandra Bharali College (L C B College)

xi. Pachim Guwahati Mahavidyalya

xii. Pragjyotish College

xiii. Pandu College

xiv. RadhaGovindaBaruah College (R G B College)

xv. SreenivasBasudevDeorah College (S. B Deorah College)

6.Name of Library with year of Establishment: The name of libraries of college which I have surveyed

Sl. No.	Name of the College	Name of the Library	Year of Estd.
1	Arya Vidyapeeth College	Central Library, Arya Vidyapeeth	1958
2	B BorooahCoellege	Hem Barua Library	1943
3	Cotton College	Dr. Surya Kumar Bhuyan Library	1901
4	Dimoria College	Dimoria College Library	1979
5	Guwahati College	Central Library, Guwahati College	1964
6	Guwahati Commerce College	Dr. Birinchi Kumar Baruah Library	1962
7	Handique Girls' College	Rajabala Das Library	1940
8	Kesab Chandra Das Commerce College	K C Das Commerce College	1983
9	Kamakhya Ram Barooah Girls' College	K R B Girls' College Library	1971
10	Lalit Chandra Bharali College	Lalit Chandra Bharali College Library	1971
11	Pachim Guwahati Mahavidyalya	Bipin Chandra Baruah Library	1978
12	Pragjyotish College	PanditTirthanathSarma library	1954
13	Pandu College	Pandu College Libray	1962
14	RadhaGovindaBaruah College	RadhaGovindaBaruah College Library	1978
15	S. B Deorah College	S B Deorah College Library	1984
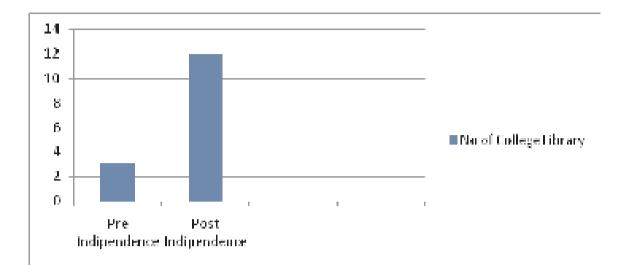
Figure 1. Name of Library with Year of Establishment

Figure 1 shows that libraries of three colleges were established in pre independence period and libraries of twelve colleges were established in post-independence period.

7 Finding and Analysis of Data Collected from the Users on Different Aspect of Library and its Use:

Questionnaires have been distributed amongst the users in three categories namely Teachers, Staffs and students of different department for collection of data pertaining to the topic. Personal interview and spot observation are used to collect some information relevant to topic and their services have also been employed. In the following, an attempt has been made to analyse on collected data and to present the findings thereof.

7.1. Information about Number of Responses: A total no of 136 nos. questionnaires were distributed in three categories: Teachers, Staffs and Students in fifteenth colleges and their responses are presented in table 2 below-

SL no	Category of user	Questionnaire Distributed	No of Responses	% of responses
1	Teachers	20	14	70.00%
2	Staff	6	4	66.67%
3	Students	110	92	83.64%
4	Total	136	110	80.88%
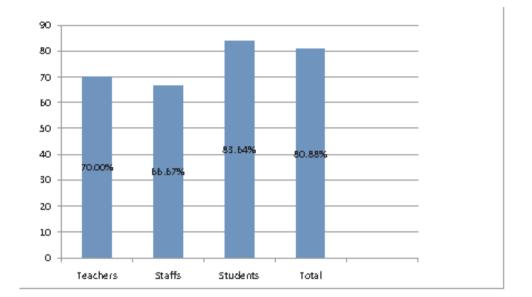
Figure 2 Information about Number of Responses

The Figure 2 shows that teachers responded to the questionnaire as is 14 i.e. (70%) followed by the staffs 4 i.e. (66.67%) and students responses is 92 i.e. (83.64%) only. The total number of responded to the questionnaire is 110 out of 136 i.e. 80.88%.

7.2 Frequency of Using Digital Resources: The digital resources are used by different users in different frequency according to their provision, need of information and type of source. The frequency of using some common digital resources generally available in the libraries are presented below-

7.2.1. Frequency of Using CD/DVD: The data about frequency of using CD/DVD by the users are given in the Table 3 below-

Table 3: Frequency of Using CD/DVD

Sl. No.	Using CD/DVD	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Never	08	57.14	02	50	52	56.52	62	56.37
2	Daily	00	00.00	00	00	05	05.43	05	04.54
3	Once a Week	01	07.14	00	00	10	10.86	11	10.00
4	Occasionally	05	35.72	02	50	25	27.19	32	29.09
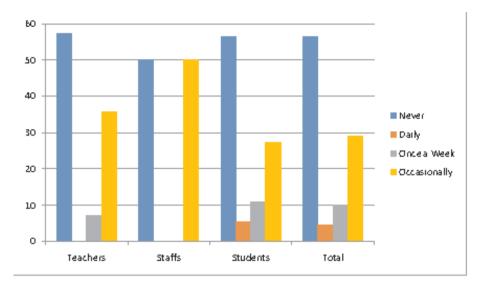
Figure 3:Frequency of Using CD/DVD

The figure 3 indicates that 8(57.14%) Teachers never use CD/DVD, 1(7.14%) once a week and 5(35.72%) occasionally uses the CD/DVD. It shows that no one uses the CD/DVD daily. Reponses from Staffs shows that 2(50%) Staffs never use CD/DVD and 2(50%) use the CD/DVD occasionally. It shows that no one use CD/ DVD daily and once a week. Whereas maximum students are found to use CD/DVD never i.e. 52(56.52) students are never use CD/DVD followed by 25(27.19%) occasionally, 10(10.86%) once a week and 5(5.43%) daily. Again we consider the whole users, maximum users i.e. 62(56.37%) users never use CD/DVD.

7.2.2. Frequency of Using E-Books: The data about frequency of using E-BOOKS by the users are given in the table 4 below-

Table 4: Frequency of Using E-Books

Sl. No.	Using E-Books	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Never	02	14.29	01	25	30	32.63	33	28.18
2	Daily	01	07.15	00	25	10	10.86	11	10.00
3	Once a Week	03	21.42	00	00	12	13.04	15	13.67
4	Occasionally	08	57.14	03	75	40	43.47	51	46.36
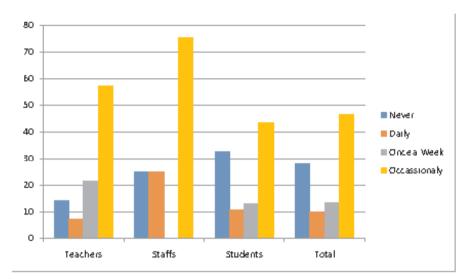
Figure 4: Frequency of using E-Books

The figure 4 indicates that majority of Teachers i.e.8 (57.14%) Teachers use E-Books occasionally followed by 3(21.42%) once a week, 2(14.29%) never and 1(7.15%) Teachers use E-Books daily. Again in case of Staffs, 3(75.00%) Staffs use E-Books occasionally and 1(25%) Staffs never use E-Books. It shows that no one Staffs use E-Books daily and once a week. Most of the students i.e.40 (43.47%) use E-Books occasionally followed by 30(32.63%) never, 12(13.04%) once a week and 10(10.86%) daily use the E-Books. Again we consider the whole users, 51(46.36%) users use E-Books occasionally which is the maximum frequency.

7.2.3. Frequency of Using E-Journals: The data about frequency of using E-Journals by the users are given in the table 5 below-

Table 5: Frequency of Using E-Journals

Sl. No.	Using E-Journals	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Never	03	21.42	01	25	36	39.14	40	36.37
2	Daily	02	14.29	00	00	05	05.43	07	06.37
3	Once a Week	02	14.29	01	25	10	10.86	13	11.81
4	Occasionally	07	50.00	02	50	41	44.57	50	45.45
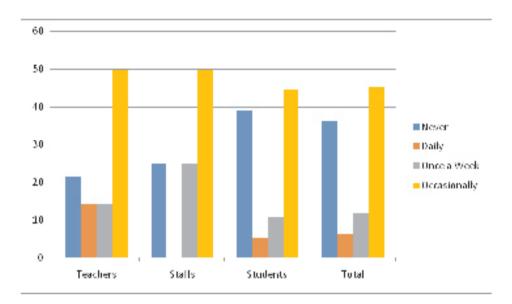
Figure 5: Frequency of Using E-Journals

The figure 5 indicates that majority of Teachers i.e.7 (50.00%) Teachers use E-Journals occasionally followed by 3(21.42%) never, 2(14.29%) once a week and 2(14.29%) Teachers used E-Journals daily. Again in case of Staffs, 2(50.00%) Staffs use E-Journals occasionally followed by 1(25%) once a week and 1(25%) Staffs never use E-Journals. It shows that no one Staffs use E-Journals daily. Most of the students i.e.41 (44.57%) use E-Journals occasionally followed by 36(39.14%) never, 10(10.86%) once a week and 5(5.43%) daily use the E-Journals. Again we consider the whole users, 50(45.45%) users use E-Journals occasionally which is the maximum frequency.

7.2.4. Frequency of Using E-Magazine: The data about frequency of using E-Journals by the users are given in the table 6 below-

Table 6: Frequency of Using E-Magazine

Sl. No.	Using E-Magazine	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Never	03	21.43	01	25	32	34.76	36	32.79
2	Daily	01	07.15	00	00	08	08.69	09	08.11
3	Once a Week	04	28.57	01	25	15	16.34	20	18.18
4	Occasionally	06	42.85	02	50	37	40.21	45	40.90
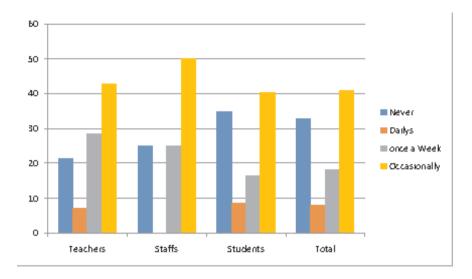
Figure 6: Frequency of Using E-Magazine

The figure 6 indicates that majority of Teachers i.e.6 (42.85%) Teachers use E-Magazine occasionally followed by 4(28.57%) once a week, 3(21.43%) never and 1(7.15%) Teachers used E-Magazine daily. Again in case of Staffs, 2(50.00%) Staffs use E-Magazine occasionally followed by 1(25%) once a week and 1(25%) Staffs never use E-Magazine. It shows that no one Staffs use E-Magazine daily. Most of the students i.e.37 (40.21%) use E-Magazine occasionally followed by 32(34.76%) never, 15(16.34%) once a week and 8(8.69%) daily use the E-Magazine. Again we consider the whole users, 45(40.90%) users use E-Magazine occasionally which is the maximum frequency.

7.2.5.Frequency of Using E-Newspaper: The data about frequency of using E-Newspaper by the users are given in the table 7 below-

Table 7: Frequency of Using E-Newspaper

Sl. No.	Using E-Newspaper	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Never	05	35.72	01	25	33	35.85	39	35.45
2	Daily	02	14.28	00	00	15	16.34	17	15.45
3	Once a Week	03	21.43	01	25	10	10.86	14	12.72
4	Occasionally	04	28.57	02	50	34	36.95	40	36.66
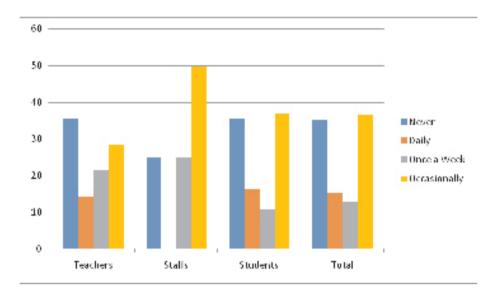
Figure 7: Frequency of Using E-Newspaper

The Figure 7 indicates that majority of Teachers i.e.5 (35.72%) Teachers never use E-Newspaper followed by 4(28.57%) occasionally, 3(21.43%) once a week and 2(14.28%) Teachers used E-Newspaper daily. Again in case of Staffs, 2(50.00%) Staffs use E-Newspaper occasionally followed by 1(25%) once a week and 1(25%) Staffs never use E-Newspaper. It shows that no one Staffs use E-Newspaper daily. Most of the students i.e.34 (36.95%) use E-Newspaper occasionally followed by 33(35.85%) never, 15(16.34%) daily and 10(10.86%) once a week use the E-Newspaper. Again we consider the whole users, 40(36.66%) users use E-Newspaper occasionally which is the maximum frequency.

7.3.Purpose of Using Digital Resources: Information regarding purpose of using digital resources is presented in the table 8-

Table 8: Purpose of Using Digital Resources

Sl. No.	Purpose of Using Digital Resources	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Preparing of Examination	02	14.21	02	50	53	57.69	57	51.81
2	Writing Assignment	00	00.00	00	00	14	15.29	14	12.72
3	Seminar Presentation	01	07.15	01	25	22	23.94	24	21.81
4	Writing Research Papers	06	42.84	00	00	00	00.00	06	05.45
5	For Teaching	05	35.78	00	00	00		05	4.54
6	Recreational	00	00.00	1	25	03	3.26	04	3.63
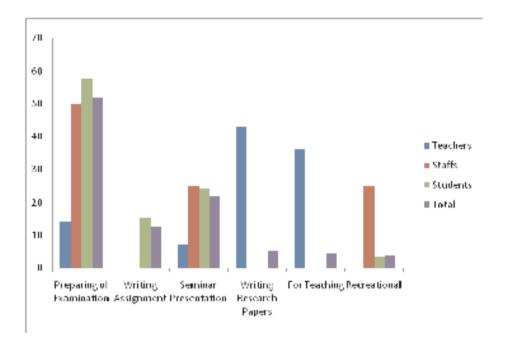
Figure 8: Purpose of Using Digital Resources

Figure 8 depicts that 2 i.e. (14.21%) Teachers, 2 i.e. (50%) Staffs, 53 i.e. (57.69%) students and as a whole 57 i.e. (51.81%) of sample uses digital resources for preparation of examination which reflects that student used digital resources maximum for this purpose. Only 14 i.e. (15.29%) students and as a whole 14 (12.72%) users of the sample uses digital resources for writing assignment. 1 Teacher i.e. (7.15%), 1 Staff i.e.(25%),22 Students i.e.(23.94%) and as whole 24 i.e.(21.81%) of the sample uses digital resources for seminar presentation and maximum use for this purpose is done by the student again. Only 6 i.e. (42.84%) Teachers and as whole 5 (5.45%) of the sample uses digital resources for writing research paper. Only 5 i.e. (35.78%) and as whole 5 i.e. (4.54%) of the sample uses digital resources for teaching purpose. 1 Staff i.e. (25%), 3 i.e. (3.26%) and as a whole 4 i.e. (3.63%) of total sample uses digital resources for recreational purpose and maximum uses is done by the students.

7.4.Time Spent for Accessing the Digital Resources: Information regarding time spent for accessing the digital resources is presented in the table 9-

Table 9: Time spent for accessing the digital resources

SL No.	Average Time Spent	Teacher		Staff		Student		Total	
		No.	%	No	%	No	%	No	%
1	Less than 1 hour	2	14.28	1	25	51	55.43	54	49.09
2	1 hour	9	64.28	1	25	28	30.43	38	34.54
3	2 hours	2	14.28	1	25	8	8.69	11	10.00
4	3 hours or more	1	07.14	1	25	5	5.43	7	6.36
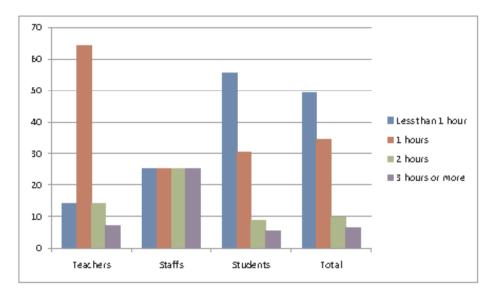
Figure 9: Time spent for accessing the digital resources

Figure 9indicates that 2 (14.28%) Teachers spent less than 1 hour accessingdigital resources followed by 9(64.28%) 1 hour, 2(14.28%) 2 hours and 1(7.14%) Teachers spent 3 hours or more accessing the digital resources .Hence it can besaid that most of the Teachers spent one hour to access the digital resources. 1(25%) Staff spent less than 1 hour for accessing the digital resources followed by 1(25%) 1 hour, 1 (25%) 2 hours and 1(25%) Staff spent 3 or more hours for accessing the digital resources. Hence it can be said that all staffs are spent for accessing the digital resources equally. 51(55.43%) Students spent less than 1 hour for accessing the digital resources followed by 28(30.43%) 1 hour, 8(8.69%) 2 hours and 5(5.43%) Students spent 3 hours or more for accessing the digital resources. As a whole 54(49.09%) users spent less than 1 hour for accessing the digital resources.

7.5.Limitation/Barrier Feels for Using the Digital Resources: Information regarding limitation/barriers feels for using the digital resources is presented in the table 10-

Table 10: Limitation/Barrier feels for using the digital resources

Sl. no	Limitation / Barrier	Teacher		Staffs		Student		Total	
		No.	%	No.	%	No.	%	No.	%
1	Lack of knowledge of computer	2	14.28	0	0	12	13.04	14	12.72
2	Lack of Knowledge of internet	1	7.14	0	0	6	6.52	7	6.36
3	Feeling uncomfortable	0	0	0	0	16	17.39	16	17.39
4	Slow speed of access	2	14.28	0	0	18	19.56	20	18.18
5	Charge to access digital resources	0		0	0	6	6.52	6	5.45
6	Lack of proper guidance	3	21.42	0	0	19	20.65	22	20.00
7	Lack of relevant digital resources	6	42.85	4	100	15	16.30	25	22.72

Figure 10: Limitation/Barrier feels for using the digital resources

Figure 10showed opinions of users regarding problems facedwhile accessing the digital resources.14.28 percent teacher stated that "Lack of knowledge of computer ", is the main problem in accessing Digital Resources. About 7.14 percent"Lackof knowledge of internet", 14.28percent," slow speed of access", 21.42 percent" lack of proper guidance", 42.85 percent" lack of relevant digital resources" are theproblems while using the Digital Resources. Anyone did not feel "slow speed of access and "charge to access digital resources" are the problems while accessing digital resources. 100% percent staff stated that "Lack of relevant digital resources" is the main problem in accessing the digital resources.13.04 percent student stated that "Lack of knowledge of computer" is the main problem in accessing Digital resources. About 6.52 percent "Lack of knowledge of internet", 17.39 percent "Feeling uncomfortable", 19.56 percent "Slow speed of access", 6.52 percent "Charge to access digital resources", 20.65 percent "Lack of proper guidance",16.30 percent "Lack of relevant digital resources" are the problems while using the Digital resources.

7.6.Satisfied with Digital Resources Provided by the Library: Information regarding user satisfaction of digital resources provided by the library is presented in the table 11-

Table 11: Satisfied with digital resources provided by the library

Sl. No.	Satisfaction Level	Teachers		Staffs		Students		Total	
		No.	%	No.	%	No.	%	No.	%
1	Fully	1	7.14	2	50	7	7.60	10	9.09
2	Partially	11	78.57	1	25	40	43.47	52	47.27
3	Not Satisfied	2	14.28	1	25	45	48.91	48	43.63
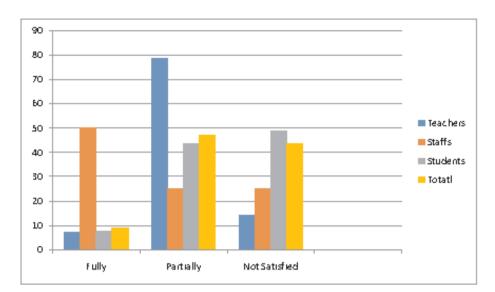
Figure11: Satisfied with digital resources provided by the library

The Data shows in figure 11 depict the user satisfaction of accessing DigitalResources in College Libraries. Data indicates that 7.14 percent of teachers are "Fully". Whereas 78.57 percent are partially, 14.28 percent teachers are "notsatisfied" fromaccessing Digital Resources in College Libraries. 50 percent of staffs are "Fully", whereas 25 percent are partially, 25 percent staffs are not satisfied from accessing digital resources in College Libraries. Again 7.60 percent of students are "Fully", whereas 43.47 percent partially, 48.91 percent are "not satisfied" from accessing digital resources. As a whole, maximum 47.27 percent of users are "Partially" satisfied from accessing the digital resources in the college.

8. Findings of the Survey

Objective 1: To study the frequency of uses of digital resources

In this connection to frequency of use digital resources were lined up for the study.

Findings-

1.1 Maximum users i.e. 62(56.37%) never use the CD/DVD followed by 32(29.09%) occasionally, 11(10%) once a week and 5(4.54%) users use CD/DVD daily. So, it can be said that maximum users never use the CD/DVD.

1.2 Maximum users i.e. 51(46.36%) use the e-book occasionally followed by 33(28.18%) never, 15(13.67%) once a week and 11(10%) users use e-book daily. So, it can be said that maximum users use the e-book occasionally.

1.3 Maximum users i.e. 50(45.45%) use the e-journal occasionally followed by 40(36.37%) never, 15(11.81%) once a week and 7(6.37%) users use e-journal daily. So, it can be said that maximum users use the e-journal occasionally.

1.4 Maximum users i.e. 45(40.49%) use the e-magazine occasionally followed by 36(32.79%) never, 20(18.18%) once a week and 9(8.11%) users use e-magazine daily. So, it can be said that maximum users use e-magazine occasionally.

1.5 Maximum users i.e. 40(36.66%) use the e-newspaper occasionally followed by 39(35.45%) never, 17(15.45%) daily and 14(12.72%) users use e-newspaper once a week. So, it can be said that maximum users use e-newspaper occasionally.

1.10 At last we said that maximum users occasionally use digital resources.

Objective 2: To study the purpose of using digital resources.

In this connection,purpose of using digital resources by the users was lined up for the study.

Findings-

2.1 Maximum users are motivated by formal notice in using the digital resources.

2.2 Maximum users 57(51.81%) use the digital resources for preparation of examination followed by 24(21.81%) seminar presentation, 14(12.72%) writing assignment, 6(5.45%) writing research paper, 5(4.54%) and 4(3.63%) use digital resources for recreational purpose.

Objective 3: To find out the amount of time spent by the users in digital resource.

In this connection average time spent by user in digital resources were lined up for the study.

Findings-

3.1 Maximum users 54(49.09%) spent less than 1 hour accessing the digital resources followed by 38(34.54%) 1 hour, 11(10%) 2 hour and 7(6.36) users spent 3 hours and more accessing the digital resources.It can be said that maximum users spent less than 1 hour accessing the digital resources.

Objective 4: To find out the problem faced by the user while using digital resources.

In this connection, problem faced by the user while using digital resources were lined up for the study.

Findings-

4.1 Maximum users learn to handle the digital resources from self-instruction.

4.2 Maximum 25(22.72%) users feel that "Lack of relevant digital resources" is the main problem while accessing the digital resources followed by 22(20%) " Lack of proper guidance", 20(18.18%) users "Slow speed of access", 16(17.39%) users "feeling uncomfortable", 14(12.72%) users "Lack of knowledge of computer",7(6.36%) users "Lack of knowledge of internet" and 6(5.45%) users "Charge to access digital resources" feel the problem while accessing digital resources. So, it can be said that maximum college libraries users of Kamrup (M) feel that "lack of relevant digital resources" is the main problem while accessing the digital resources.

Objective5: To find out the satisfaction level of users of accessing digital resources

In this Connection, satisfaction level of users in accessing the digital resources were lined up for the study.

Findings-

5.1 Maximum 52(47.27%) users partially satisfied with digital resources provided by the library followed by 48(43.63%) users not satisfied and 10(9.09%) fully satisfied with the digital resources. So, it can be said that maximum college libraries users of Kamrup (M) partially satisfied with digital resources provided by the library.

9. Suggestions

9.1 Suggestion to the Government

i) The government should take steps for providing library facilities with well-equipped modern technology.

ii)) Information technology may be provided for making network among the libraries.

iii) The government should not grant affiliations and permissions to the academic institutes until and unless they can keep the requisite library norms.

9.2 Suggestion to the Authority

i) The administration should invest more on the acquisition of computers and other new electronicresources and computerized tools.

ii) Digital resource training/awareness programme may be organized from time to time by the concerned authority.

iii) Availability of information technology facilities (like internet) should be considered and encouraged.

iv) The management committee should take steps to take help/assistance from the UGC for the successful implementation of modern technology.

v) Adequate funds may be provided to libraries for their development and functioning and it should be utilized properly.

vi) The parent body must have to co-operate with the library authorities and have to give them some specific fund for building and increasing digital information reserves

vii) Concerned college authority should be positive minded for development of the library.

9.3 Suggestion to the Librarian

i) The emphasis should be given to the accessibility and subscription of electronic information resources.

ii) Libraries must be encouraged to renovate themselves in the modern trends.

iii) To overcome the problem of financial crisis in the cost of Digital resources, Librarians or Information managers should form consortia in order to share the cost of provision and access to library and information resources.

iv)Users should be trained for use of computer to information retrieval, use of internet/worldwide web and IT applications.

 v) Training on internet search skill should be given to the library users to enable them make adequate use of the digital technology.

vi) More computer terminals or work station should be created to enable users have access to the internet.

vii) Librarians must emphasis on International cooperation .Without that libraries will be far behind from the modern services and facilities.

viii) Librarians need to proactive in making digital resources collections decisions.

ix) The libraries must have to develop a collection development policy for digital resources.

x) There should be developing specific criteria for adding and cancelling digital resources.

xi) Awareness should be done among users about availability of digital resources

10. Conclusion:

Uses of digital resources are a vast area for study. Covering all related sub-areas in this particular study

is a very challenging task. There is every possibility that the researcher may miss to cover some of the areas either knowingly or unknowingly. In my study, uses of digital resources covered frequency of using digital resources, purpose of using digital resources, amount of time spent by user in using digital resources, problem faced by using digital resources and satisfaction level of users.

College libraries in Kamrup (M) are facing problem in managing the different types of digital resources collected from various sources. These problems are arises mainly due to their diverse nature, different process of acquisition and such other related factors. Moreover, lack of expertise of the LIS professionals in organizing the resources, developing institutional repository, giving access platform to users are some of the problems faced by the College Libraries of Kamrup (M).

The college libraries of Kamrup (M) must realize that provide relevant digital resources to its users and it is possible only when section and acquisition policy of digital resources are managed in a convenient way so that uses can access the digital resources in optimum way.

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USAGE OF E-RESOURCES BY THE RESEARCH SCHOLARS OF GAUHATI UNIVERSITY: A STUDY

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Abstract:

E-resources are becoming more and more available. The print resources are now being digitized, which increases the availability of book and journals in the electronic format. E-resources offer enormous benefits; they provide user faster, more convenient, 24 x 7 hours access from the library and home. The paper describes about the usage of e-resources available at Gauhati University by the research scholars. The present study demonstrates and elaborates the various aspects of the use of e-resources. The paper also identifies the level of user's satisfaction, access of e-resources and awareness about the use of e-resources. Suggestions have been given to impart training on feasible usage of library resources to fresh research scholars.

Key Words: E-resources, UGC INFONET, Gauhati University.

1. Introduction

With the rapid development of technology and emergence of internet, electronic publishing is getting a tremendous impetus from the publishing industry as well as libraries and information centres. The rapid advancement in information processing, storage and information communication technologies have change the role of worldwide libraries in disseminating information services to their users. Therefore, the libraries are facing new challenges, new competitors, new user demands, new prospects and variety of information services from users tailored to their wants and needs. Traditional libraries are still handling largely printed materials that are expensive and bulky. Today, information seekers are not satisfied with only printed materials.

2. Need for the Study

Research is one of the most important infrastructural inputs necessary for overall socio-economic development and betterment of the country. This sector is subject to frequent changes and developmental processes are always prominent here. Therefore, it is important for each and every research scholars to be aware of the changes taking place so that they can keep pace with the development. E-resources in the form of open access journals have made it considerably easier to find and obtain the material they need in their work and to keep up with developments in their own field. Through this study it is aimed to know the level of awareness and frequency of use of E-resources so that necessary steps can be taken to attract the researchers towards E-resources.

3. Electronic Resources in Gauhati University

The Krishna Kanta Handique Library (KKHL), Gauhati University established in the year 1948. The K.K Handique Library support academic and learning activities. Library is always adopted the new resources and services with the new technology to fulfil the needs of university user community. Realizing the importance of e-resources library have made and making effort to all type of e-resources for the benefit of university user community. With its continuous effort the K.K. Handique library have a rich collection of e-resources which consists e-resources like NISCAIR Journals, UGC-INFONET, Science Direct, LISTA Database, Web of Science, Sage Publications etc. and E-resources in institutional repository consists GU Journal, GU ETD, GU Newsletter, Photo Gallery, Question Bank, CD/DVD Collections and the K.K. Handique library consists rich collection of open access e-resources which consists DOAJ, IAS, DLS/IRS, NISCAIR, educational resources and Theses etc.

4. Objectives

The major objectives of the study are:

1.   To know the awareness of e-resources among the research scholars

2.   To know the frequency of the Research Scholars using e-resources

3.   To know the effectiveness of usage of e-resources among the research scholars

4.   To know the impact of e-resources on quality of research

5.   To know the use pattern of e-resources

6.   To identify level of user satisfaction with use of e-resources

7.   The degree of preference for the electronic and printed formats

5. Methodology

In the present study, questionnaire method and interview method has been adopted for obtaining generalized information from the research scholars of some selected departments of Gauhati University to know the opinion of the research scholars in respect of usage of e-resources for their research work.

6. Statement of the Problem

The present study has been undertaken to answer what is the effectiveness and impact of E-resources using by the research scholars, what are the major problems faced in accessing E-resources and to find out the solutions for the problems identified through study to enhance the usages and impact of E-resources available at Gauhati University.

8. Scope and Limitation of the study

The present study is delimited to the research scholars of the different department of Gauhati University. Though the topic is concerned with all the departments of Gauhati University   but the study is limited to some selected departments of Gauhati University.

The researcher has used the random sampling technique for the study. The study includes 150 Research Scholars drawn from some selected departments which include departments under faculty of Arts and faculty of Science of Gauhati University.

9. Data Analysis and Interpretation

The primary data have been collected by using questionnaire and interview method. On the basis of filled up questionnaire received from the research scholars of Gauhati University, the data have been analysed and inferences have been drawn using standard statistical techniques. All the results have been

presented in the form of tables and graphs. All the results are shown in percentage (%) only.

9.1 Distribution of questionnaire and Responses Received

Number of questionnaire distributed			Number of questionnaire received		
Male	Female	Total	Male	Female	Total
102 (68%)	48 (32%)	150	79 (62.6%)	47 (37.4%)	126

(Source: Primary data obtained from the Questionnaire)

The above table shows that out of 126 respondent, 79 (62.6%) respondents belong to male category and 47 (37.4%) belong to female category.

9.2 Duration of using e-resources

Table 2: Duration of using e-resources

Duration	Respondents	Percentage %
Less than 1 year	12	9.5%
1-2 years	35	27.8%
3-4 years	43	34.1%
More than 4 year	36	28.6%
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

The above table indicates that 12 (9.5%) research scholars use e-resources less than 1 year, 35 (27.8%) research scholars use e-resources 1-2 years, 43 (34.1%) research scholars use 3-4 years and remaining 36 (28.6%) research scholars use more than 4 years.

9.3 Frequency of using e-resources

Table 3: Frequency of using e-resources

Frequency	No. Of Respondents	Percentage (%)
Weekly	58	43%
Fortnightly	42	31%
Occasionally	22	16%
Almost Daily	14	10%
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

The above table shows that the frequency of using e-resources of the respondents are 43% of respondents using weekly, 31% of respondents using e-resources fortnightly, 16% occasionally and rest of the respondents 10% using e-resources almost daily.

9.4 Preferred place to access e-resources
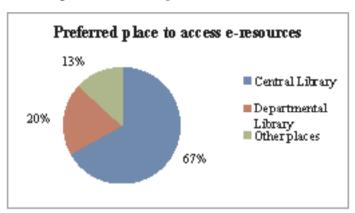
Table 4: Preferred place to access e-resources

Place	Responses	Percentage %
Central Library	84	67%
Departmental Library	25	20%
Other places	17	13%
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

The above table indicates 67 % Research Scholars are use central library for accessing e-resources, 20% Research Scholars are use Departmental library for accessing e-resources and remaining 13% are use other place for accessing e-resources.

Figure 1: Preferred place to access e-resources

(Source: Primary data obtained from the Questionnaire)

9.5 Awareness and Usage of E-Resources

Table 5: Awareness and Usage of E-Resources

Awareness	Responses	Percentage %
Not at all	15	11.9%
Slightly Aware	40	31.7%
Very much aware	71	56.4%
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

The above table indicates that 11.9 % Research Scholars are not at all aware about usages of e-resources, 31.7% Research Scholars are slightly aware about e-resources and remaining 56.4% Research Scholars are very much aware about usages of e-resources.

Figure 2: Awareness and Usage of E-Resources

(Source: Primary data obtained from the Questionnaire)

9.6. Preference of e-resources over printed resources

Table 6: Preference of e-resources over printed resources

Preferences	Responses	Percentage %
E-resources	56	41 %
Printed resources	28	21 %
Both resources	52	38 %
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

The above table revels that out of 126 responses 56 (41%) Research Scholars preferred e-resources where only 28 (21%) Research Scholars preferred print resources and remaining 52 (38%) Research Scholars preferred both the resources.

9.7. Influence on the use of e-resources

Table 7: Influence on the use of e-resources

Influence	Responses	Percentage %
None	0	0 %
Very little	6	4.8 %
A moderate influence	46	36.5 %
Very much influence	74	58.7 %
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

Figure 3: Influence on the use of e-resources

(Source: Primary data obtained from the Questionnaire)

The above table indicates none of the research scholars are not influenced on the use of e-resources, 6 (4.8%) research scholars are very little influence on the use of e-resources, 46 (36.5%) research scholars are moderate influence on the use of e-resources and remaining 74 (58.7%) research scholars are very much influence on the use of e-resources.
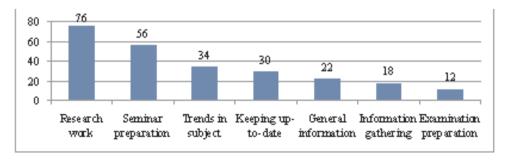
9.8. Purpose of using e-resources

Table 8: Purpose of using e-resources

Purposes	Responses	Percentage %
Research work	76	(31%)
Seminar preparation	56	(23%)
Trends in subject	34	(14%)
Keeping up-to-date	30	(12%)
General information	22	(8%)
Information gathering	18	(7%)
Examination preparation	12	(5%)
Total	248	100 %

(Source: Primary data obtained from the Questionnaire)

Figure 4: Purpose of using e-resources

(Source: Primary data obtained from the Questionnaire)

From the above table it is clear that 76 (31%) research scholars are using e-resources for their research work, 56 (23%) research scholars using e-resources for seminar preparation, 30 (12%) research scholars use e-resources for keeping them up-to-date, 22 (8%) research scholars use e-resources for general information and 12 (5%) research scholars use e-resources for examination preparation.
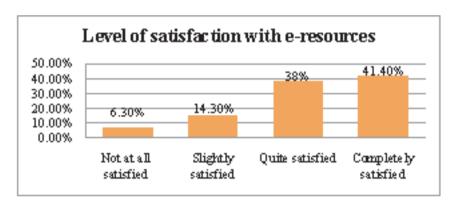
9.9. Level of satisfaction with e-resources

Table 9: Level of satisfaction with e-resources

Satisfaction Level	Responses	Percentage %
Not at all satisfied	08	6.3 %
Slightly satisfied	18	14.3 %
Quite satisfied	48	38 %
Completely satisfied	52	41.4 %
Total	126	100.00

(Source: Primary data obtained from the Questionnaire)

Figure 5: Level of satisfaction with e-resources

(Source: Primary data obtained from the Questionnaire)

The above table revels that 8 (6.3%) research scholars not at all satisfied with e-resources, 18(14.3%) research scholars are slightly satisfied with e-resources, 48(38%) research scholars are quite satisfied with e-resources and 52(41.4%) research scholars are completely satisfied with e resources.

11. Findings

➢ Most of the respondents (43%) use E-Resources on weekly basis which is followed by (31%) respondents who use E-Resources Fortnightly.

➢ Majority of respondents (34.1 %) using e-resources for 3-4 years followed by (28.6 %) respondents using e-resources for more than 4 years.

➢ It is found that (56.4 %) respondents are aware about using e-resources.

➢ Most of the respondents (67 %) access to electronic resources through in the central library followed by (20%) respondent's access to e-resources trough respective department library.

➢ Majority of the respondents (41%) prefer to both form of resources (Electronic and Print), (38 %)

respondents preferred e-resources and (21 %) print resources preferred.

➢ It is found that (58.7 %) respondents are very much influence on the use of e-resources and (36.5 %) respondents a moderate influence on the use of e-resources.

➢ The majority of (31%) research scholars are using e-resources for research work.

➢ Majority of the respondents (41.4%) completely satisfied with e-resources followed by (38%) respondents quite satisfied with e-resources.

12. Suggestions and Recommendations

➢ Library professionals should make research scholars aware of tools that are available to assists the use of e-resources.

➢ There is a need to make the research scholars concerned about the benefits of e-resources specially the open access journal.

➢ There is a need for the library also in managing the e-resources.

➢ The orientation/ workshop on the use of e-resources should be conducted regularly so that research scholars become interested in use of e-resources.

➢ To introduce adequate open access full text book and journal sites.

➢ Impart training on feasible usage of library resources to fresh research scholars.

13. Conclusion:

In conclusion, it may be said that e-resources are the most supporting tool in academic purpose for any research scholars, which help to improve the quality education and research work. With the rapid advancement in computer technology along with IT, libraries and information centres have been blessed with electronic materials and therefore libraries are gradually shifting towards the e-libraries with electronic resources. The result of the present study offer significant information on the level of awareness and use of e-resources by the research scholars are very much encouraging.

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USE AND USERS SATISFACTION ON ONLINE PUBLIC ACCESS CATALOGUE (OPAC) SERVICE AMONG THE RESEARCH SCHOLARS OF TEZPUR UNIVERSITY: A SURVEY.

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Abstract: *The purpose of this study is to investigate the use and user satisfaction on Online Public Access Catalogue (OPAC) service at Tezpur University. This study attempted to investigate the frequency, purpose of use and to find out the problems faced by the Research scholars while using OPAC. Attempt was also made to investigate user's awareness about the benefit of OPAC service. Lack of skills to use OPAC independently, lack of awareness about OPAC and lack of proper guidance to use OPAC were the major problem faced by the users while using OPAC. Findings revealed that satisfaction level of Research scholars of school of engineering were quite encouraging and they were very much satisfied with the performance and quality of OPAC services.*

Keywords: OPAC, Catalogue, Library Catalogue, Information Technology, Online Public Access Catalogue, Tezpur University. Information Communication Technology, ICT.

1.INTRODUCTION

The implementation of ICT in the field of Libraries and Information Centers has brought a revolution in the techniques of access, storage, retrieval and dissemination of information resources that a library acquired to serve its users. The transformation of the card catalogue to Online Public Access Catalogue (OPAC) is one of the most significant accomplishments of information technology (IT). Libraries started using computer applications for their catalogues in the latter part of the 20th century. Developments in information technology (IT) revolutionized the catalogue and consequently, the online public access catalogue (OPAC) emerged. It may be defined as a database of bibliographic records describing the holdings of a library. It allows users to search a document by author, title, subject and keywords from a terminal. Users can see the collections and issue status of each document of the library and can reserve and renew a document of their interest when needed. Concurrent access is one of the prime privileges provided by OPAC.Through OPAC, bibliographic records which are stored in a database can be quickly retrieved for display on computer terminals. Further with the development of web OPAC users from anywhere in the world can view the bibliographic records of the collection of a library at any time.

2.LITERATURE SURVEY

Kumar, R and Singh J(2017) studied the use of OPAC in the university library of Guru Gobind Singh Inderparstha University, Delhi. Findings revealed that that 39.1% of the users were using OPAC facility at daily basis and 54.4% of the users were fully satisfied with the present OPAC facility. Less awareness

of OPAC system, inappropriate location of the OPAC terminals etc. and unavailability of library staff near the OPAC terminals were the major problems that users faced while using OPAC. **Asokan, L and Dhanavandan,S(2015)** investigated the use of online public access catalogue (OPAC) at the library of Aalim Muhammed Salegh College of Engineering in Chennai . Finding revealed that a significant number of users search information regarding the library material through OPAC. Inadequate systems were found to be the major reason for not utilizing of OPAC. **Narang Asha and Singh Sukhdev (2013)** attempted to ascertain the use and opinion about OPAC in Bhai Gurdas Library, Guru Nanak Dev University, Amritsar by the research scholars. Information technology has played a crucial and constructive role in the modernization of information services. Findings revealed that OPAC significantly helped the users in speedily finding their required documents. **Devendra and Nikam, K. (2013)** studied the attitudes of two law university library users towards the use of OPAC/Web OPAC and located in Andhra Pradesh. Findings of the study revealed 62(50%) of the respondents were using OPAC/Web OPAC and 51(41.8%) respondents stated that their use of the OPAC/Web OPAC was not guided by library OPAC/Web OPAC. The analysis found that respondents have positive attitudes about the use of OPAC/Web OPAC service and facility. **Velmurugan V. S. and Amudha G. (2012)** studied how introduction of computers in the field of Libraries and Information Centers has brought many changes. The Online Public Access Catalogue (OPAC) is a modern and flexible form of online catalogue and it serves as an index to full-text information. OPAC is considerably more user friendly than a card catalogue since it provides a variety of help to the users.. **Kumar, S. and Vohra, R. (2011)** investigated the use of Online Public Access Catalogue by the users at Guru Nanak Dev University Library, Amritsar (Punjab). The paper focuses on various aspects of OPAC such as awareness, frequency of use, frequently used access points, satisfaction level, etc. The findings revealed that most of the users use the OPAC to locate the documents despite facing some difficulties. However, majority of the users are not satisfied with the OPAC. The study suggests that the users should be made familiar with the use and operation of the OPAC by providing special training. **Islam, M (2010)** studied the use of library catalogue by undergraduate of the Dhaka University Library of Bangladesh. Finding revealed that majority of respondents were not aware of the library catalogue and use. As a result a majority of respondents never used the catalogue. Students prefer to borrowing book through the shelves to locate books, because there is no proper user education programme in the university to make proper use of library catalogue. Therefore author suggested on user's education programme to ease and facilities the use of catalogue. **Ebiwolate, P. B. (2010)** attempted to study the use of library catalogue by undergraduate students of Niger Delta University Library. Author suggested conducting user's education programme at a regular interval and also on wide publicity on OPAC to create awareness among library users.

3. METHODOLOGY

This study has been carried out through questionnaire based survey methods. The research scholars visiting the library were requested to fill up the questionnaires. 120 questionnaires were prepared and distributed to research scholars doing research activities under different programme at Tezpur University. 89(74.17%) duly filled in questionnaires were received back. Relevant records and registers were also consulted to collect necessary secondary data. Data collected through the questionnaires was organized, analyzed, tabulated and interpreted by using simple statistical method.

4. OBJECTIVE OF THE STUDY

1. To investigate the use of OPAC.
2. To investigate the frequency of using OPAC
3. To find out the purpose of using OPAC

4. To find out the problems faced by the research scholars while using OPAC

5. To determine the students awareness about the benefits of OPAC services

6. To determine the users satisfaction on OPAC services.

5. LIMITATION

At present, there are 349 registered research Scholars in Tezpur University doing research under different programmes. In order to make the study more specific and a meaningful one, survey was conducted only among the research scholars instead of covering each category of register users of the library.

6. CENTRAL LIBRARY, TEZPUR UNIVERSITY: AT A GLANCE

Tezpur University was established on January 21, 1994 by an Act of Parliament of India, At present, the University offers a number of Programmes on Under-Graduate Degree/Diploma/Certificate, Post-Graduate Degree/Diploma and Doctor of Philosophy Degree in various Disciplines. The Central Library has been started functioning since 1994.It is fully computerized with the LibSys software, which is an integrated multi-user library management system that supports all its in-house operations. The Central Library is providing access to e-resources and databases through the e-ShodhSindhu Consortia of INFLIBNET Centre and DeLCoN Consortium.

The collection of the central library is in the table below:

SL.No	Collection	Quantity
1	Books	77286
2	Print Journals (National + International)	180
3	Electronic Journals	11958
4	Online Databases	46
5	Back Volumes	7848
6	E-Books	500
7	Thesis	489
8	Dissertation	1025
9	CD	2286

Apart from the above resources, the Central Library also contains more than 1000 publications in Tezpur University (TU) Knowledge Repository and more than 300 Thesis in ETD Repository. The opening hours of the library is from 9 am – 12 midnight on all working days and 10 am - 9 pm on Saturdays and Sundays.

7. FINDINGS AND ANALYSIS:

Table I: Percentage of questionnaire responded

Sl.No	Respondents	Questionnaire distributed	Questionnaire Responded	Percentage %
1	Research Scholars	120	89	74.17

In order to conduct the survey 120 questionnaires were prepared and served among the research scholars visiting the library. Out of 120 questionnaires 74.17(89) percent respondents have responded to our questionnaires.

Table II: Gender wise distribution of respondents

Sl.No	Gender	Respondents	Percentage
1	Male	38	42.70
2	Female	51	57.30
	Total	89	100

Table II shows gender wise distribution of respondents 57.30(51) percent of the respondents were female and 42.70(38) percent respondents were male.

Table III: Frequency of using OPAC:

Sl.No.	Frequency of library visit	No. of respondents	Percentage
1	Every day	35	39.33
2	2-3 times in a week	26	29.21
3	Occasionally	19	21.35
4	Never used	9	10.11
	Total	89	100

Table III reveals that 39.33(35) percent respondents used OPAC everyday. 29.21(26) percent respondents have the habit of using OPAC services 2-3 times in a week. Further 21.35(19) percent respondents indicated that they used OPAC occasionally and only 10.11(9) respondents mentioned that they don't use OPAC.

Table IV: Purpose of using OPAC

Sl.No.	Purpose of using OPAC	No. of Respondents	Percentage
1	To locate a document on shelves	34	38.2
2	To know whether a particular book is on the shelves or issued to someone else	16	17.98
3	To know what a library has on a given author, title or subject	21	23.6
4	To know about a document without visiting library	7	7.87
5	To search different categories of documents such as books, thesis, back vol. CD by changing the types of document	11	12.35
	Total	89	100

Table IV indicates that. 38.2(34) percent respondents used OPAC to locate document on shelves. 23.6(21) percent respondents admitted that they use OPAC because it helps them to know what documents the library possesses on a given author, title and subject. 17.98(16) percent respondents used OPAC to know whether the identified book is on the shelves or issued to someone else 12.35(11) percent respondents indicated that they used OPAC because it is easy to search different categories of documents such as books, thesis, back vol., CD etc. by changing the type of document. Only 7.87(7) respondents revealed that they use OPAC to know about a document without visiting library. It is clear from the table that majority of the users use OPAC to locate documents on shelves & to know what a library possesses on a given author, title and subject.

Table V: Problems faced while using OPAC

Sl.No	Problems	Agreed (%)	Disagreed (%)	Not Sure(%)	Total(%)
1	Lack of skills to use OPAC independently	81(91.01%)	8(8.99%)	0	89(100%)
2	Lack of awareness about OPAC	71(79.77%)	13(14.61%)	5(5.62%)	89(100%)
3	Lack of proper guidance to use OPAC	69(77.53%)	17(19.1%)	3(3.37%)	89(100%)
4	Lack of sufficient OPAC terminals	62(69.66%)	16(17.98%)	11(12.36%)	89(100%)
5	Book not in proper place as indicate in the OPAC	59(66.29%)	19(21.35%)	11(12.36%)	89(100%)

During the survey five problems were raised and research scholars were asked to give their opinion. Table V revealed that 91.01(81) percent respondent find it difficult to use OPAC due to lack of skills, 79.77(71) percent respondents were not aware about the OPAC, 77.53(69) percent respondents faced difficulties due to lack of proper guidance to use ,69.66(62) percent respondents stated lack of sufficient number of OPAC terminals as a barrier and 66.29(59) percent respondents expressed that books not in proper place as indicated in OPAC as hindrance in using OPAC.

Table VI: Awareness of students about the benefits of using OPAC

Sl. No	Reasons	Aware %	Not Aware %	No Response %	Total %
1	Easy to locate document by author, title or by subject.	66(74.16%)	23(25.84%)	0	89(100%)
2	Easy to renew a book without visiting library	39(43.82%)	50(56.18%)	0	89(100%)
3	Easy to reserve a title if it is issued by someone else	37(41.58%)	51(57.30%)	1(1.12%)	89(100%)
4	Easy to search different categories of documents such as book, thesis, report, back vol. etc. by changing the types of document categories.	55(61.80%)	27(30.34%)	7(7.86%)	89(100%)
5	It assists in the choice of a book	51(57.30%)	38(42.70%)	0	89(100%)

From Table VI, it is observed that 74.16(66) percent respondents were aware that OPAC help borrowers to locate document by author, title or by subject on the shelves. 61.80(55) percent respondents were aware that it is easy to search different categories of documents such as book, thesis, report, back vol. etc. by changing the types of document categories. 57.30(51) percent respondents viewed that OPAC assists in the choice of a book. It is also observed that 56.18(50) percent and 57.30(51) percent respondents respectively were not aware about the online renewal and online reservation facilities of OPAC.

Table VII: Students Level of satisfaction on OPAC service

Sl.No.	Satisfaction level	Respondents	Percentage
1	Highly Satisfied	41	46.07
2	Satisfied	33	37.08
3	Not Satisfied	15	16.85

Table: VII reveals the satisfaction level of research scholars on OPAC service. Findings revealed that 46.07(41) percent respondents were highly satisfied, 37.08(33) percent respondents were satisfied and only 16.58(15) percent respondents responded that they were not satisfied with OPAC facility available in the library.

Table VIII: Gender wise awareness of OPAC services

Sl. No	Gender	Respondents	Percentage
1	Male	38	42.7
2	Female	51	57.3
	Total	89	100

Table-VIII depicts the gender wise awareness about OPAC and its facilities among research scholars. 57.3(51) percent female research scholars and 42.7(38) percent male research scholars were aware about the OPAC and its facilities, it is thus analyzed that female students were more aware than their male counterpart.

8. Summary of Finding:

The findings of the study are as follows:

- Finding revealed that 39.33(35) percent respondents used OPAC every day. 29.21(26) percent respondents uses OPAC service 2-3 times in a week and only 10.11(9) respondents mentioned that they don't use OPAC

- 38.2(34) percent respondents used OPAC to locate documents on shelves. 23.6(21) percent respondents admitted that they use OPAC because it helps them to know what library possesses on a given author, title and subject and 17.98(16) percent respondents used OPAC to know whether identified book is on the shelves or it has been issued to someone else. Thus it is clear that majority of the users uses OPAC to locate documents on shelves and to know what a library possesses on a given author, title and subject.

- Lack of skills on the part of research scholars to use OPAC independently, lack of awareness, lack of proper guidance and lack of sufficient OPAC terminals were the major problems that research scholars

faced while using OPAC. Findings revealed that 91.01(81) percent respondent find it difficult to use OPAC due to lack of skills to use OPAC independently. 79.77(71) percent respondents viewed that they were not aware about the fact that OPAC helps to locate documents by author, title or by subject. and 77.53(69) percent respondents faced difficulties due to lack of proper guidance to use OPAC.

- It is observed that 74.16(66) percent respondents were aware that OPAC help borrowers to locate documents by author, title or by subject on the shelves. On the other hand, 56.18(50) and 57.30(51) percent respondents respectively were not aware about the online renewal and online reservation facilities of OPAC.

- Findings revealed that research scholars were highly satisfied with the OPAC facilities. 46.07(41) percent respondents were highly satisfied, and 16.58(15) percent respondents research scholars were not satisfied with the OPAC facility available in the library.

- Regarding gender wise awareness about OPAC and its facilities among research scholars, it has been found that 57.3(51) percent female and 42.7(38) percent male research scholars were aware of the OPAC and its facilities. It is thus evident that female students were more aware than their male counterparts.

9.Suggestions and Conclusion

- The entire library staff should be properly trained on OPAC and its facilities, so that they can develop skills and render assistance to users as and when required

- For better utilization of online renewal and online reservation facilities of OPAC, library authority should focus to create awareness on the use of these two services.

- Number of OPAC terminals should be increased, so that users don't face any difficulty due to lack of sufficient OPAC terminals.

- In order to fully derive the benefits of OPAC,each library must conduct user orientation program at the beginning of each academic session. In many cases it has been seen that at times users are reluctant to attend the library orientation programme. Therefore, the library authority should be able to convince the users about the necessity of their attendance in library orientation programme.

- Apart from providing the orientation programme at the beginning of the academic session the library authorities can also adopt some more measures to increase the utility of OPAC.e.g. by uploading a video tutorial explaining how to handle the OPAC in the library website so that users can refer it as and when required.

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VIRTUAL LIBRARIANSHIP: AN IMPORTANT ASPECT

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ABSTRACT:

Virtual teams are the new organizational forms resulting from the advances in information technology. Cohesion is an important aspect of virtual teams associated with better performance mitigating communication difficulties and fostering information sharing culture. This paper highlights that today's libraries live in a complicated phase that is composed by the scarce resources, variety of information sources and services, growing use of e-communication and continuing change of organizational conditions. Librarians need specific skills corresponding to the new roles to be played. The investigation of virtual teams is still in its infancy and significant work remains to be done to understand these new organizational forms.

Keywords: Computer Mediated Communication; Distributed Collaboration; Lis Education; Virtual Librarianship

INTRODUCTION

Information technology is providing the infrastructure necessary to support the development of new organization forms. Virtual teams are one such organizational form. While 'work teams' were use in the US as early as 1960s, the wide spread use of teams and quality circles began in the Total Quality Management (TQM) movement in 1980s. All types of economic activities are moving towards globalization. Organizations are facing unprecedented challenges in this complex environment. With the rapid development of electronic information and communication media in the last decades, distributed work has become much easier, faster and more efficient (Hertel, et al, 2005).

CONCEPT OF VIRTUAL TEAM

Virtual Teams are geographically dispersed groups where collaborative work is enabled by a network of communication technologies. These dispersed teams collaborate and share their knowledge through a robust virtual work space that enables complex communication and serves as a common information repository, easily revised and accessible any time, any place, 24x7 (Ware and Young 2007). In lieu of face to face contact, team members collaborate and share knowledge via online. What holds them together is a common sense of purpose and a real need to know what each other knows. Virtual team members have interdependent performance goals, and are mutually accountable for team results. This digital environment is based on the infrastructure provided by the internet and the web, and its defining characteristic is the digital information flowing through the International web of communicating networks. This has resulted in creation of products, organizations and activities that are not static in nature but change dynamically in order to cope with new goals, objectives etc. They offer information products and services tailored to the needs of specific users or user communities (Smith, 1993; Stanley, 2015).

BASIC FACTORS FOR VIRTUAL TEAMS

Experts in the field of organizational management opine that the following factors increase the durability and effectiveness of virtual teams (Ware and Young, 2007)

➢ A clear mission defining explicit roles and responsibilities of team members

➢ Members are self-motivated, flexible and adaptable

➢ Have strong knowledge of computer technology

➢ Willingness to share responsibility

➢ A robust communication network which supports knowledge sharing, storage of messages, data and documents

➢ Anonymous peer review system for continuous assessment.

Today's libraries live in a complicated phase that is composed by the scarce resources, the variety of information sources and services, the growing use of electronic communication, the continuing change of conditions and organization. To participate in and to develop virtual space for information handling and management, modern librarian requires specific skills corresponding to the new roles especially those related to the cooperation and interdependence.

Librarians' Role

Information professionals should be able to cope with the traditional skills of handling and managing information products, services and institutions and with the new requirements concerning the tools, methods and techniques for handing information and information services in the digital environment.

Librarians provide a wide range of information support services not only to their patrons of patron organization and also other patron organizations' community. For this, they need to have wide range access to the entire collection of materials. Librarian's role has changed from that of intermediary to that of adviser and facilitator for these new innovative services (Al Rashid et al, 1998).

Growing Info Market

Information market is fast developing into a million dollars enterprise. Library users have become information consumers. Profit-oriented information business houses are selling information directly to scholars and students (D'Andria, 1994). Academic libraries must have products and services highly useful for a large majority of on and off campus information consumers. Librarians occupy a unique intermediary role between the roles of supplier and consumer. They also serve as intermediary between other campus consumers and content providers.

VIRTUAL TEAMs IN LIBRARY SERVICES

Virtual teams can evolve in the field of library service when they share collections, inter-library lending, collective bargaining for journal subscription packages, and on-line access, share records and metadata, jointly organize e-learning course and continuing education programmes.

People are key to successful virtual work. The success of virtual teams is dependent on the expertise knowledge and wisdom of individual, time management and self-supervisory skills. Cox and Morris (2003) observed that as a profession, librarians need to be looking for more powerful ways to harness networking to strengthen professional knowledge sharing and collective learning.

With the increasing influence of on-line information and information environments, reference and information services have increasingly moved away from library reference desks and away from library's

print collections out into the virtual world. However, even in the digital library several basic library functions continue to be needed such as aggregation, curation and reference. These functions continue to be critical than ever – even though the Google and Wikipedia have commercialized the library reference services.

Librarians can take advantage of networked reference service models for virtual reference to build a high quality, highly efficient reference service. Traditionally they had these affiliations in the form of Inter Library Lending and Collection Development. Such alliances would establish formidable collections of resources, considerable convenience to information users and significantly strengthen the position of academic libraries in information market place (Skiadas, 1999).

NEED FOR DIGITAL LITERACY

Taking cognizes of this situation librarians should, obviously, be able to cope both with traditional skills of handling and managing information products and services, and also with the new requirements concerning the tools, methods and techniques for handling information and information services in the digital environment.

Librarians need to ensure that sufficient training facilities, equipment's, courses etc., are available, both for the library staff and for the users. They have to determine whether their data bases are held on CD-ROM or other digital media; whether they contain bibliographic information or images. In addition, they have to seek affiliation with similar institutions to survive in the changing environment.

User education, preparation of e-course materials, information services, organized common resources, continuing education for librarians, use and transfer of technology are some of the areas where virtual teams of librarians can actively involved in order to achieving the best practices.

In this context of digital space and virtual teams, products and services, special attention should be paid towards LIS teaching so that new skills are incorporated in the curricula. This refers to the ways, methods, tools and standards to be used to handle the dynamic information. As the digital environment is in a continuous evolution, this also should be in the case of LIS curricula.

CONCLUSION

"Virtual Team is not simply a different form of organization or the way the working environment can be organized and managed. It is, in fact, a radically different space and context." This is the digital space which is still in the stage of continuous and rapid evolution and development.

Virtual teams will not totally replace conventional teams as they are not appropriate for all situations. Factors that impact on the effectiveness virtual teams are still ambiguous. Researches on vertical teams are still its nascent stages. Studies suggest that more research is needed to explore the ways to enhance the performance of virtual teams.

Librarian plays a vital role for libraries and society because he is working like bridge between information and information searchers.Librarianship has got a reputation. The word 'librarian' and the image associated with it are inextricably bound up with books, reading and pursuit of knowledge.

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VIBRANT CHILDREN LIBRARY SERVICES IN DIGITAL AGE

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Abstract: Children are the ultimate assets of the society. Educate them is the prior function of the society. Library services for children are essential as like the adult library. The information and communication technology has a great impact on every sphere of human life. Children are not exception from it. The children are the very much positive in modern era i.e. they have very positive approach with the modern gadget. Now the technology is the key part of the children and youth. The children libraries should move towards modern technology for attracted the child in the children library. This article highlights the need of children library in the society along with how much impact on modern technology in the children life.

Keywords: Children library, Importance of children library, ICT, Digital Children Library

1. Introduction:

Children are the great assets of a nation. They are the greatest hope for the future. The future of every developed as well as developing country is associated with the children. If the children are not educated, less knowledgeable they would be, then the countries are not rising. For developing a nation is needed healthy, protected, educated and well-developed children. They are the possible and useful human resources for the progress of the nation. Many of them, if properly tuned-up, may occupy various vital and useful positions in all walks of their lives in the future. The role of children libraries cannot be ignoring for developing a future responsible citizen. After home and school, children libraries play a vital role for developing reading habit among them. In the era of modern ICT the role children libraries are challenging to attract the children in the libraries. So children libraries must cope up with the modern ICT and should kept modern gadget for the children to attract the library.

2. Need for children library

It is always even more frequent that a question comes up for the establishment of children library services. The elders of the society may ask, "Why to establish libraries for children?" "Do they actually need?" But the real fact is that there are many reasons behind the establishment of children library service. The need of childhood education is utmost important for society's development. To educate them that libraries are the main platforms to create reading habit among them. In some extent we can say that children libraries are much important than the adults. For economic, social, political, and technological development among the children, the roles of children libraries cannot be ignored. Through its collection, the children library supports children information needs and contributes to their intellectual, emotional, social, educational and language development. There are some logical points which are given below for need of children library in the society. These reasons are:

- ✎ Facility of information resources
- ✎ Acquisition of knowledge
- ✎ Cultural knowledge
- ✎ Development of reading habit

✍ Teaching the proper use of library

✍ Introduction with the modern ICT skills

✍ Learning of the skills of acquisition

3. ICT and Children

We are living in a constantly developing digital world. ICT has a great impact on nearly every aspect of human lives- from working to socializing, learning to playing. The digital age has a great impact on children and youths. With the born a child opens the eye in a digitized world today i.e. today's child is growing in the era of modern technology. Today from the birth a child grows with an atmosphere where the modern technology is the essential part of human life. Whereas the child of the recent past may have needed an introduction to computers and digital information upon beginning formal schooling, these things have very likely been a part of life for today's child from the beginning. One way that children learn is by observing their parents. Today's child may see his/her parents using computer technology more often than reading books. The children response towards electronic equipment is going to increase in this digital era are quite natural due to digital technologies like colour, movement, sound and better interaction. It responds to a child's input in a most immediate and satisfying way. It empowers the child to make things happen instantaneously. From preschool students to high school student they have knowledge of ICT. Even the children who are not school going have enough knowledge of ICT. Online games, Television, audio etc. are strong part of children now-a-days.

4. ICT and children library services

Today children from preschool to high school access and use digital tools and information as a critical part of their daily lives. Now-a-days it is observed that the children are strongly having positive views of technology and technologies are the key part of the children. Even then the children do more prefer online documents than the printed documents. Now the libraries cope up with the new modern technology and provide services through the application of information and communication technology

4.1 Digital collection development for children

Developing a digital collection of materials for children offers many challenges or the librarian of a digital library. Now school education is based on technology. All the projects and assignments work are done through the computer. For that, school children might know the knowledge of computer technology. The digital collections for children mainly include CD, DVDs, video games etc. Children libraries should be equipped with gadget of modern technologies to attract the children and youths. Developing digital collection is the prior function of children libraries of today. Electronic resources attract the children frequently. The children are always crazy for the use of the new modern electronic gadget. Now children must be familiar to operate the new smartphones. Sometimes the adults do not know all the functions of new mobile handsets which come with the market with android operating system. But the children's are much familiar with all the functions. So imagine that the modern technology how it impacts the children's mind. For that electronic resources must be stored in the children library for the proper use of the library. If a children library introduces or procures all the electronic resources which are familiar among the children then children would surely be attracted to that library for use.

4.2 Internet facility

The Internet is now key part of the young children. Without the internet, the children cannot complete their projects and assignments related to their course curriculum. The children library provides internet facility to all the children of the community. The age groups between 5 to 16 of children are now familiar

with the internet technology. They uplifted their knowledge through searching different educational websites. For children, today more often use the internet for acquiring information, knowledge, used as educational tools, for sharing information, communication to each other for playing games (online games), use the social network for sharing views, ideas etc. While looking for the above use children library should provide internet facility to children and youths to enhance their knowledge and interest to visit the library.

4.3 Digital camera

Digital camera is a wonderful gift of modern technology. Digital camera has a great impact on children's mind. A child feel enjoys seeing their own face which is taken from the digital camera. With that in mind, here are a few library programmes and ideas built around using a digital camera. Shoot and Show programs bring the pleasure of taking pictures and the instant satisfaction of their images to children. Click and Create programs allow children to photograph objects around the library. Using a little computer magic, a colour printer, some laminating skills, even an amateur photographer can create a library program. Look and learn programs encourage kids to think and interact with bulletin boards or displays whenever they are at the library. Quick to Create program can be used by the librarians to build positive relationships with patrons while keeping up with their own ever-growing to-do lists.

4.4 Audio books

Audio books are the wonderful way of getting knowledge. An audio book or simply talking book is recording of the text of a book for reading. Audio books are the advanced way of learning. For children, teaching audio books are widely used by the developing countries. Today in the electronic era the children prefer non-print devices for acquiring information and knowledge. The audio books are the device that user listens to the books through different electronic devices such as iPod, mp3 player and now smartphones. Earlier the books consist in the CD and DVD. In the audio book, including music, a skilled narrator's use of voices and dialects, and supplementary materials such as an interview with the author add to their enjoyment of the book. If the children became the reader the audio book can help connect with the book. No doubt the printed texts are far better than audio books. In a printed text the children know the literally informational skill, letter sequence, grammar etc.

4.5 Smart tab

The smart tablet is the great invention of modern ICT. Just like the adult smart tab is also available for children. A smart tab is a great toy for the children. Though children love the letters and numbers, this tab increases the interest of the children with its visual stimuli to learn letters and numbers along with other skills of typing and cause of the effect. Through a smart tab, children can also enjoy with playing games. In some of the developed countries like USA, UK, Germany etc. are available of smart tab for enhancement of knowledge. Children libraries should keep smart tab to attract the pre-schoolers and primary schoolers to use the library. Using the smart tab children can introduce with the letters and numbers.

4.6 Video game

Video game means electronic game. In the video games now are very much popular among the children and youths. The video game is the human interaction with the visual effect of the video devices such as television, computers and smartphones. In a children library video games should be always available. A few of educationists strongly opposed the place of video games in public children libraries. But the children libraries and the librarians support the importance of video game in the library.

5. Digital children library

In this age of information explosion the need of digital children libraries are realized by the educationist,

technologist. In digital children libraries the resources are available in electronic format that include text, visual material, audio material, video material. The digital library no means the printed, microform, and other media are stored for information retrieval. Today's children are very much familiar with internet and they want web resources for information. Developing modern technologies suitable for children can be challenging, since young children can have difficulty in reading, typing, spelling, and are continually changing in their interests and abilities. While there is an emerging and significant research field devoted to digital libraries and information retrieval, we have found that the vast majority of content and interfaces are targeted at adults or older students. For the world children literature the International Children Digital Library (ICDL) is exist which is serve for the world children. The ICDL is developed by the International Digital Library Foundation to overcome the problem of children approach the e-format book.

6. Need of National Children Digital Library (NCDL)

The need of digital children libraries for exploring of children books in national level is essential. The children literatures are important for the new generation. Children literature needed by children for educational development as well as mental growth. The children literatures are simple, easy to understand with the example and illustrated stories which are included in the children literature.

If we look back to a few years the children literature in national level have few numbers with good quality. There are negligible number of regional languages children literature are available in the nation. In our nation and other developing countries the children literatures are motivational book to be literate. Without book the whole mankind cannot be literate. So that books are needed for the literate society. In the current age, children literature plays a vital role for making a civilized society. The children are increasing their internal creativity with the reading good books.

There are maximum numbers of children literatures available in India which are published in regional languages. But the improvement is necessary for the production along with the need to reach the children's hand. Indian children are not interested to multi language books, mostly in the regional languages. The NBT can take great efforts to publish multi language books with illustrative description so that the interests of the children are increasing towards Multilanguage books.

In India there is no documentation and database for the children books of Indian languages. The NBT published catalogue for Children's books in different Indian languages such as, Assamese, Bengali, Konkani, Odiya etc. NBT plays a great role in the field of managing children's literature. The children literatures which are published within India hardly get the publicity and these books are not easily available in markets which are published by the Indian publishers.

In this modern age with the development of ICT the e-book takes an important part in education. The technology has bad impact on publishing in printed market. Internet, e-book etc. are all the spheres are having impact on the publishing series- from publishing to distribution. The e-book has an impact on younger's mind. Some of the literate person says that the e-books have reduced the reading habit among the children. But some of the librarian/information manager of the children libraries wants to say that e-book leads to promote the reading habit. For searching the e-book the users are to visit the library because the internet is free and accessible from everywhere. The public libraries freely provide the internet facilities to the children. Browsing of internet leads the children to read e-books if it helps.

It is not recommended by the eminent persons that reading books in computer screen is harmful for the eyesight and as well as it reduced reading habit. There are many children literature published in printed format, in that case no need for reading e-books.

Now most of the adult books are published both electronic and printed forms, so why children literature are not published? The e-books of children literature have visual effects and this can lead motivate the children to read books. The children are familiar with web and the skill of browsing in internet. In India the digital object of children's book are not common. The NCCL (National Council of Children Literature) in India is now doing great efforts to digitize the children's books and prepares a data bank in this regard. But it takes some time to complete this initiative.

The International children digital library (ICDL) is a digital library which provides e-book of children literature in international arena. Hardly a few of the Indians heard about the ICDL. The importance of NCDL cannot be ignored to exposure of Indian children literatures in international field. Hitherto, the Indian literatures especially the children literatures are not available in e-format in larger quantity. The children are now familiar with the computer and modern technology so in that case the idea of NCDL does not fail. The children books in electronic format help the children or an adult who wants to know the availability of children literature in the Indian regional languages.

The 21st century is the age of modern technology where the internet plays key role for information dissemination and retrieving. The children and the younger mostly need the internet for the information needs. If the Indian regional children literatures in the digitized format are available in the web then surely the children are attracted to read the books. This can lead to create reading habit to the children. The NCDL will be then the best platform where lots of children literatures will be available in e-format and children can browse any Indian children literature with click the computer key within a minute. The multimedia presentation of books in the computer will act as motivational for reading the book. If there is a visionary approach to the development of National Children Digital Library (NCDL) with the phenomenon of International Children Digital Library (ICDL), then the entire world will know through the availability of children literature in Indian languages. This would provide the Indian children literature in world wide. This process will help the international reader. For the NCDL a data bank will be prepared, once the databank is ready it is an easy task to browse the NCDL, sitting anywhere in the world. The NCDL surely gives the Indian children an international exposure. The Indian culture may be risen with the impact on NCDL. It is difficult to gather books and information of Indian Regional languages in one platform, but if it comes in the one platform that means in NCDL it is easy to reach the rural and village children to view in the lager screen. It is the task for the block level of libraries and village libraries arranged the same to reach the NCDL to unreached.

The protection of national cultural heritage is possible through the availability of children literatures in regional languages through internet. Realizing the importance of regional languages and the children users, it is proposed to develop National Children Digital library like the International Children Digital Library.

7. Conclusion

The concept of traditional library has been changed with the introduction of modern technology in the services of library and information centre. Children library has also been changed and move towards digital way. Today's children from home to school they are fully depends on technology. A small school project without computer they are not capable to complete. For that reason to attract the children a children library should cope up with the technology. The children librarian job is now going to challenging in this digital age. All the modern equipment those are need by the children for fun, study, amusement etc should kept by the library.

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WEB CITATION BEHAVIOUR IN SRELS JOURNAL OF INFORMATION MANAGEMENT AND DESIDOC JOURNAL OF LIBRARY & INFORMATION TECHNOLOGY

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Abstract

The article describes a citation analysis of research articles from the two scholarly electronic journals i.e., SRELS and DESIDOC published in the year 2012-2016. The analysis focused on the extent to which scholars are using web-based sources in scholarly electronic journals, to find out the overall percentage of articles with web based sources by year, to identify which e-journal has more number of web references, to measure the web citations and print citations of the two journals, etc. during 2012-2016. It has found that 306 articles published in SRELS journal, out of which 61.43% of articles had web references during 2012-2016, only 20.65% are web references and 79.34% of references are print references. A total of 286 articles were published in DJLIT during the period of study, out of which 87.06% of articles had web references, 33.80% are web references and 66.19% of references are print references. The percentage of articles with web references of DESIDOC journal (87.06%) is more than SRELS journal (61.43%), the number of web references in DESIDOC (33.80%) is more than SRELS (20.65%). The overall percentage of articles with web references by year of both the journals is 73.81 % during the year 2012 to 2016 have web references. It concludes that print references (72.40%) are more than web-based references (27.59%).

Keywords: Web References, Print References, Web-based sources, Citation Analysis, SRELS and DESIDOC

1. Introduction

Citation analysis is the examination of the frequency, patterns and graphs of citations in documents. It examines the different frequencies, heir patterns and graphs of citations given in articles, review papers, technical communication, theses and books [9].Citations are used in scholarly works to establish links to other works and researchers, which form a part of primary scientific communication in a geographical proximity (Binwal, Chandel & Saraf, 1990) [1]. It is a bibliometric technique of counting citations and is used as research evaluation tool mostly used in library and information science.Garfield (1979), "citation links provide quantitative picture of journal utility and relationships that are useful"[4]. Smith (1981), Citation analysis is now commonly used to determine what titles to purchase, to discontinue, or to weed

[9].The growing web-based sources and emerging network technologies have been revolutionizing society by making information available to the people in new ways [2]. The citation analysis technique has been widely used to investigate the structure of scholarly activities in many disciplines.

1.2 SRELS (Sarada Ranganathan Endowment for Library Science) Journal of Information Management

Sarada Ranganathan Endowment for Library Science (SRELS) was founded by Dr. S.R Ranganathan, renowned Library and Information Scientist in 1961. The endowment was registered as a Charitable Endowment with the Government of India in 1963 and with Government of Karnataka in 2006. The objectives of the Endowment are to improve the library and information services in India, to train library and information service, etc. SRELS [13]. Its publication was started in 1964 with four issues in a year.

1.3DESIDOC Journal of Library and Information Technology (DJLIT)

The Defence Scientific Information & Documentation Centre (DESIDOC) Journal of Library and Information Technology is an international, peer-reviewed, open access, bimonthly journal, each volume having six issues published by Defence Research and Development Organization (DRDO) located in Delhi which started in 1980, that endeavors to bring recent developments in information technology, as applicable to library and information science [11, 12]. Earlier DESIDOC started as a four page newsletter under the title DESIDOC Bulletin. In 1985, the bulletin started publishing articles on IT applications to the discipline of LIS under the editorship of S.S Murthy (former Director of DESIDOC). It was renamed as 'DESIDOC Bulletin of Information technology (DBIT)' in 1992. After that it is being published as bi-monthly[5].

2. Literature Review

Casserly and Bird (2003) [3] conducted study on web citation availability: analysis and implications for scholarship. The authors examined 500 citations to internet resources from articles published in library and information science journals in 1999 and 2000 were profiled and searched on the web. The result visualized that majority contained partial bibliographic information and no date viewed, most of URLs pointed to content pages with "edu" or "org" domains.

Bhatt and Kumar (2008) [2] conducted a study on web citation behavior in scholarly electronic journals in the field of library and information science during 2000-2006. Their study focused on the extent to which scholars are using web-based sources in scholarly electronic journals and found that 81.49% of articles published in selected 9 electronic journals have web references, out of 25,730 references 56.54% of references are print journal references and 43.52% of them are web references, majority of articles having web references are found in ARIADANE (93.24%) which ranks at top among the selected journals.

Singh, Sharma and Kaur (2011) [9] conducted a citation analysis of all the journal articles published in the Journal of Documentation from 1996-2010 and found that 487 articles are published in the journal during 15 years, in which highest number (44) of articles are published in the year 2005, contains 15587 citations, average number of citation per article is maximum in 2009, while in regard to authorship pattern, single author (49%) citations are dominant than others.

Gupta and Rattan (2013) [6] conducted a citation analysis of Information research: An International Electronic Journal during the period 2008-2012 and found that maximum number of articles (57) and citations (2324) was published in 2008, the average number of citations per article was 43.21, maximum number of articles (92) were having citations between 26-50, more than half of the citations (51.44%) were multi-authored, whereas 48.56% of citations were single-authored.

Kumar, Mondol and Verma(2013) [8] conducted a citation analysis of Journal of Creative Behavior and resolved that journals are main source of information in field of creative, psychology and education.

Garg and Bebi(2014) [5] conducted a citation study of the number of articles published in Annals of Library and Information Studies (ALIS) and DESIDOC Journal of Journal of Library and Information Technology (DJLIT) from the period 2010-2013 and found that the average number of articles published in DJLIT are more than ALIS and DJLIT also received more citations and published more papers than ALIS while citations per paper in both the journals are almost equal.

3. Objectives of the study

1. To measure the web citations and print citations of the two journals

2. To know the year wise distribution of citations in journals

3. To identify which e-journal has more number of web references

4. To assess either e-journal articles more likely to cite web based sources than print journal articles or not

5. To find out the overall percentage of articles with web based sources by year during 2012-2016.

4. Scope of the study

The present study conducts a web citation behavior of the articles published inSRELS Journal of Information Management and DESIDOC Journal of Library and Information Technology. The study is further limited to the 5 years period.

5. Methodology

For this study, the data for the period of 5 years was collected from the SRELS website (http://www.srels.org/index.php/sjim/issue/archive) and DJLIT website (http://publications.drdo.gov.in/ojs/index.php/djlit/issue/archive).It is bimonthly journals, in which 286 articles were collected from 05 volumes of DJLIT journal and a total of 306 articles were collected from 5 volumes of SRELS journal during 2012-2016. All articles published in both the journals were examined and all research articles that include citation were selected. The study examines the web-based citations of both the journals. The results were tabulated and analyzed to meet the objectives mentioned above.

6. Analysis

6.1 Selected E-Journals for the study

The selected e-journals and their web addresses are listed in Table 1.

Sl. No.	E-Journal	Web address (URL)
1	SRELS	http://www.srels.org/index.php/sjim/issue/archive
2	DJLIT	http://publications.drdo.gov.in/ojs/index.php/djlit/issue/archive

6.2 SRELS Journal of Information Management

Table 2 clearly shows the percentage of articles having web references in SRELS from the year 2012 to 2016. Total 306 articles were published in SRELS journal during these years out of which 61.43% of articles had web references, in which the year 2016 had the maximum number of articles with web references (81.25%). Table also illustrates the percentage of web references and print references in the SRELS journal. It visualizes that a total of 4250 references are found out of which only 20.65% are web references and 79.34% of references are print references. Thus, it clearly depicts that print references are more in numbers than web references. The figure is depicted in the below mentioned graph (Fig. 1).

Table 2: Percentage of articles having web references in SRELS by year

Year	Total no. of articles	Total no. of articles with web references & %	Total no. of references	Total no. of web references & %	Total no. of Print references & %
2012	66	37 (56.06)	800	183 (22.87)	617 (77.12)
2013	70	44 (62.85)	1140	170 (14.91)	970 (85.08)
2014	46	23 (50)	423	91 (21.51)	332 (78.48)
2015	60	32 (53.33)	772	175 (22.66)	597 (77.33)
2016	64	52 (81.25)	1115	259 (23.22)	856 (76.77)
Total	306	188 (61.43)	4250	878 (20.65)	3372 (79.34)
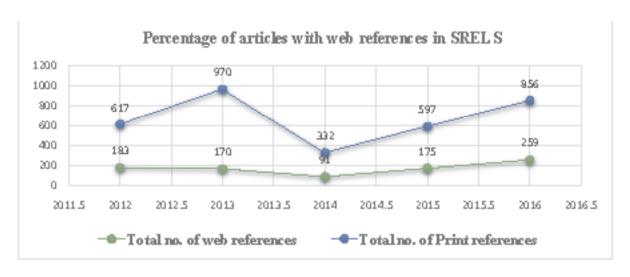
Fig. 1:Percentage of articles with web references in SRELS

6.3 DESIDOC Journal of Library and Information Technology (DJLIT)

Table 3 shows the percentage of articles having web references in DESIDOC from the year 2012-2016. Total 286 articles were published in DJLIT during these period out of which 87.06% of articles had web references, in which the year 2012 had the maximum number of articles with web references (92.18%) and a total of 4748 references are found in DJLIT out of which 33.80% are web references and 66.19% of references are print references. The figure is depicted in the below mentioned graph (Fig. 2).

Table 3: Percentage of articles having web references in DESIDOC by year

Year	Total no. of articles	Total no. of articles with web references & %	Total no. of references	Total no. of web references & %	Total no. of Print references & %
2012	64	59 (92.18)	1132	521 (46.02)	611 (53.97)
2013	60	48 (80)	982	177 (18.02)	805 (81.97)
2014	60	50 (83.33)	934	292 (31.26)	642 (68.73)
2015	53	48 (90.56)	893	339 (37.96)	554 (62.03)
2016	49	44 (89.79)	807	276 (34.20)	531 (65.79)
Total	286	249 (87.06)	4748	1605 (33.80)	3143 (66.19)
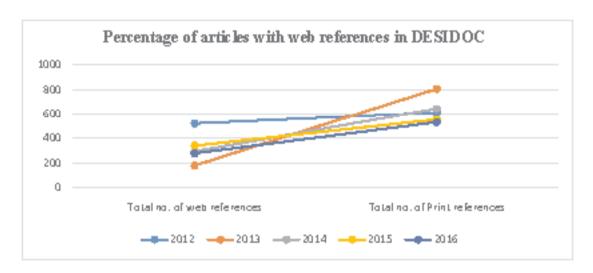
Fig. 2: Percentage of articles with web references in DESIDOC

6.4 Percentage of articles having web references in SRELS and DJLIT e-journals

Table 4 showsthe percentage of articles having web references in both the e-journals and percentage of web references and print references. The table depicts that the percentage of articles with web references of DESIDOC journal (87.06%) is more than SRELS journal (61.43%). Also the number of web references in DESIDOC (33.80%) is more than SRELS (20.65%). The total number of print references with 79.34% in SRELS is more than DESIDOC (66.19%).

Table 4: Web references in Different e-journals

E-Journal	Total no. of articles	Total no. of articles with web references & %	Total no. of references	Total no. of Web references & %	Total no. of Print references & %
SRELS	306	188 (61.43)	4250	878 (20.65)	3372 (79.34)
DESIDOC	286	249 (87.06)	4748	1605 (33.80)	3143 (66.19)
Total	592	437 (73.81)	8998	2483 (27.59)	6515 (72.40)

6.5 Overall Percentage of Articles with web references by year

Table 5 illustrates the overall percentage of articles with web references by year of both the journals. It can be observed that 73.81 % articles published during the year 2012 to 2016 have web references, in which the year 2012 (73.84%)& 2016 (84.95%) has got the highest overall percentage of articles with web references. The total of 27.59% references are web-based references whereas, a total of 72.40% references are print references. The figure is depicted in the below mentioned graph (Fig. 3).

Table 5: Overall Percentage of Articles with web references by year

Year	Total no. of articles	Total no. of articles with web references	Total no. of references	Total no. of web references	Total no. of Print references
2012	130	96 (73.84)	1932	704 (36.43)	1228 (63.56)
2013	130	92 (70.76)	2122	347 (16.35)	1775 (83.64)
2014	106	73 (68.86)	1357	383 (28.22)	974 (71.77)
2015	113	80 (70.79)	1665	514 (30.87)	1151 (69.12)
2016	113	96 (84.95)	1922	535 (27.83)	1387 (72.16)
Total	592	437 (73.81)	8998	2483 (27.59)	6515 (72.40)
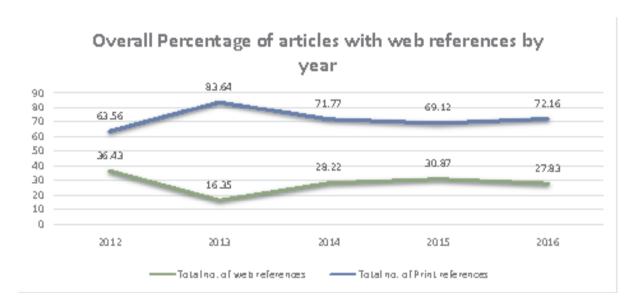
Fig 3: Overall Percentage of articles with web references by year

7. Findings

1. Out of 306 articles published in SRELS journal, 61.43% of articles had web references.

2. A total of 4250 references are found in SRELS, which only 20.65% are web references and 79.34% of references are print references.

3. A total of 286 articles were published in DJLIT during the period of study, out of which 87.06% of articles had web references

4. A total of 4748 references are found in DJLIT out of which 33.80% are web references and 66.19% of references are print references.

5. The percentage of articles with web references of DESIDOC journal (87.06%) is more than SRELS journal (61.43%).

6. The number of web references in DESIDOC (33.80%) is more than SRELS (20.65%).

7. The overall percentage of articles with web references by year of both the journals is 73.81 % during the year 2012 to 2016 have web references

8. The print references (72.40%) are more than web-based references (27.59%).

8. Conclusion

The present study is about the use of web-based sources in the scholarly e-journals i.e., SRELS & DJLIT in the field of library and information science and the result reveals that the scholars are using more print journal references (72.40%) in the scholarly e-journals as compared to web references (27.59%). The overall percentage of articles with web references by year of both the journals is 73.81 % during the year 2012 to 2016 have web references. The percentage of articles with web references of DESIDOC journal (87.06%) is more than SRELS journal (61.43%).

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LIS EDUCATION, RESEARCH AND TRAINING IN INDIA: TOWARDS TRANSFORMING LIBRARIES

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Abstract

The paper deals with an overview of LIS Education in India , its levels,current state of bright and dark sides of Libraries and LISERT and its role.The issues associated with tranforming libraries and role of LISERT in this regard have also been discussed. Concludes that when the teachers, curriculm, infrastructue, facilities of LISERT are transformed then libraries can also be transformed.

Keywords:LISERT;Transforming Libraries;NML;Digital Library

An Overview

Literature in Library and Information Science (LIS) has documented clearly the LIS education, research and training as the 19th century phenomenon, the subject matter of which might have been studied by the then scholars when they begun the establishment of library and similar institutions around the world.But formal approach to education for librarianship came a bit late.Way back in 1887, Melvil Dewey initiated the education for Librarianship in the Columbia College (now Columbia University), USA, being the first approach in the whole world. In 1889 the programme was moved to the New York State Library in Albany when Melvil Dewey became its Director. However in India, the LIS Education is a 20th Century phenomenon. The beginning of the century, in fact, also marked the beginning of LIS education in the country. As per some records, in-service training for library professionals was introduced by John Macfarlane, the first Librarian of the Imperial Library (now The National Library, Kolkata) who initiated a training programme from 1901 to 1906. Thereafter, the training programme was opened to the staff of the other libraries and even to non-librarians but dealing in books and other documents (Panigrahi, 2011).Refering the Key Note Address of B.S.Maheswarappa delivered in the XXIV IATLIS National Conference held in Karnatak University, Dharwa, Karisiddappa and Asundi (2011) quoted that LIS Education in India was initiated by John Macfarlane in 1901. However, the LIS Education in India , as generally agreed, was started in 1911 and in 2011 the LIS freternity of the country celebrated the year 2011 in a befitting way as the ***100 Years of LIS Education in India.*** Sayyaji Rao Gaekwad, the then Maharaja of the erstwhile princely State of Baroda, initiated the LIS education movement in the country. The Baroda School started for the first time in the country the first formal training course in library routines in 1911 when classes were held to impart professional training to librarians in the erstwhile Baroda. The begining of LIS education in India in 1915 in Punjab University, Lahore (earlier part of undivided India)

is another landmark year in its history in the University level. LIS education was also acted through Library Associations in the country since the begining of the 1920s. The first such attempt was initiated by Andhra Desa Library Association(established in 1915) in 1920. In such programmes lectures on various topics were organised on various topics of library science (Patel & Krishan Kumar 2001). In 1929, Madras Library Association (MALA) also started classes for library staff. Dr. M.O. Thomas , Librarian, Andhra University started Diploma Course during 1935. Again in 1938, S.R. Ranganthan started P.G. Diploma for the working librarians in University of Madras. Since 1941 such a Diploma Course was started in Banarus Hindu University.Calcutta University and Delhi University started PG Courses in 1945 and 1947 respectively. During 1960s, PG/Master Programmes were introduced in Andhra University (1961), Banarus Hindu University (1965-66), Gauhati University(1966) in North East India and with the effort of S.R. Ranganathan, DRTC(1962), INSDOC (1964) were also established to offer specialised courses including M.Sc in LIS. Regarding Ph.D. Programme, Delhi University as the first University in the country started for the same in 1950. During 1970s the nomenclature of the course was changed from Library Science to Library and Information Science on the reccomendation of the University Grants Commission(UGC). Thereafter since early 1980s a number of Universities including Open Universities in the country started BLIS and MLIS programmes M.Sc.LIS, and PGDLAN in some few universities.

Levels of LIS Education

The levels of LIS Education in the country as understood include the following:

i)   Certificate Course
ii) Undergraduate Diploma Course
iii) Postgraduate Diploma Courses:
       a. Postgraduate Diploma in Library Automation and Networking(PGDLAN-IGNOU, University of Hydrabad)
       b. Postgraduate Diploma in Digital Library Mangement(PGDDLM)
       c. Postgraduate Diploma in Digital Information Mangement (PGDDIM)
iv) Advanced Training Course in Information Systems Management and Technology (National Centre for Science Information, IISc, Bangaluru)
v)   Bachelor of Library and Information Science
vi) Master of Library and Information Science
vii) Associateship in Information Science (DRTC, NISCAIR)
viii) M.Sc. in Library and Information Science (DRTC)
ix) M.Phil.
x)   Ph.D.
xi) D.Litt.(a very few)
xii) Other Specialised Programmes:
       IASLIC offers a one-year diploma programme in special librarianship and the National Archives of India offers a one-year diploma programme in archives and related subjects (Patel& Krishan Kumar, 2001, p.212)

Curriculum Development and Improving Library Services

Curriculum of the Course plays a very important role in LIS Education. So far we have witnessed four attempts made towards improving library services and recasting the LIS Curriculum with a holistic apprach providing a platform for bringing uniformity in LIS Education in the country.These include:

1. Ranganathan Committee on University and College Libraries (1957)
2. Ranganathan Committee on Library Science Education(1965)
3. Kaula Committee on Curriculum Development in LIS Education(1993)

4. Karisiddappa Committee on Curriculum Development (2011).

The National Knowledge Commission (NKC) constituted in 2005 has also made many recommendations for LIS Education in the country. On the basis of recommendations of report of NKC, the National Mission on Libraries (NML) was launched on 3rd February 2014 by President Pranab Mukherjee at Rashtrapati Bhavan, New Delhi. The NML was designed for the entire spectrum of population. Kolkata-based Raja Rammohun Roy Library Foundation (RRRLF) is the nodal agency to implement this mission. NML constituted Working group on Library and Information Science Education, Training and Research **(LISERT)** facilities headed by Prof . ARD Prasad, Professor & Head ,DRTC,ISI, Bangalore.Education and research at varoius levels right from certificate course to Ph.D. in different universities and institutions are being rendered.Training courses as continuing education programmes including refresher courses, orientation courses, short term courses,seminars,workshops, conferences,symposia, capacity and cofidence building programmes, etc. are also conducting in the country through various institutions, universities, etc. of the country.

Libraries and LISERT Today: Bright and Dark Sides

The current status of LISERT in India is in a transition period having both bright and dark sides which we need to check deeply to chalk out a road map for the future.On the bright side of the story we are familiar with the following aspects:

· Growth of LIS Schools in different parts of the country;
· Introuction of new courses as per demands of the market,though in limited scale;
· Adoption of new and emerging technologies in the libraries;
· Use of ICT based gadgets in teaching and learning programmes;
· Revision of curriculum towards making LIS products employable in librraies and information systems by adopting emerging issues in the field;
· Launching of National Mission on Libraries for rejuvinating the libraries in the tune of digital environment;
· Efforts of the individual libraries towards their transformation;
· Enhanced accessibility to consortia based resources;
· Researches in multidisciplinary and emerging aspects of librarianship with increased funding agencies, etc;
· Initiatives towards assessing the quality and standard of LISERT and library system;
· Increased number of continuing education programmes for different groups of target audiences;
· Opening of scope for internship and engagement of LIS products as trainees by deiffernt agencies including technical institutions of the country;
· Introduction of trainning programmes of INFLIBNET for LIS teachers on latest technologies, etc;
· Emergence of Free Open Source Softwares for library management and their applicability in building IR, Digital Library, Document Delivery, etc.

Besides these , there are many aspects on bright side of the LISERT and Libraries in the context of the country. In this tranformational phase , there is also , on the other hand, issues associated with the dark side as ennumerated below:

· Want of revision of the curricula in the tune of the demand of the market;
· Lack of infrastructure in terms of manpower, physical facilities, well equipped laboratory, etc;
· Need for empowering the existing manpower for continuing education programme;(Ibohal Singh, 2010);
· Demand for the LIS courses becoming diminishing day by day due to low profile;

- Mushrooming growth of LIS Schools without check and balance and offering basic facilities thereby producing substandard library professionals;
- Inadequate faculty strength having explored in up-to-date knowledge of the discipline with latest technologies as well as lack of supporting staff;
- Lack of Departmental Library which is expected to serve as a workshop place or laboratory for the Department;
- Lack of adequate ICT/Digital Laboratory to make the students explored with hands on practice efficiently;
- Lack of uniformity in admission procedures , intake and admission criteria;
- Absence of mandatory and sound apprenticeship programme for adequate practical training in libraries;
- Dual responsibility as teacher in the Department and in-charge Librarian of the University which seems not to be a healthy practice;
- The quality of research particularly in Master's level is not encouraging in many cases due to many factors;
- Lack of accreditation and proper assessment for the subject;etc.

But Transformation Came into the Scene

While the world is changing so fast, the concept of library and mode of delivery of its services have also been changing instantly witnessing a paradigm shift in the whole affairs of librarianship. The web of technology is rapidly sweeping through the library profession. Moreover, a new breed of LIS professionals has swiftly replaced the mere librarian. Many skills-***competency and proficiency***, as such, on the part of the LIS professionals need to be developed to enable them works in the changing environment. The field of Librarianship, in fact, has been transformed by much technological advancement. Therefore, the contents of the courses in LIS Education have to play a pivotal role in this regard. Incorporation of new emerging concepts with practical aspects in the ICT-based environment is really required for the LIS Schools...Unless LIS Schools act now to save themselves and the profession via transformation, both will be swept away(Ibohal Singh, 2010 p.111). Due to adoption of latest technologies, libraries have started transformation from conventional to digital though not in large scale. ***Open Mantra for - Open Education, Open Resources, Open Library and Open Services*** is going to dominate the future librarianship. LISERT, as such, should not delay in taking up initiatives for the cause.Now, the time has come to change our motives and mindsets. It is ,in fact, after understanding the present situation , the time to prepare ourselves to produce new generation of LIS professionals for the future.There is no doubt that the quality of library and its services is deeply related to quality of LISERT.

The Tasks Ahead

With the entry into the second decade of this 21st century, we are witnessing many developments and tranformational changes that have taken place which were not so in the last more than one hundred years. The moment has come now to introspect what we have done in the last more than one century of LIS Education in the country.Also it is the right time to have a serious professional thinking to crtically adopt to which way we need to go deeply on the sideline of the Digital India Perspectives, the system of which is expected to prevail for many years to come at the global level. Now we also need to reassess our ongoing programmes. A SWOT analysis of the prevailing programmes in the dawn of the digital empowerment era can be dome to assess where we stand and what and how are we going to excercise our moral, social, technological and educational responsibilities collectively. It is also a time for LIS Education,Research

and Training (LISERT) to review our policies and programmes towards setting up of a road map from the perspective of empowering professionals so that they would be capable enough with full confidence and competence to deliver their valued service. While launching the NML, Shri Pranab Mukherjee, honourable President of India said, "the creation of a National Virtual Library of India is one of the major component schemes of the National Mission on Libraries. This is truly a step in the right direction. With the aim of equitable and universal access to knowledge resources, the National Virtual Library of India would provide digital resources by digitizing the relevant reading material in different languages, which would be shared at all levels. He said, he is happy to know that the target users of NVLI will not only be students, researchers, doctors and professionals but also the educationally, socially, economically and physically disadvantaged groups. Thus, it would empower people with information in order to create a knowledge society and also ensure preservation of digital content for posterity.Shri Mukherjee said, digital libraries open up the possibility of far more flexible and coherent multimedia collections that are both fully searchable and browsable in multiple dimensions"(http://pib.nic.in/newsite/PrintRelease. aspx?relid=102951 Retrieved:12th June,2017).Though, ample scope for LIS education, reserach and training is not mentioned clearly in the NML, there are so many issues to be transacted by LIS fraternity of the country towards transforming the existing library system of the country in which the way how the LIS education, research and training is rendered , have to play a very pivotal crucial role. In this reagrd, the present paper aims to discuss certain key aspects towards transforming libraries through education, research and training in the field of LIS to chalk out appropriate and concrete plans, policies and programmes that will be fit in transforming the libraries.

Towards Transforming Libraries: Key Issues

There are certain key challenging issues concerning the transformation of libraries in which role of LISERT must come into the scene.These issues may include the following:

a. Recasting of Curriculum

Majority of the LIS Schools accross the country, due to many factors, could not follow in toto the latest curriculum developed by the Karisiddappa Committee on Curriculum Development (2011) of the UGC. In the meantime, many changes have taken place in the affairs of libraries and information systems with the adoption of latest technologies. As such efforts should be made to recast our LIS curriculum by incorporating emerging issues , for which UCG may take up initiatives.Need for following the curriculm uniformly by the LIS Schools is also there to maintain a standard of the LIS products for the country.

b. Impact of Digital Era

With the dawn of the digital era there is sharp changes in transforming libraries, thereby LISERT should be given importance in this perspectives. The phenomenon is likely to continue in many years to come.Many dimensions on this aspects need to be taken into account.

c. Accreditation and Assessment of LIS Programmes

Excepting the accreditation and assessment done by the National Assessment and Accreditation Council(NAAC) for the whole institute there is no agency to do the needful in respect of LISERT in the country so far. NML also fails to provide a clear cut vision in this direction. LIS professionals need to jointly work in the country as done in the UK (by CILIP) and the USA(by ALA Committe) to give more influence to the concerned Ministry or UGC towards having and Assessment Committee specifically for LISERT understanding the nature of the subject and its importance in the country.

d. Quality and Standard of Resaerch

   As estimated, India stands second in rank in producing doctoral degrees just next to the USA.However , no assessment and evaluation is done on the quality and content(Karisiddappa and Asundi, 2011.p.200).Many similarities of the contents and duplicacy in the areas of topic are found in many theses and dissertations. Not only in theses of Ph.D., the dissertations of M.Phil. and Master level lack of quality is found. As such the Research guides should very very innovative in this concern particulary in selecting topic, etc.

e. Confidence and Capacity Building Training for the Teachers

   With the incorporation of new facets in the curriculum followed the confidence and capacity of the faculty members also required to be developed. Competent teachers with full confidence in the subject and profession can guide the students in the right ways. Therefore Confidence and Capacity Building Training for the LIS teachers should be organised from time to time. INFLIBNET Centre has started such a programme for the LIS Teachers of North East India, which is very fruitful and commendable.UGC-HRDC of different universities may be approached to introduced such courses besides short term courses and Refresher/Orientation programmes.

f. Reengineering the Teaching Methods and Techniques

   Taking the advantages of the emerging technologies innovative teaching methods and techniques can be incorporated in the teaching learning process by the LIS schools.This will be made the session more interactive, educative and fruitful.

g. Producing Employable Professionals

   The employability is an important factor for diminishing the LISERT in the country on one side.However, the world, on the other hand has become so competitive. The LIS products of the Indian Schools should be made employable in the international market. As such as per demand of the market , it is essential to initiate mechanisms by the Schools.Aspects related to employability skills should be incorporated while recasting our curriculum as a dimension of LIS programme.

h. Check and Balance in opening LIS Schools

   There is mushrooming growth of LIS Schools in the country. Nearly 200 LIS Schools are offering different courses in the discipline without having the basic facilities. In fact there is no check and balance on the emergence of such new LIS schools which results in mass production of substandard library professionals thereby creating an increasing problem of unemployment in the job market. We should not encourage this trend.

i. Introducing Module Based Programmes

   LIS Schools should come forward to introduce Module Based Programmes from time to time as per the market demand so that our products could be accomodated in the employment sectors.This would be an important dimension in the LIS Education of the country. Library Schools must expand their scope to teach interdiscilinary and specialised courses such as community information services, information and media policy, information for integrated rural development ,business and decision management system, consortia and network management. But above all students must be taught to become self – entrepreneurs to provide fee based information services(Wormell,1996).Development and Mangement of Digital Library, Development of Institutional Repository,Development Open Sourse Softwares, Delivery of Online Services,etc. are some of the module based programmes suggested.

Conclusion

   Change is the order of the day, so the libraries also change. A sea change has been observed in the field of librarianship due to contributions of LISERT all over the world. In fact, **TRANSFORMATION** of libraries is possible only when the challenges and other obstacles are taken head on and possible solutions are sought. Moreover, the next generation of LIS professionals is dependent on the quality of LISERT.

This challenges need to be addressed by authorities, policy makers, teachers and practicing librarians and other professionals in the field. When the teachers, curriculm, infrastructue, facilities of LISERT are transformed then libraries are also transformed.

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