GRANTHAKUTI

(A Peer Reviewed Annual Journal on Library and Information Science)

GUIDELINES FOR CONTRIBUTIONS

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 The word limit is 3000-4000.

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6. At least one hardcopy of the paper (s) and a softcopy shall be submitted alongwith an abstract note exceeding 150 words and three keywords composed preferably in 'page- maker'.

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9. The editorial board and editor are not responsible for views and opinions expressed in the articles.

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EDITORIAL

Libraries are treasurehouse of knowledge. Modern libraries are different from that is terms of collection, services and spaces. The tremendous development of ICT, has changed the character of library. The collection of library is added with digital form. People can use these at anytime from any where. The modern library services always keep sight on the users need and satisfaction. It extends its service adding a cafe, a better IT service with free wifi, mobile zone, mobile library to the specially different people and to the senior citizen, library service in other location etc. Some library's adopt some schools to make awareness and provide library services. Modern library becomes a community hub for learning and knowledge creation. Users come to library for the third space where they come and enjoy a few hours reading, playing games, paying taxes, getting legal assistance, improving information literacy etc.

The present volume is fourth volume and it is brought out as 'Modern Library Management'. In this volume nine contributors have authored. Dr. Kishor Sarma writes on "Organisation and Management of Special Libraries in Assam in Digital Era : A Study." The author analysed the present status basing on a survey. Mr. Debajit Borgohain and Ms. Rima Nath write on "Web based Library and Information Services in University Libraries : A study with special Reference to Lakshminath Bezbaroa (L N B) Library, Dibrugarh University". Web, based services are regarded as an indispensible part of modern library. This study reveals the performance of the Web-based library. Availability of E-resource is the main aspect of modern library. Ms. Nandita Barman and Ms Geetima Katakey pen on "Use of E-resources by the Research scholar Community of Tezpur University : A study". Ms. Dipa Kalita and Dr. Nirmali Chakraborty write on "Institutional Repository in scholarly Communication : A study on GYAN IR". The GYAN is the Information Repository of Indian Institute of Technology, Guwahati (IITG). The authors find out that it is an useful and best tool of resource sharing for management and dissemination of created materials created by IITG. Mr. Sanjib Narzary and Dr. Maya Moyee Narzary pen on the topic "Collection Development in College Libraries of Chirang District : A survey". Mr. Biswajit Chutia and Mrs. Bornali Chutia write on "Role of

Library in Rural Development : An Overview". Dr. Jyotika Borthakur pens on "Bibliometric study of the Research Publications of the scientists of Indian Institute of Chemical Biology (IICB), Kolkata". Ms. Kakali Sarmah focuses on "Management and Preservation of Archival Materials in Modern Library System : a cuse study on KKH Library, Guwahati University". Mr. Bhaskar Khanikar analyses on "Implementation of ICT in college libraries of Guwahati District : Problems and Prospects". ICT is indispensible in Modern Libraries. It makes libraries automated and digital.

All these papers covers the various pros and cons of Modern Library Management. We expect that the readers will go through these and build their libraries with modern library characteristics.

We are thankful to the authors who contribute the informative research papers in this volume. We are grateful to our Principal Dr. Jitu Buragohain for his positive attitude and financial support which brings the issue in reality. We sincerely give heartiest thanks to Prof. Sanjoy Kr. Singh, Dr. Mukesh Saikia, Dr. Wooma Sankar Dev Nath, Dr. Utpal Das, Dr. Maitreyee Mayuri Sarma, Mr. Diganta Boro for their co-operation and valuable suggestions. We are thankful to all the members of Editorial Board. We welcome all the team of Banphul Printing Press who has printed this issue timely.

At last, I beg blessing and co-operation from Dibru College Community, well-wishers and readers of new generation for the Granthakuti to be a prosperous one.

Mrs. Dipika Das
Editor, Granthakuti

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Editorial

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Organization and management of Special libraries in Assam in digital era: a study

* Dr. Kishor Sarma

Abstract

A special library is the one which is specializing in a particular subject or group of subjects or a particular form of documents. Some people even consider libraries serving the needs of a special clientele as (e.g. blind, children, prisoner etc.) Special library. Dr.S.R. Ranganathan a renowned library scientist prefers to call it as specialist library to supply detailed information regarding some subject field - scientific, technical and otherwise. Special libraries are different from public or academic or national libraries because they deal with some specific and limited subject field, relating to a particular branch of knowledge. A humble attempt has been made through this paper to focus on the present status of organization and management on special library system in Assam basing on the survey undertaken by the author.

Keywords: Special library, management, library automation

1. Introduction

From time immemorial library has been regarded as a store house of books meant mainly for preservation. But now a days a library has been regarded as a service institution. Its aim is to enable the user to make the most effective and efficient use of the available resources and services of the libraries.

2. Scope of the study

The scope of the present work covers mainly the Special libraries of Assam where information Technology is used.

3. Objectives of the study

(a)   To know the organization and management of special libraries of Assam where information technology is used.

(b)   To know the status of information technology application in special libraries of Assam.

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(c) To suggest necessary and suitable recommendations for modernizing the special libraries of Assam.

4. Limitations of the study

The study is confined to the special libraries of the jurisdiction of Assam only. Present study is done on the basis of data collected of those special libraries where information technology is used.

5. Methodology

The following methods are used for conducting the study:

(a) Questionnaire method.

(b) Survey method.

(c) Observation method.

A number of documents studied for this study are identified and acquired through different sources and important websites.

6. References

In preparing references, publication manual of the American Psychological Association (APA) citation style has been followed.

7. Special Library

A special library is the one which is specializing in a particular subject or group of subjects or a particular form of documents. Some people even consider libraries serving the needs of a special clientele as (e.g. blind, children, prisoner etc.) special library. Dr.S.R. Ranganathan a renowned library scientist prefers to call it as specialist library to supply detailed information regarding some subject field - scientific, technical and otherwise.

Special libraries have been defined differently by different people. The question as to what a "special library" has never been simple to answer. The Encyclopedia of Library and Information Science (Vol. 28, Pp. 389-394) provides 29 definitions in a chronological order (1910- 1976), but a clear, distinct and generally accepted definition is still awaited. On the basis of these definitions, libraries may be "special" on account of a specific subject, form of collection, functions, institutional affiliation and class of users. Generally the special libraries are part of research organizations of various fields of science and technology or social science.

8. Special Libraries in Assam

Assam Known as Pragyotishpura or Kampura has rich heritage of culture and civilization. There were learned pandits in ancient Assam and owing to the encouragement given by the monarchs, scholars flocked to Assam from different places. The rulers encouraged the scholars to write manuscripts on different essential subjects. The libraries which were setup in ancient and medieval period were grown up in unorganized way though they possessed vary rich collection of manuscripts, royal reports, letters etc. This process is still prevalent in Namgharas, Satras and some other sacred institutions of Assam. At present in Assam there are 109 number of special libraries to serve various interest in the field of social science , art, trade and industries, humanities and various branches of science and technology. All special libraries are engaged in various specialized field.

In this study questionnaires were distributed to 109 special libraries of Assam and received responses from 83 special libraries. Out of 83 special libraries 33(40%) libraries are found with IT application. Number of libraries without IT application is 50(60%).

Table 1. Response rate and number of libraries with IT application.

Questionnaire circulated	Response received	Number of Libraries with IT application	Number of Libraries without IT application
109	83 (76%)	33 (40%)	50 (60%)

Table 2. List of libraries with IT application

SLNo	Name of the Library	Parent Organization	Year of Establis hment	Location	Website Address
1	AASC Library.	AASC	1960	Guwahati	www.ichr.ac.in
2	ABILAC Library.	ABILAC, Assam	1989	Guwahati	www.abilac.org
3	AIN Library.	AIN	2006	Guwahati	www.ainguwahati.org
4	AIRTSC Reference Library.	AIRTSC	1977	Guwahati	-
5	Assam Legislative Assembly Library.	Assam Legislative Assembly.	1926	Guwahati	www.assamassembly.nic .in
6	ASI, Guwahati Circle Library	ASI, Guwahati Circle.	1983	Guwahati	www.asiguwahaticircle.g ov.in
7	ATI Library.	ATI	1920	Guwahati	www.assamtextileinstitut e.org
8	CIPET Guwahati Library.	CIPET, Guwahati.	1999	Changsari	www.cipet.gov.in
9	CPP Library	CPP-IPR	1991	Sonapur	www.ipr.res.in

SL No	Name of the Library	Parent Organization	Year of Establis hment	Location	Website Address
1	AASC Library.	AASC	1960	Guwahati	www.ichr.ac.in
2	ABILAC Library.	ABILAC, Assam	1989	Guwahati	www.abilac.org
3	AIN Library.	AIN	2006	Guwahati	www.ainguwahati.org
4	AIRTSC Reference Library.	AIRTSC	1977	Guwahati	-
5	Assam Legislative Assembly Library.	Assam Legislative Assembly.	1926	Guwahati	www.assamassembly.nic.in
6	ASI, Guwahati Circle Library	ASI, Guwahati Circle.	1983	Guwahati	www.asiguwahaticircle.gov.in
7	ATI Library.	ATI	1920	Guwahati	www.assamtextileinstitute.org
8	CIPET Guwahati Library.	CIPET, Guwahati.	1999	Changsari	www.cipet.gov.in
9	CPP Library	CPP-IPR	1991	Sonapur	www.ipr.res.in
10	Central Library.	CIT-Kokrajhar	2006	Kokrajhar	www.cit.ac.in
11	Central Library.	LGBRIMH	2001	Tezpur	www.lgbrimh.org
12	Central Library.	NITS	1977	Silchar	www.nits.ac.in
13	DHAS Library	DHAS	1928	Guwahati	-
14	ICHR-NERC Library	ICHR-NERC	1997	Guwahati	www.ichr.ac.in
15	ICM Library	ICM	1974	Guwahati	www.icmguwahati.gov.in
16	IIBM Library	IIBM	1982	Guwahati	www.iibm.ac.in
17	IIE Library	IIE	1996	Guwahati	www.iie.nic.in
18	Julhas Ali Library	Don Bosco Institute of Management.	2009	Guwahati	www.dbim.ac.in
19	Jorhat Institute of Science and Technology Library.	Jorhat Institute of Science and Technology.	2009	Jorhat	www.jistassam.in
20	Knowledge Resource Center.	NEIST	1961	Jorhat	www.neist.res.in
21	Knowledge Resource Center.	IASST	1979	Guwahati	www.iasst.gov.in
22	Media Archives cum North East Reference Library.	Media Trust, Assam.	2004	Guwahati	-
23	NERIM Library.	NERIM	1992	Guwahati	www.nerimindia.org
24	NERIWALM Library	NERIWALM	1990	Darrang	www.neriwalm.gov.in
25	NIPCCD, RCG Library	NIPCCD, RCG	1978	Guwahati	www.nipccd.nic.in
26	NIRD-NERC Library	NIRD-NERC	1983	Guwahati	www.nirdnerc.nic.in
27	NPTI-NER Library	NPTI-NER	2003	Guwahati	www.nptiguwahati.com
28	OKDISCD Library	OKDISCD	1989	Guwahati	www.okd.in
29	RFRI Library	RFRI	1988	Jorhat	www.rfri.icfre.gov.in
30	RMRC-NER Library	RMRC-NER	1982	Dibrugarh	www.rmrcne.org.in
31	Suresh Chandra Reference Library	VKIC	1996	Guwahati	www.vkic.org
32	Tape Library PPC-NE	Doordarshan, PPC-NE	1991	Guwahati	www.ddindia.gov.in
33	Tocklai Library	Tocklai Tea Research Institute	1911	Jorhat	www.tocklai.net

9. Organization and Management of Libraries

Generally special libraries are part of research organizations of various fields of science and technology or social science. Their objectives, collections, and even users differ from one type of special libraries to other types of special libraries depending upon various fields.

Management is a process that brings several varied resources like physical, human and financial along with techniques and technologies together to accomplish a task or a series of tasks. If we manage our organization well the result will be fruitful but if management fails, the entire organization will be held up. Scientific organization and management is essential for all kinds of libraries.

9.1 Nature and type of parent organization

From the survey it is found that 13(39.39%) libraries are under the Government Organization, 17(51.52%) libraries are under the Autonomous Organization, 2(6.06%) libraries are under Private Organization and 1(3.03%) is under Non Government Organization.

Table 3. Nature and Type of parent organization

Nature and Type			
Govt.	Autonomous	Private	Non Government Organization
13	17	2	1
(39.39%)	(51.52%)	(6.06%)	(3.03%)

9.2 Range of collection of books

The collection of the surveyed libraries consists of books, periodicals, reports, non-print materials such as CD-ROMs, DVD-ROMs etc. The range of collection of books and the number of libraries have been presented in the following figure.

Fig 1. Range of collection of books
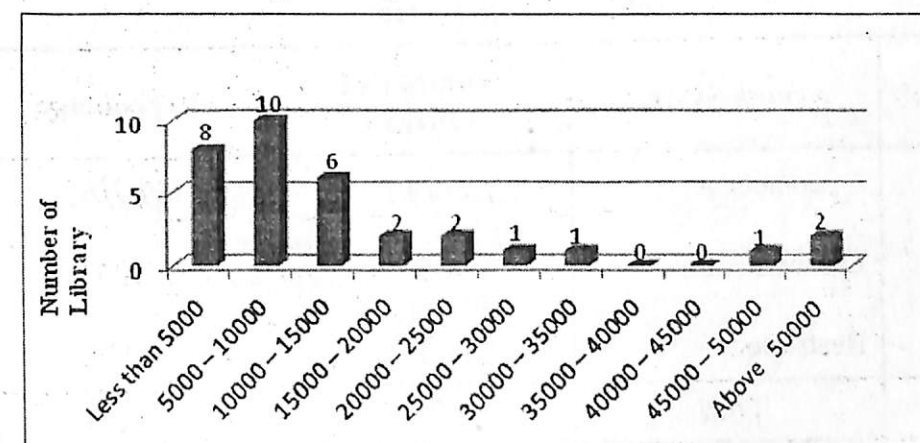
The above figure shows that the highest numbers of 10(30.30%) libraries have a collection of books between 5000 to 10000 and only 2(6.06%) libraries have a collection of above 50000 books. Assam Administrative Staff College Library and Central Library NITS has more than 50000 books.

9.3 Classification scheme

Classification provides formal access to documents in a library. It is an important activity in all the libraries to keep the documents in a scientific way. 27(81.82%) libraries have been classifying the books according to DDC scheme. 5(15.15%) libraries have been classifying the books according to UDC scheme and 1(3.03%) library follows their own classification system.

Fig 2. Classification scheme used
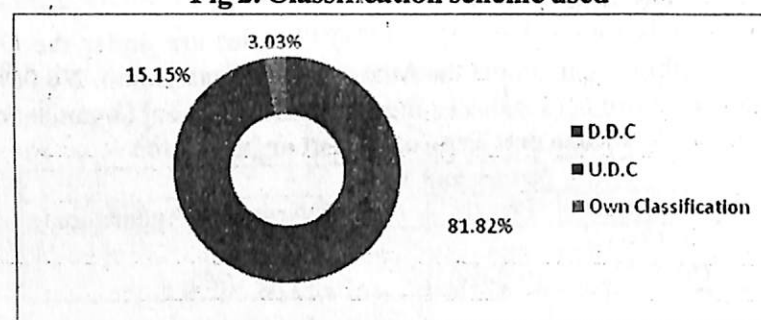
9.4 Access system

The collection of a library should be well organized. It should be made freely accessible without any barriers. In this context open access system has been found to be extremely useful. This will enable the users to get the documents required by him promptly. The percentage of access system followed by the libraries is shown in the table 4

Table 4. Access System

SL No	Access System	Number of Library	Percentage
1	Open access	23	69.70%
2	Closed access	9	27.27%
3	Restricted	1	3.03%
	Total	33	100%

9.5 Services

Special libraries provide specialized services to its specialist users. Some of the services are provided to the special library users due to their needs. A set of services were mentioned in the questionnaire during survey and responses were receives accordingly. All the libraries are providing reading room services to users. Only a few libraries provide the services like Inter Library Loan (21.21%), SDI (15.15%), Indexing (9.09%), Abstracting (9.09%) and paper clippings (3.03%) The percentage of different services is shown in the figure 3.

Fig 3. Library Services
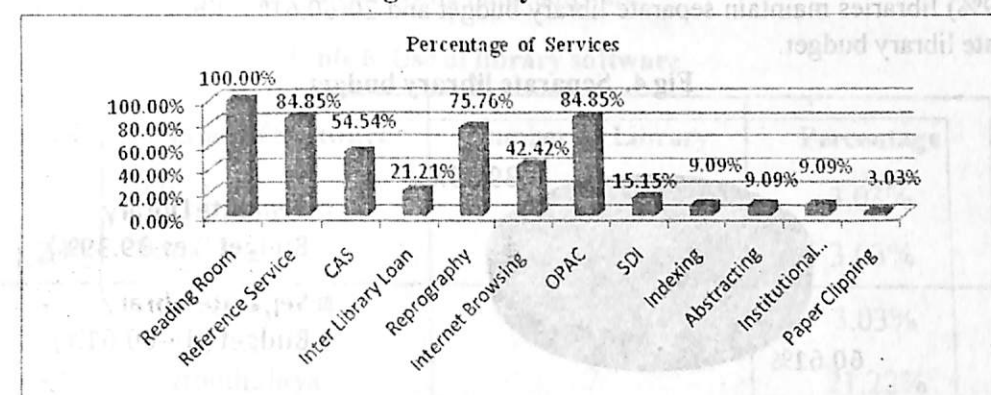
9.6 Library Staff

To run a library adequate number of library staff is very much important. Manpower is a powerful resource for the successful management of any library. The following table shows the total number of library staff at different categories.

Table 5. Library staff

Professional Staff		Non Professional staff	
Categories of Staff	Number of Library	Categories of Staff	Number of Library
One professional staff	23 (69.70%)	One non professional staff	17 (51.52%)
Two professional staff	6 (18.18%)	Two non professional staff	6 (18.18%)
Three professional staff	4 (12.12%)	Three non professional staff	3 (9.09%)
More than three professional staff	0 (0.00%)	More than three non professional	7 (21.21%)
Total	33 (100%)	Total	33 (100%)

9.7 Provision of library rules

Provision of library rules in printed form is very important. As the libraries are being social institutions, their management have a special responsibility to see that the use of their resources, facilities and services be regulated properly so that there is no room for misuse. From the survey it is found that 29(87.88%) libraries have printed form of library rules and only 4 (12.12%) libraries have no printed library rules. The library rules make the new user aware about the features and services of the library.

9.8 Library Budget

Budget is very important task performed in special libraries. Out of 33 libraries only 13 (39.39%) libraries maintain separate library budget and 20(60.61%) libraries don't maintain separate library budget.

Fig 4. Separate library budget

39.39%

60.61%

- Separate Library Budget (Yes-39.39%)
- Separate Library Budget (No-60.61%)

9.9 Library committee

The library committee means of body consisting of group of person, which is assigned a particular job. Such committees mostly supervise and advise the Librarian for effective management of the library. From the survey it is found that 18(54.55%) special libraries have library committees. 15(45.45%) libraries are running without library committee.

9.10 Number of PCs use in library activities

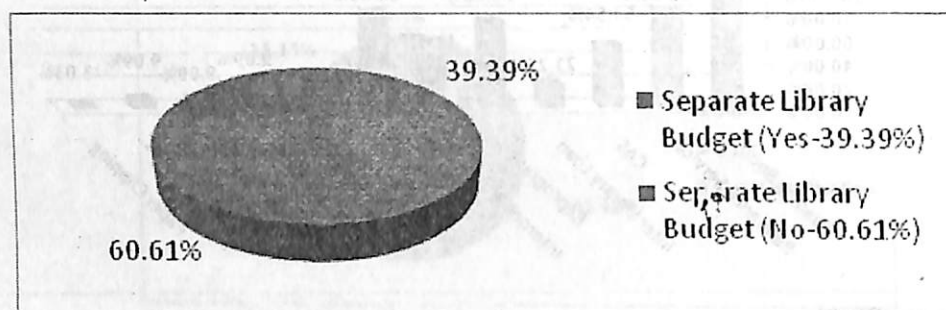Under the survey, respondents are asked about the total number of computers available in the libraries. There are only 3(9.09%) libraries where more than ten computers are available. From the survey it is found that 10(30.30%) libraries are doing their activities using only one computer. The surveyed libraries are using computers in different sections of the library. In all the libraries different versions of windows operating system like windows 2000, windows XP, windows 2007 etc are being used. In one library i.e. Knowledge resource centre of IASST, they are using windows operating system for their library automation and for Institutional Repository they are using Linux operating system.

9.11 Use of library Software

Software plays an important role in the automation of library. Selecting software for a particular application can be a lengthy task, but it will not always be easy. A lot of library software packages are available in Indian market. In the following table the name of different software used by special libraries of Assam are mentioned.

The table shows that 8(24.24%) libraries are using SOUL 2.0, 7(21.22%) libraries using E-granthalaya, 6(18.18%) libraries are using LibSys software. While 3(9.09%) libraries using WINISIS and rest of the libraries using other software.

Table 6. Use of library software

Sl No	Name of Software	Number of Library	Percentage
1	ARCLIB	1	3.03%
2	Book Shelf	1	3.03%
3	EBLIS	1	3.03%
4	E-granthalaya	7	21.22%
5	In house software	1	3.03%
6	Koha	1	3.03%
7	LIBPLUS	1	3.03%
8	LibSys	6	18.18%
9	NewGenLib	1	3.03%
10	OpenBiblio	1	3.03%
11	SLIM	1	3.03%
12	SOUL 2.0	8	24.24%
13	WINISIS	3	9.09%
	Total	33	100%

9.12 Areas of library automation

There are various areas in automating a library which needs systematic plan and work for the smooth and accurate information. It has been observed from the survey that cataloguing and OPAC are the most common housekeeping operations available in the libraries. 16(48.48%) libraries have started computerized acquisition and 19(57.57%) libraries started circulation services. 8(24.24%) libraries are using serial control operation which is very important for special libraries.

Fig 5. Areas of library automation
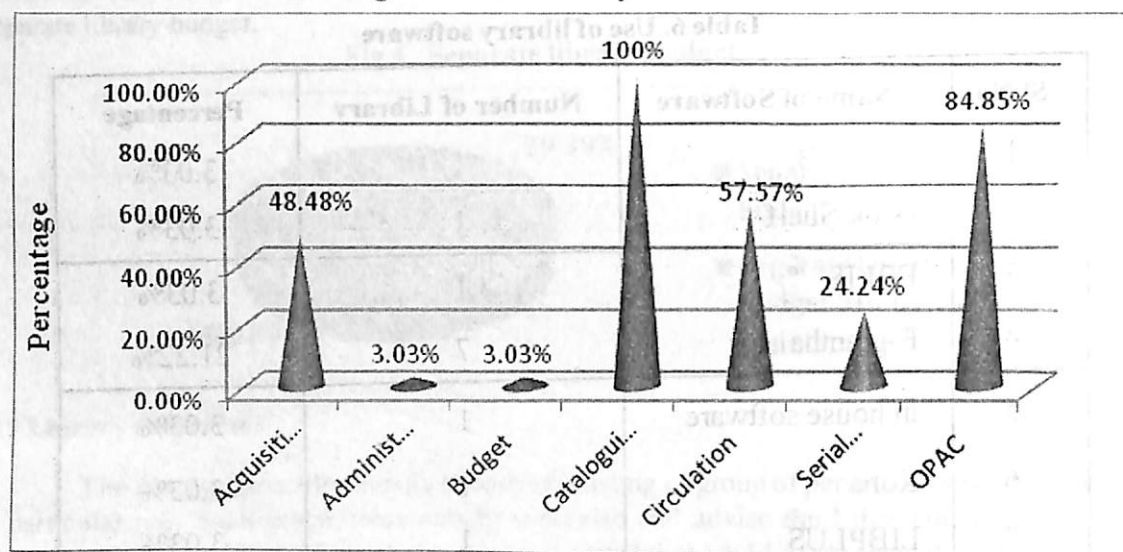
10. Conclusion and Suggestion

Special libraries have now become exciting places in the twenty first century. The essential purpose of the special library is to provide information which assists its parent organization. To do this adequately the library should hold a reasonably high position in the organization and management structure, so that it knows the organization's policies and interest.

Based on the findings of the survey some suggestions are mention below:

10.1   The parent organization should provide separate building and make sufficient space available for different sections like, reading room, reference sections, periodical sections etc. for smooth functioning and management of the library.

10.2   Increase of professional staff is a must as they are the right persons to impart the services.

10.3   Sufficient non-professional staff should be provided to the library as per need for the effective management of the library.

10.4   Proper and desired financial benefit and status should be given to the library staff then this will help a lot in improving the library services.

10.5   The authority of the parent organization should provide the autonomy to the Librarian to prepare library budget for each year which is very important for special libraries to plan for its development.

10.6   Support from management is necessary for successful implementation of information technology in libraries. Management of parent organizations should come forward for implementation of information technology in various library operations and services.

10.7   There are various areas in automating a library. Special libraries of Assam should start computerizing all other areas of different sections of the library. A library cannot be said fully automated until and unless all the operations and services are automated.

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Web-Based Library and Information Services in University Libraries: A Study with special reference to Lakshminath Bezbaroa (LNB) Library, Dibrugarh University

* Debajit Borgohain
** Rima Nath

Abstract: Information and Communication Technology (ICT) has revolutionalized in the field of library and information services and developed to such a stage that it has given access to information at fingertips. Internet created thoughtful impact on library and information services by offering new modes of information delivery and vast information sources. The services include web access to catalogues, email delivery of CAS and SDI bulletins, web access to purchases databases, CD-ROM databases, remote information services, etc. Web provides significant advantages by integrating different library and information services. Web-based services are regarded as an indispensable part of modern Library and Information services towards satisfying the information needs of the user community in the contemporary IT driven society. The study reveals only performance of the Web-based library services in University Libraries especially in LNB Library, Dibrugarh University.

Keywords: *Information and Communication Technology (ICT), Library Services, University Library, Web.*

1. Introduction:

Library is a repository of information resources and an integral part of any educational Institution whose primary function is to serve the users. The traditional methods of offering library and information services have changed greatly in recent years because of the development and application of new technology, especially the Internet and web technologies. Internet, in the context of information storage, organization and retrieval, has become omnipotent. Internet has become a part of the structure of everyday life. The influence of the

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internet has already changed human life, including the way of thinking, communicating and learning etc. It has also changed the way of accessing information. Emergence of websites is the ideal medium through which knowledge and information can be disseminated very efficiently to every nook and corner of the world. The library is only one of many institutions changing in the face of technological advances. With its wealth of data and information-sharing capabilities, web is a natural complement to traditional library services. The inherent character of the web offers many advantages and improvements for library services including the ability to hyperlink to other resources, use of a graphical interface, and access for remote users.

In this changed scenario, more and more libraries in the world are exploring and offering new web-based library services to satisfy the library and information demands of its users. Because of their popularity with the users, an overwhelming attention is being given to the web-based information services in libraries. The emergence of the World Wide Web (WWW) and Internet as a new media of information storage and delivery provide an unparalleled media for delivery of information with greater speed and economy. The web technology and Internet has changed the way of information is stored, retrieved and communicated in the libraries. As more libraries move towards providing their services in a digital environment, the improved access to remote library collections is making the use of electronic information resources more realistic and more attractive.

Web provides significant advantages by integrating different library and information services. Some of the information services provided through internet are OPACs, CAS, SDI, DDS, ILL, reference services, abstracting services, database access, translation service, referral service, etc. Library service on the internet requires many of the same qualities as traditional references: accuracy, promptness, courtesy, an understanding of the information need. It provides users with the convenience of accessing information in their own time, saving them traveling cost and time and new options for answering reference questions. And while there may be a disadvantage in not having a face-to face encounter, there are many advantages to this new medium and the greatest advantage is that many more users can be helped by using electronic library services.

1.1 Objectives of the Study:

The study is mainly confined to LNB Library, Dibrugarh University. The basic objectives of the study are as follows-

i) To identify the different Web-based Library and Information Services in present day context.

ii) To know the availability of infrastructural facilities in providing Web-based Library services.

iii) To study the implementation of Web-based services in University Libraries especially in LNB Library, Dibrugarh University.

1.2 Scope and Limitation:

The present study is limited to Web based Library and Information services provided by University Libraries. Web-based information services are the library services that are provided with the help of internet and different computing devices. It reveals only the web based library services of LNB Library, Dibrugarh University.

1.3 Methodology:

The methodology of the study consists of personal observation and survey method. It is based on the physical observation, collection of information relating to the Library by using questionnaire prepared for the purpose and by the method of personal interview with Deputy Librarian of LNB Library, Dibrugarh University.

1.4 Literature Review:

In order to conduct the present study, literature review is very essential to be aware of the available sources of literature in the field of present work. It enables to know up to date information of what others have done on the topic and is to state the objectives clearly and concisely.

Ganguly (2007) in his book "*Impact of Modern Techniques in Information Service*" states that there are phenomenal changes that the information technology has brought in the process of collection, storage and distribution of information, particularly with the rise of the

internet, compact discs, digital libraries and other technological paraphernalia of our age. This has been written to serve as a forum for the discussion of the issue surrounding the archiving of digital information, how it forms a cause for concern for many and what can be done to alleviate this problem.

Sharma (2007) in his book "*Information Technology and Library Services*" states that the application of electronic information resources virtually has changed the functions of the libraries from manual to digital all over the world. Under the changed circumstances the libraries throughout the world provide citizens with public access to networked information. Information resources are available electronically. In this exciting but uncertain environment information providers who need to protect their investment are turning licenses to define and control the use of their products.

Ralhan (2009) in his book "*Current Tools and Techniques in Library Science*" states that Libraries today are increasingly consolidating their position as storage facilities for and disseminators of information in the light of rapid advances in communication and information technologies. The book undertakes a comprehensive look at the trend of information explosion in library science throughout the ages with the aid of technology and the contemporary tools in the field. The trend of library policy is clearly towards the ideal of making all information available without delay to all people. Because of technological progress, however the difficulties of accomplishing this goal are formidable and growing.

Pandey and Velayudhan (2011) in their book "*Reference Services in Libraries*" states that Reference Service is an inevitable part of modern libraries. Libraries have always been and remain extremely expensive. Reference services, although their costs are frequently buried in library wide aggregates for personnel, material acquisition etc are of very high maintenance. This will be of immense help to all those contemplating to acquire expert knowledge of library and information science in general and reference service in particular.

2. Web-Based Library and Information Services in University Libraries:

Web Services are self-contained, modular applications that can be described, published, located, and invoked over a network, generally, on the Web. Library networks offer much potential and new capability for sharing information among different libraries and information centers at local, regional, national and international levels and eliminate the size, distance, and language barriers among users through resource sharing. University Libraries are the backbone of any University. There are various library services provided by the University Library to the users. The various web based library services are as follows:

2.1 Access to Online Database

Databases are collections of records in machine-readable form that are made available for searching from remote computer terminals. Several publishers today offer web-based solutions for providing access to their databases.

2.2 Virtual Reference Desk/Ask-A-Librarian

The Virtual Reference Desk (VRD) is a project dedicated to the advancement of digital reference and the successful creation and operation of human-mediated, internet based information services. This service provides support to Ask-A-Librarian services. Ask-A-Librarian services are Internet-based question and answer service that connects users with individuals who possess specialized subject knowledge and skill in conducting precision searches.

2.3 Electronic Current Awareness Services (E-CAS)

E-CAS (Current Awareness Service) makes the information about new arrival of documents available to the library patrons periodically using email facility. So E-CAS means implementing the CAS electronically, using the Email facility. E-CAS can combine both CAS and SDI together.

2.4 Electronic SDI Service

An SDI service is a current awareness service that provides users with up-to-date and relevant information on a regular basis: monthly, bi-monthly or quarterly. It is based on profiles that describe the users' information needs. Through this service the profiles of users are searched in a batch mode on the latest updates on a monthly basis and the result are e-mailed to respective members.

2.5 Electronic Document Delivery Service/ILL

Electronic document delivery services provided by reciprocating libraries are necessary for very good customer service. Texts are stored and delivered electronically in either image or character encoded (OCR) form; the latter enabling service providers to deliver "customized" information products on demand. Users may order documents by mail, by fax, by electronic mail or in real-time from computer terminals. Documents are delivered by mail, by fax, by electronic mail and on-line.

2.6 Bulletin Board Services

A bulletin board is an electronic communications forum that hosts posted messages and articles connected to a common subject or theme or interest. It allows users to call in and either leaves or retrieves messages. The messages may be directed to all users of the bulletin board or only to particular users. But all messages can be read by all users.

2.7 Virtual Library Tours

Websites of libraries provide virtual library guide to the physical facilities including collections, services and infrastructure available in the library. The combination of library maps and floor plans, library departments and photographic views are used for the tour.

2.8 News Clipping Services

News clipping service is one of the CAS provided in many libraries in print/photocopy form. To provide this service, news items from selected news papers are first marked and then the clippings are pasted on a white sheet. These filed clippings are then circulated among the users. Due to its physical nature, its distribution is limited by the number of copies generated as well as this conventional filing systems provide only one index field for the file.

2.9 Web OPAC

Online public access catalogue (OPAC), when made available on the Web is called Web OPAC. Information may be available in any media; it is the catalogue that ensures maximum exposure and subsequent use of information sources. Web OPAC's have provision of boolean operators. While searching library collection using OPAC, we can use operators like AND, OR, NOT and make our query more specific.

2.10 Services through Library WebPages

Library webpage is very much essential for any library. Academic libraries in the developed countries started using web technology to create home pages as starting points or as gateways for searching information about the library. A home page reflects the characteristics of an academic institution. It provides an opportunity to the library to propagate its services and facilities to the academic community worldwide.

2.11 Online Discussion Forums

Discussion forums allow open exchange of messages on a topic of common interest. They allow users to initiate a discussion on new topic, replying to an ongoing discussion (called thread). All messages for a given topic or thread are grouped together for the convenience of users. Discussion forums are basically modified bulletin boards, which have added feature of dividing messages into logical groupings called thread.

2.12 Content alert service:

The library can also provide the Articles-Alert Service to its users by downloading e-journals in which some of them are available freely and can be uploaded on to the intranet. Elsevier's Science Direct is an example of a service offered by a major publisher that includes alerting services for their journals. The options include a search alert that lets you input author names, subject words, etc.; a volume/issue alert to discover when a new issue appears; and a citation alert that notifies you when an indicated article has been cited by someone in a newer article.

2.13 E-Translation service:

Most of the non-English language portion of the world's scientific and technical literature required by scientists, engineers, and technologists probably amounts to as much as 50 percent. At present, the most expedient way to make this body of foreign language material available to the scientists and engineers of the system is by the provision of a translation facility. Translation from German, Danish, Russian, French, Japanese, etc. to English would be necessary. It may also be imperative, at a later date, to provide for translation facilities to regional languages from English to facilitate access to information to the operating and technical personnel in the lower cadres.

2.14 Video conferencing/ webinar:

In this reference service librarian and user are able to see each other e .g. Skype, Hangout etc. Discussion with experts meetings and online demonstration are available to users.

2.15 Social Networking:

Under this service librarians are using social media tools e.g., facebook, slidshare, lislink, twitter etc. for diffusion of information and distributing educational resources to users.

3. Web-Based Library and Information Services in Lakshminath Bezbaroa (LNB) Library, Dibrugarh University: The Study

3.1 Dibrugarh University:

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 on seven point scale at '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.

3.2 Lakshminath Bezbaroa Library:

The Central Library of Dibrugarh University is popularly known as the Lakshminath Bezbaroa Library. It was established in the year 1965 along with the University and since then 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. ft. in 1985. The Lakshminath Bezbaroa Library is rich in terms of its holding in print and electronic resources. The Library has setting capacity more than 150 users at a time in various clusters arranged with modern ergonomic reading facilities with installation of OPAC and CCTV surveillance.

3.3 Library Personnel:

A well qualified library personnel is very much essential for proper library management in different library services. Library personnel play a vital role in the development of the library, motivation of users to use the library resources etc.

Table 3.1

Sl. No.	Name of the Library.	Name of the Librarian/Librarian In-Charge	Qualification	Experience (in Years)
1	Lakshminath Bezbaroa Granthagar, DU	Dr. Utpal Das (i/c)	MSc., MLISc, M.Phil., PhD.	20 Years

Table 3.1 shows that Dr. Utpal Das is the Librarian in-charge of LNB Library, Dibrugarh University and he has gained 20 years of professional experience.

3.4 Library Total Collection:

A strong collection is the base of any library. The collection may cover printed as well as non-printed media. Printed materials include books, periodicals, thesis/ dissertation, newspapers, magazines, back volume, reports etc. Non –printed materials includes e-database, e-journals, e-books, CD-ROM, microfilm etc. In the following Table 3.2 and 3.3 shows the library printed and non-printed collections of LNB Library, D.U.-

3.2 Total Print Collections

Text Books	Reference Books	Journals	Magazines	Newspapers	Project/Thesis/ Dissertations	Standards/ Project Report	Others	Total
2,19,063	12,163	143	21	08	5,661	--	19,375 (Back Vols.)	2,56,434

3.3 Library Total e-resource (Non-print) Collections

e-Books	e-Journal	e-Thesis/ Dissertation	CD/DVD	Microfilm	Databases	Any other	Total
10,370+	--	--	723	--	11	6,014	17,118

In the table 3.2, it is seen that LNB Library has a large amount of print collections i.e., 2, 56,434 Nos. including textbooks, reference books, journals, magazines, newspapers, projects, dissertations and other back volumes. Regarding non-print collections, the library has 17,118 nos. (Table 3.3) including e-Books, CDs/DVDs, online databases and others.

4. Library Software used by LNB Library, D.U.:

For maintenance and management of library collections automation plays an important role. In the Table 4.1 shows different Library Management Software practicing by the surveyed libraries-

Table 4.1: Library Software

Library Management Software	Plagiarism Software
SOUL 2.0	UrKund

In table 4.1, it shows that LNB Library, D.U. uses SOUL 2.0 for their Housekeeping Operations and UrKund Software for Plagiarism detection.

5. Total Number of Library Staff:

Library staff takes one of the important parts in imparting the library services among the users. In libraries, generally three kind of staff are available i.e., Professional, Semi-professional and Non-professional. The staff pattern are shown in the Table 5.1-

Table 5.1: Library Staff

Staff Category			Total
Professional	Semi Professional	Non- Professional	
08	21	07	36

Table 5.1 shows that there are eight Professional, 21 (Twenty one) Semi- Professional and seven Non-Professional Staff has been working at LNB Library, Dibrugarh University.

6. Hardware and Software (General) used by LNB Library of Dibrugarh University:

Hardware equipments and different types of software are very much essential for any library. Application of hardware cannot be performed without the software and vice versa. Following are the different hardware and software used in LNB Library, Dibrugarh University-

Table 6.1: Hardware Equipments

	Name of the Hardware Equipments										
	Computer	Laptop	Printer	Scanner	CD/DVD/Writer	Barcode Reader/Scanner	Reprography Machine	UPS	CCTV	Projector (Multimedia/Over Head/LCD	Telephone
Total Nos.	62	01	08	03	60	05	03	16	12	01	01

Table 6.2: Software (General)

	Type of the Software					
	Operating System	Office Applications	Database Management System	Web Browser	E-mail Client	Document viewer
Name of the Software	Windows, Linux	MS Office	MS Access, MySQL	Internet Explorer, Mozilla Firefox	Outlook Express	PDF

The table 6.1 and 6.2 shows the hardware equipments and software (General) used by LNB Library, Dibrugarh University. In the table, it is seen that there are 62 nos. computers, one laptop, eight nos. of printers, three nos. scanners, 60 nos. CD/DVD, five nos. barcode reader/ scanner, three nos. of reprography machines, 16 nos. UPS, 12 nos. CCTV, one projector and one telephone. And regarding General software package, for operating system they have used Windows and Linux, for Office applications they have used MS Office, for database management system they have used MS Access and MySQL, for Web Browsing they have used Internet Explorer and Mozilla Firefox, for E-mail Client they have used Outlook Express and for Document Viewer they have used PDF Viewer.

Table 6.3: Internet Connectivity

Type of Connectivity		
LAN	WAN	Intranet
√	—	√
Mode of Connectivity		
Broadband	Wi-Fi	
√	√	

In the table 6.3, it is seen that for Internet Connectivity they have used LAN (Local Area Network) and Intranet. The LNB Library, D.U. uses two types of mode of connectivity i.e., Broadband Connectivity and Wi-Fi Connectivity.

7. Web-based Library Services in LNB Library, Dibrugarh University:

The World Wide Web and its different services are important for web-based information services. So it has been described in details. The infrastructural facilities for web services are important because without proper infrastructure it is very difficult to provide library services. Following are the Web-based services provided by LNB Library, Dibrugarh University-

Table 7.1: Web-based Library Services provided by LNB Library, D.U.

Sl. No.	Web-based Library Services	Yes/No
1	Online E-Journal Services	√
2	Online E-Book Services	√
3	Online E-Database Services	√
4	Online ETD Services	√
5	OPAC (Online Public Access Catalogue) /Web OPAC	√
6	E-CAS	--
7	E-SDI	--
8	Web-based DDS (Document Delivery Service)	√
9	Ask-A-Librarian Services	--
10	FAQ Services	--
11	E-Bulletin Board Services	--
12	Web Form Services	--
13	Inter Library Loan Services	√
14	E-Mail Services	√
15	Fax Services	√
16	Web-based User Orientation & Feedback	√
17	Audio/ Video Conferencing	--
18	Videotext Services	--
19	Multimedia Database Services	√
20	Services Through Library Website	√
21	Internet Browsing Facility	√
22	Institutional Repository (IR) Services	--
23	Automated Circulation System	√
24	E-Translation Services	--
25	Services through Social Networking	√

The table 7.1 shows that the LNB Library, D.U. has provided various Web-based services to its users. The services like Online E-Journal, E-Book, E-Database, Online Database Services, OPAC/ Web OPAC, Web-based DDS, Inter Library Loan Services, E-mail & Fax Services, Web-based User Orientation & Feedback Services and Multimedia database services are available at LNB Library, D.U. Besides, Services through Library website, Internet Browsing facility, automated circulation system and Services through Social Networking sites like Facebook, Twitter etc. are also provided by LNB Library, Dibrugarh University. Regarding Institutional Repository services, Audio/Video Conferencing Services and Videotext Services, LNB Library have initiated the necessary action for implementing them in near future.

8. Conclusion:

The performance of web-based library services in LNB Library, Dibrugarh University is very much satisfactory. The position of the infrastructural facilities like hardware equipments and software packages are also quite satisfactory in preset day context. There are lots of open source resources available now-a-days and awareness about these resources among the users is necessary. The librarians should be expert to hold the hands of the users as they are moving from face to face human contact to human machine interaction, from paper to electronic delivery, from text centered mode to multimedia and from physical presence to virtual presence. The creation of Institutional Repository (IR) at LNB Library, Dibrugarh University is in planning stage. Hopefully it will be created very shortly and the entire community of Dibrugarh University will be benefitted from it.

Strategic planning, training and exposure to latest technologies and constant learning are required to strengthen the web services. The Librarian and Library staff should strive hard to engage with the learning community in variety of roles and functions. As the technology world unfolds for libraries, librarians have to be IT-savvy to understand today's digital world. The implementation of web technology could be realized only when the library personnel are skilled and self-conscious about the latest development of the world.

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Use of E-Resources by the Research Scholar Community of Tezpur University: A Study

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Abstract: The present study focuses on the use of electronic resources by the research scholar community of Tezpur University. It highlights about its awareness and also discusses the frequently accessed databases and the level of satisfaction by its use in their respective research works. Moreover, some necessary suggestions are also being put forwarded on the basis of the findings of the study which are been found by applying some methodological tools and techniques.

Keywords: E-Journals, E-Resources, Research Scholars, Tezpur University.

1. Introduction

Today we are living in the age of information, where information is dynamic and never ending process. With the continuous changing complexity of Information and Communication Technology (ICT) which has touched in every sphere of work activities, its impact on library and its collections are also not-left far behind. This has led to the emergence of e-resources, where the traditional libraries are gradually migrating from the print collections to electronic resources. Since over a decade, these electronic information resources are becoming an important component in an academic library collection in order to meet the growing needs of different user community. Thereby its demand and necessity is increasing day by day. These e-resources has not only enhanced the service efficiency of a library but also promoted for more research activities and institutional publications both in quantity and quality.

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2. The Central Library of Tezpur University

The Central Library of Tezpur University was established in 1994 along with the establishment of the University, by an Act of Parliament. The library holds a huge collection of 79362+ volumes of books, 10000+e-journals and 8380 numbers of back volumes of journals. Apart from the online journals and database provided by e-ShodhSindhu and DelCon Consortium, the library also holds more than 2551 CDs scattering to different thought contents. The users of the Central Library can access the resources of the library from any terminal within the University campus. It also remains open throughout the year.

3. Scope of the Study

The scope of the study is being limited within the research scholar community of Tezpur University.

4. Objectives of the Study

i) To find out the different types of e-resources provided by the Central Library of Tezpur University.

ii) To find out the level of awareness and use of different types of e-resources by the research scholars.

iii) To know the purpose and its frequency.

iv) To find out the frequently accessed available databases by the research scholars.

v) To find out the satisfaction level of the research scholars by accessing the e-resources subscribed by the library.

5. Methodology of the Study

The present study is based on the Survey method of research by designing a structured questionnaire as a primary data collection tool. Along with that personal interview and observation method is also applied in order to gain authentic information from the respondents (i.e. research scholars).

6. Review of Related Literature

It can be visualized that there are large numbers of studies that has been carried out on the use of e-resources by the students, research scholars, faculty members and scientists of various institutions and organizations all over the world. Some of the related studies are been discussed here: Chakravarty and Singh (2005) discussed about the problems of academic libraries of shrinking budgets and exponential rise in the prices of the journals. Therefore, the study urges to facilitate access to e-resources to the research scholars and faculties through UGC-INFONET and INDEST Consortium as an initiative to rescue the academic libraries from the present situation.[1]

Satpathy and Rout (2010)has highlighted about the exposure and use of e-resources by the faculty members along with the problems encountered by them while accessing it. [2] Singh (2013) conducted a study where he examined the user's awareness of accessing the different types of e-resources available in the IIM Bangalore Library. [3] Singh and Prasad (2013) identifies how the scientists use the electronic resources with their purpose of its use, the places they prefer to access including the problems faced by them during accessing the e-resources. [4] Sinha and Chanda (2014) described about the usage of e-resources available under the UGC-INFONET Digital Library and DelCon Consortium by the scientific community users of the University. [5]

7. Data Analysis and Interpretation

A total of 70 numbers of questionnaires were randomly distributed among the research scholars of the university, out of which 52 questionnaires i.e. (74.28%) of them were received.

Table No. 1 Frequency of Library Visit

Frequency	Number of Visits (Percentage)
Daily	17 (32.69)
Weekly	24 (46.15)
Once in a Month	08 (15.38)
Occasionally	03 (5.76)
Never	-

The Table No.2 indicates that the majority of the research scholars i.e. (34.61%) of them visited the library for the purpose of borrowing and returning of books. While only a few of them i.e. (5.7%) visits the library for study purposes.

Table No.3 Awareness about E-Resources

Awareness	Percentage of Respondents
Yes	50 (96.15)
No	02 (3.84)

From the above Table No.3 it can be observed that almost majority i.e. (96.15%) of them are aware about the electronic resources provided by the library. On the other hand, only a few of them i.e. (3.84%) are not aware of it.

Table No.4 Sources of Awareness for Accessing E- Resources

Sources	Percentage of Awareness
Library Orientation Programs	4 (7.69)
Library Staff	-
Friends/Colleagues	5 (9.61)
Teachers/Research Supervisors	4 (7.69)
Institution Website	19 (36.53)
Printed Sources	-
E-Mail Notification from Library	17 (32.69)
Self-Awareness	3 (5.76)

The Table No.4 shows that majority of the research scholars i.e. (36.53%) are aware about the e-resource services and facilities provided by the library through the institution website. Whereas, only (7.69%) of them are aware by library orientation programs.

Table No.5 Types of E-Resources Accessed

Types of E-Resources	Frequently	Occasionally	Never
E-books	14 (26.92)	36 (69.23)	2 (3.84)
E-Journals	37(71.15)	15 (28.86)	-
Online Databases	19 (36.53)	25 (48.07)	8 (15.38)
E-Theses& Dissertations	20 (38.46)	32 (61.53)	-
Electronic Open course wares	-	-	-

From the above Table No.5 it can be observed that 69.23% of them accessed e-books occasionally whereas 71.15% of them access e –journals frequently. On the other hand, 36.53% of them access online databases frequently and 61.53%access e-theses and dissertations occasionally.

E-Journal Databases	Frequently	Occasionally	Never
American Chemical Society	19(36.53)	25(48.07)	8(15.38)
American Institute of Physics	25(48.07)	17(32.69)	10(19.23)
Cambridge University Press	13(25.00)	24(46.15)	15(28.84)
American Physical Society	21(40.38)	26(50.0)	05(9.61)
J Gate Plus (JCCC)	27(51.92)	19(36.53)	6(11.53)
Institute of Physics	23(44.23)	20(38.46)	09(17.30)
Royal Society of Chemistry	21(40.38)	24(46.15)	07(13.46)
Science Direct	25(48.07)	21(40.38)	06(11.53)
SciFinder Scholar	22(42.30)	18(34.61)	12(23.07)
Springer Link	28(53.84)	22(42.30)	02(3.84)
Web of Science	31(59.61)	17(32.69)	04(7.69)
Nature	23 (44.23)	21(40.38)	08 (15.38)

The above Table No.6 indicates the frequently accessed e-journals under this consortium. They are American Institute of Physics (48.07%), J Gate Plus (51.92%), Institute of Physics (44.23%), Science Direct (48.07%), SciFinder Scholar (42.30%), Springer Link (53.84%),Web of Science (59.61%) and Nature (44.23%). Whereas American Chemical Society (48.07%), Cambridge University Press (46.15%), American Physical Society (50.00%), Royal Society of Chemistry (46.15%) are accessed occasionally.

Table No.7 Online E-Journals Subscribed by Tezpur University

Online E-Journals	Frequently	Occasionally	Never
IEEE(ASPP)	22(42.30)	26(50.00)	04(7.69)
ACM Digital Library	25(48.07)	18(34.61)	09(17.30)
Bio resource Technology	28(53.84)	21(40.38)	03(5.76)
ASCE Journals	19 (36.53)	23 (44.23)	10 (19.23)
Composite Science and Technology	25 (48.07)	18 (34.61)	09 (17.30)
Chemistry –A European Journal	30(57.69)	17(32.69)	05(9.61)
Food Microbiology	21(40.38)	24(46.15)	7(13.46)
Renewable Energy	19(36.53)	23(44.23)	10(19.23)
Cambridge Structural Database (CSD)	25(48.07)	18(34.61)	09(17.30)
Materials and Design	27(51.92)	20(38.46)	05(9.61)
Microbiology and Molecular Biology Review	12(23.07)	18(34.61)	22(42.30)
Mechatronics	21(40.38)	19(36.53)	12(23.07)

The above Table No.7 indicates the frequently accessed e-journals. They are ACM Digital Library (48.07%), Bio resource Technology (53.84%), Composite Science and Technology (48.07%), Chemistry- A European Journal (57.69%), Cambridge Structural Database (48.07%), Materials and Design (51.92%). Whereas the occasionally accessed e-journals are IEEE(ASPP) 50.00%, ASCE Journals (44.23%), Food Microbiology (46.15%), Renewable Energy (44.23%). While, 42.30% of the scholars never accessed the Microbiology and Molecular Biology Review online e-journals.

Table No.8 Use of Indian E-Journals

Indian E-Journals	Frequently	Occasionally	Never
Bulletin of Market Science	23(44.23)	19(36.53)	10(19.23)
Indian Journal of Chemical Science	27(51.92)	21(40.38)	4(7.69)
Indian Journal Polymer Materials	18(34.61)	22(42.30)	12(23.07)
Man in India	25(48.07)	18(34.61)	9(17.30)
Linux for You now Open Source for you	28(53.84)	21(40.38)	3(5.76)
Advances in Fuzzy Sets and Systems	21(40.38)	24(46.15)	7(13.46)

The above Table No.8 indicates the frequently accessed e-journals which includes Bulletin of Market Science (44.23%), Indian Journal of Chemical Science (51.92%), Man in India (48.07%) and Linux for you now Open Source for you. Whereas occasionally accessed e-journals are Indian Journal of Polymer Materials (42.30%) and Advance in Fuzzy Sets and Systems (46.15%).

Table No.9 Use of International E-Journals

International E-Journals	Frequently	Occasionally	Never
Asia Pacific Journal of Human Resources	22(42.30)	24(46.15)	6(11.53)
The Journal of Applied Behavioral Science	19(36.53)	23(44.23)	10(19.23)
Nature Chemistry	27(51.92)	23(44.23)	2(3.84)
Journal of Applied Probability	17(32.69)	21(40.38)	14(26.92)
Cell	25(48.07)	22(42.30)	5(9.61)
American Sociological Review	21(40.38)	23(44.23)	8(15.38)

From the above Table No.9 indicates the frequently accessed e-journals which includes Nature Chemistry (51.92%) and Cell (48.07%). Whereas the occasionally accessed e-journals are Asia Pacific Journal of Human Resources (46.15%), The Journal of Applied Behavioral Science (44.23%), Journal of Applied Probability (40.38%) and American Sociological Review (44.23%).

Table No.10 Use of Open Access Resources

Open Access Resources	Frequently	Occasionally	Never
National Science Digital Library (NSDL)	21(40.38)	23(44.23)	8(15.38)
Directory of Open Access Journals (DOAJ)	19(36.53)	22(42.30)	11(21.15)
Open Access Thesis and Dissertations	15(28.84)	19(36.53)	18(34.61)
E-Thesis portal	27(51.92)	20(38.46)	5(9.61)
OCLC World Cat	18(34.61)	21(40.38)	13(25.00)
Digital Library of India	29(55.76)	21(40.38)	2(3.84)

The above Table No.10 indicates the occasionally accessed open resources. They are National Science Digital Library (44.23%), Directory of Open Access Journals (42.30%), Open Access Theses and Dissertations (36.53%) and OCLC World Cat (40.38%). Whereas the frequently accessed open resources are E-Thesis portal (51.92%) and Digital Library of India (55.76%).

Table No.11 of ETD provided by ShodhGanga

Opinion	Percentage Use
Yes	50(96.15)
No	2(3.84)

From the above Table No.11 it indicates that around 96.15% of the research scholars opined the use of ETD. While 3.84% responded that they did not use the ETD provided by the Library.

Table No.12 Time Spend for Searching and Downloading E-Resources

Time Spend	Percentage of Respondents
Less than 1 hour	14(26.92)
Less than 3 hours	27(51.92)
Less than 5 hours	8(15.38)
More than 5 hours	3(5.76)

The above Table No.12 shows the percentage of time spend by the research scholars for searching and downloading the e-resources. 26.92% of them opined that less than 1 hour while 51.92% then spends less than 3 hours. On the other hand, 15.38% of them spends less than 5 hours whereas 5.76% likes to spend more than 5 hours for accessing the variety of e-resources.

Table No.13 Influence of E-Resources on Research Work

Influence	Percentage of Respondents
Expedited the research/project process	7(13.46)
Easier and faster access to information	24(46.15)
Wide range of access ability to subjects information	19(36.53)
Delayed research work	-
Less useful information retrieved	-
Time consuming	2(3.84)

The above Table No.13 indicates that 46.15% of the research scholars stated that e-resources help them in easier and faster access to information in their research work, 36.53% stated that it provides a wide range of accessibility to subjects of information while 13.46% said that it helps in expedited the research/project process. Moreover 3.84% stated that the influence of e-resources on their research work is quite a time consuming process to access the different sources of information.

Table No.14 Satisfaction withthe E-Resource Collections

Satisfaction	Percentage of Respondents
Yes	47(90.38)
No	5(9.61)

The Table No.14 indicates that 90.38% of the research scholars are satisfied with the existing e-resource collections that the Library holds while 9.61% of them are still not satisfied with its available collection.

8. Findings of the Study

On the basis of the above study, some of the major findings are been listed below-

8.1. Majority of the research scholars i.e. 46.15% of them visits the library on weekly basis.

8.2. Majority of the research scholars visited the library for the purpose of borrowing and returning of books (34.61%) followed by access to e-resources (28.84%) and to consult the printed resources (21.15%).

8.3. Around 96.15% of the research scholars are well aware about the e-resource facilities provided by the library.

8.4. Institutional Website (36.53%) and E-Mail notification from the library (32.69%) are the most popular sources of awareness for accessing the e-resources among the research scholars.

8.5 The frequently accessed e-resources are e-journal (71.15%) followed by e-thesis & dissertations (38.46%),online databases (36.53%) and e-books (26.92%).

8.6 The frequently used e-journal databases that are subscribed through ShodhSindhu Consortium are American Institute of Physics, J Gate Plus, Institute of Physics, Science Direct, SciFinder, Springer Link, Web of Science and Nature. Whereas the occasionally accessed are American Chemical Society, Cambridge University Press, American Physical Society and Royal Society of Chemistry.

8.7 The frequently used online e-journals subscribed by the library are ACM Digital Library, Bio resource Technology, Composite Science and Technology, Chemistry-A European Journal, Cambridge Structural Database, Materials and Design and Mechatronics. Whereas the occasionally accessed e-journals are IEEE (ASPP), ASCE Journals, Food Microbiology, Renewable Energy. Moreover, the Microbiology and Molecular Biology Review has never been accessed yet.

8.8 The frequently used Indian e-journals are Bulletin of Market Science, Indian Journal of Chemical Science, Man in India and Linux for you now open source for you. Whereas the occasionally accessed e-journals are Indian journal of Polymer Materials and Advance in Fuzzy Sets and Systems.

8.9 The frequently used International e-journals are Nature Chemistry and Cell. While occasionally accessed are Asia Pacific Journal of Human Resources, The Journal of Applied Behavioural Science, Journal of Applied Probability and American Sociological Review.

8.10 The frequently used Open Access Resources are E-Thesis portal and Digital Library of India. Whereas occasionally used are NSDL, DOAJ, Open Access Thesis and Dissertation and OCLC World Cat.

8.11 Majority of the research scholars i.e. 96.15% of them used the ETD provided by ShodhGanga subscribed through the library website.

8.12 51.92% of the research scholars likes to devote less than 3 hours time in the process of searching and downloading the e-resources.

8.13 Majority of the research scholars i.e. 46.15% of them stated that e-resources helps them to access easier and faster means of information. While 39.53% stated that it provides a wide range of accessibility to different subjects of information.

8.14 Majority of the research scholars i.e. 90.38% of them are satisfied with the present existing e-resource collection that the library holds.

9. Suggestions

Some of the necessary suggestions are been put forwarded on the basis of the above findings gained-

9.1 Although the present collection of e-resources subscribed by the library is quite high in number but the way to access to these resources should be properly demonstrated to the research scholars specially through some library orientation programs.

9.2 Well skilled library staff and expertise IT professionals should be deployed for handling these resources.

9.3 More e-resources should be subscribed in the field of environmental science subjects like hydrology, geology, geochemistry, ecology etc.

10. Conclusion

With the emergence of ICT, libraries have undergone tremendous changes in their work environment. The process of information procurement, to handling and its dissemination have been completely transformed within the decade. Nowadays, the users especially the research scholars prefer to access more e-resources besides the available print documents of a library. As an academic library forms an integral part of teaching learning process so they should meet the growing needs of the users by subscribing quality electronic resources as basic goal of a service library.

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Institutional Repository in Scholarly Communication: A Study on GYAN IR

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Abstract

Purpose – The present study is aimed to make an overall study of the IR of the IITG with various issues related to it.

Design/methodology/approach – A self administered questionnaire was distributed among the the the faculties, research scholars and project staffs . Moreover, a semi-structured interview with the administrator or developer of the GYAN IR of IITG at the study site was conducted.

Findings – An IR is a tool useful to all academies and a best tool for resource sharing for providing services to the users or members of its community for the management and dissemination of digital materials created by the academic institutions. The GYAN IR of IITG is also not the exception. It was developed by trained in-house man power with DSpace software. Regarding content coverage till March, 2018, the Gyan IR of IITG is having only one community called E-Collections. Again within this community there are two sub communities namely M. Tech./ M. Des Theses and Ph.D. Theses. Within these two sub communities collections are entered department wise. Again 14 numbers of department have contributed their collections here; and the department of Chemistry is on the top rank with 152 number of collections followed by department of Biosciences and Bioengineering with 96.

Paper type - Research paper

Keywords: Institutional Repository, Digital Repository, GYAN IR, IITG

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1. Introduction

Now-a-days, open access publishing model such as Institution Repository(IR) has become an important alternative for publishing research findings. An IR is a set of services and technologies for collecting, preserving, managing and disseminating the digital materials of the intellectual output which are produced within an institution. IRs have been progressively recognized as an important tool for scholarly communication, source of institutional visibility and a potential way of institutional knowledge organization. There are different ways by which authors can provide open access to their work. One way is to publish it and self achieve it in a repository which can be accessed for free, such as IR.

Many studies have revealed about the utilization of IRs in different aspects related with the scholarly communication. The impact of IRs on the scholarships has been a subject of several research studies throughout the world. According to Lynch (2003) " An IR is a recognition that the intellectual life and scholarship of our universities will increasingly represented, documented and shared in digital form and that a primary responsibility of our universities is to exercise stewardship over these riches: both to make them available and to preserve them". Another researcher, Holdried (2009) had found that IRs present academic institutions with the opportunity to provide global open access to the scholarships that is created within that institution without going through the traditional publishing model.

IRs have slowly and steadily penetrated the scholarly communication scenario in higher academic institutions India. Nazin and Devi (2008) found 26 institutional archives in India which are listed in the registry of open access repositories of which 20 were accessible and functional at the time of writing their paper. However, Jain and Srivastava (2008) found that open access to Indian research is still in its infancy. Only a few of Indian institutions are providing open access to their research publications.

Hertenstein (2014) found that student scholarship in IRs is a growth area for academic institution and libraries. He found that the most of the libraries are achieving a variety of student generated content success honours' project, Capstone papers, Conference papers, Multimedia projects and student research paper. A study made by Mashroofa and Seneviratne (2016) in Sri Lanka found that there are 23 IRs active but which needs to be enriched with more content and the same time more attention needs to be given for enriching the content.

Several studies conducted on the awareness and use of IRs in academic institutions had revealed a poor scenario. Chakraborty (2011) found that faculties are more aware and more responsible towards the repository of their institute in comparison with the research scholars but the lack of user's awareness is the major problem for the development of IR in North-Eastern Hill University.

2. Objectives of the Study

The study is based on the following objectives-

i) To identify the software package used, staff involvement and content coverage of the GYAN IR in IITG

ii) To examine the awareness among the research scholars and faculty towards the IR of IITG.

iii) To identify the resources that the students and faculty members are interested to contribute to IR in IITG.

iv) To identify the factors that would make IR a valuable tool in scholarly communication at IITG.

3. Scope and Limitations of the study

The study is limited to the Institutional Repository of IIT Guwahati that is known as GYAN IR. The GYAN IR of Lakshminath Bezbaroa Central library was established in the year 2015. It manages, preserves and makes available the academic works of facilitate and research scholars. The IR is established to facilitate the deposit of digital content and allowing academic and their departments to share and preserve the content in a managed environment. There are 3 professional staff engaged for developing the IR. There are different types of materials currently available in the GYAN IR of IITG such as Thesis (full text), Thesis (abstract), Dissertations (full abstract), Technical reports etc. The main objectives for establishing the IR of IITG were- (i) to enhance the visibility of the institutions outputs. (ii) To provide free access to the institution research output. (iii) To preserve the institutions research output. (iv) To help evaluate researchers and departments.
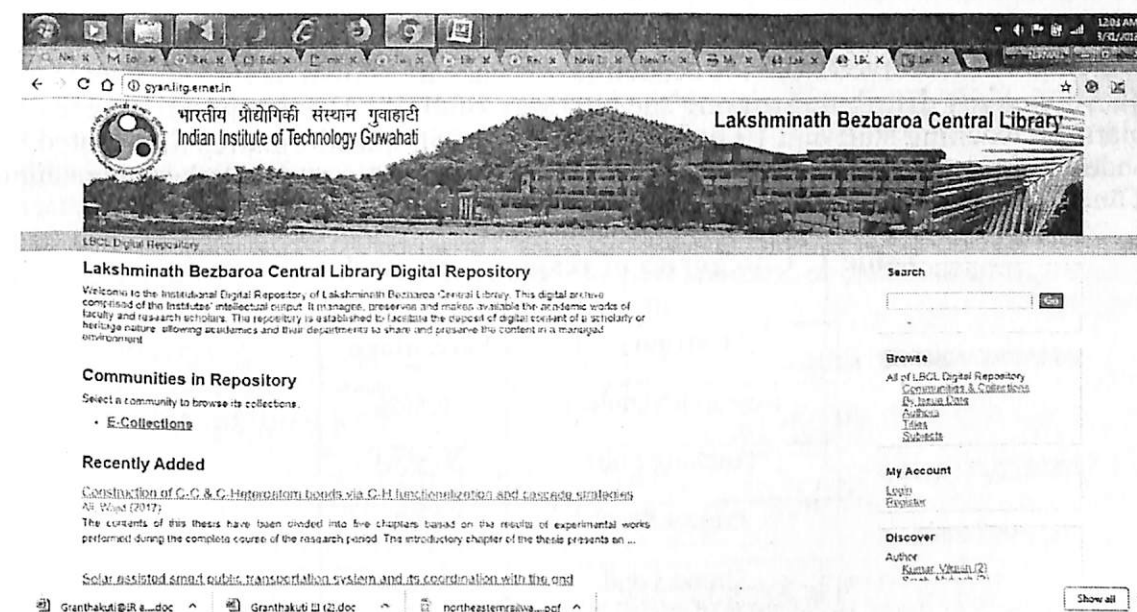
4. Methodology

For data collection a structured questionnaire was prepared which was distributed among the faculties, research scholars and project staffs under the study to find out the role of IRs in scholarly communication. During the survey, 50 questionnaires were administered to randomly selected 30 faculties, 10 research scholars and 10 project staff. Out of 50 questionnaires, 34 questionnaires were returned which includes 7 teaching staff, 24 research scholars and 3 project staffs. The basic research method used in the study is descriptive research in which questionnaire was to collect the opinions of different categories of users in contributing their publications in GYAN IR of IITG and the awareness among them about the IR. The filled up questionnaires were organized, analysed and coded. The questionnaires were prepared in simple and structured language. The questionnaire consisted of both open ended and close ended questions.

Moreover, a semi-structured interview with the administrator or developer of the GYAN IR of IITG at the study site was carried out to explore how they currently used the technology for the IR, how they think about the importance of the IR and how many staff were involved for developing the IR.

5. Data Analysis

5.1 Categories of respondents:

The category-wise details of the questionnaires distributed to sample population and the responses received from the academic scholars are shown in Table1. There were 50 questionnaires distributed among the IR users of IITG. They include 30 research scholars, 10 teaching staff and 10 project staff. Out of 50 questionnaires distributed 34 repondents 68% of the totals were received. This includes 24 research scholars, 7 teaching staff and 3 project staff.

Table 1: Categories of respondents under the study

Category	Percentage
Research Scholars	70.59%
Teaching Staff	20.59%
Project Staff	8.82
Grand Total	100%

5.2 Awareness of respondents towards the GYAN IR of IITG:

Respondents were asked question on their awareness about the GYAN IR. The level of awareness among the respondents is found to be higher.

Table 2: Awareness of respondents towards the GYAN IR of IITG

Responses	Percentage
Yes	76%
No	24%
Grand Total	100%

5.3 Previous experience with IRs

Table 3 shows the previous experiences among the different categories of users with IR. The level of experiences among the respondents is found to be very less.

Table3: Previous experience of respondents with IRs

Responses	Percentage
Yes	29%
No	71%
Grand Total	100%

5.4 Level of willingness of respondents to add contents to the GYAN IR

Table 4 shows the level of willingness among the respondents to contribute the contents to the GYAN IR of IITG. Many of the respondents are interested to contribute contents to IR departmentally.

Table4: Level of willingness of respondents to add contents to the GYAN IR

Level	Percentage
Individual	32%
Department	38%
Both	24%
None	6%
Grand Total	100%

The overall analysis of table 4 indicates that out of 34 respondents, 38% are willing to contribute content to IR departmentally. 32% of the respondents of IITG are willing to contribute content individually. Some of the respondents i.e. 6% are not willing to contribute any contents to the IR. It is remarkable that 24% of the respondents are interested to contribute contents to the GYAN IR of IITG both department and individually.

5.5 Types of material respondents are willing to contribute in GYAN IR of IITG

Table 5 shows the materials that the respondents are interested to contribute to the GYAN IR of IITG. Here respondents are allowed to select more than one response. As such, it can be seen that the respondents are willing to contribute a variety number of materials to the IR.

Table5: Types of material respondents are willing to contribute in GYAN IR of IITG

Material	Percentage
Scholarly books	32%
Journal articles	38%
Pre-prints	64%
Course materials	66%
Thesis & Dissertation	10%
Project reports	30%
Audio/video	-

The overall analysis of Table 5 shows that majority of the respondents expressed their willingness to contribute Pre Prints and Course Materials in GYAN IR of IITG.

5.6 Important factors that will make GYAN IR a valuable tool

Faculty, research scholars and project staff of IITG were asked to admit their view points regarding certain factors that would make GYAN IR a valuable tool for them. Responses were obtained from them on these factors on a scale ranging from critical at one end and insignificant at the opposite end which were assigned a scaled weightage of five and one respectively. The mean value of the responses are tabulated below-

Table 6: Important factors that will make GYAN IR a valuable tool

Factors	Responses (Mean value)
Provision of Pre-print version	3.6
Provision of Faster publishing	4.1
Provision of Long term preservation	4.3
Provision of Easy search and location	4.4
Provision of finding current research outputs	4.3
Provision of knowing ongoing researches/projects	3.6
Provision of creating online peer-reviewed journals	3.9

a) Make preprint versions available to worldwide audience :
From Table 6 it is evident that the mean value for this factor is 3.6 on a scale of critical with weightaged five and insignificant with weightaged one.

b) Make research outputs faster than the traditional publishing process:
From Table 6 it is evident that the mean value for this factor is 4.1 on a scale of critical with weightaged five and insignificant with weightaged one.

c) Provide a long term preservation of digital materials :
From Table 6 it is evident that the mean value for this factor is 4.3 on a scale of critical with weightaged five and insignificant with weightaged one.

d) Make easy searching and locate research outputs:
From Table 6 it is evident that the mean value for this factor is 4.4 on a scale of critical with weightaged five and insignificant with weightaged one.

e) Allow the researchers to search most current research findings of the institution :
From Table 6 it is evident that the mean value for this factor is 4.3 on a scale of critical with weightaged five and insignificant with weightaged one.

f) Provision of knowing ongoing researches/projects :
From Table 6 it is evident that the mean value for this factor is 3.6on a scale of critical with weightaged five and insignificant with weightaged one.

g) Provide a way to create online peer-reviewed journals :
From Table 6 it is evident that the mean value for this factor is 3.9 on a scale of critical with weightaged five and insignificant with weightaged one.

6. Findings

An IR is a tool useful to all academies and the best tool for resource sharing for providing services to the users or members of its community for the management and dissemination of digital materials created by the academic institutions. The present study is aimed to make an overall study of the IR of the IITG with various issues related to it. The study is intended to examine the impact of IRs in scholarships.

6.1 General findings:

Objective 1: *To identify the software package used, staff involvement and content coverage of the Gyan IR in IITG*

i) For developing the IR of IITG DSpace software package was used.

ii) The IR of IITG was developed by trained in-house man power.

iii) Regarding content coverage till March, 2018, the Gyan IR of IITG had only one community called E-Collections. Again within this community there are two sub communities namely M. Tech./ M. Des Theses and Ph.D. Theses. Within these two sub communities collection are entered department wise. Again 14 of departments contributed their collections here; and the department of Chemistry is on the top rank with 152 number of collections followed by department of Biosciences and Bioengineering with 96.

Objective 2: *To examine the awareness among the research scholars and faculty towards the IRs.*

i) The awareness among the research scholars, project staffs and faculty towards the IRs is found to be higher.

ii)   It is remarkable that many of the respondents are knowledgeable about the concept of GYAN IR of IITG

Objective 3: *To identify the resources that the student and faculty members are interested to contribute to IR in IITG. To identify the factors that would make IR a valuable tool in scholarship among students and faculty in IITG.*

i) It is found that a the research scholars, project staff and faculty members are interested to contribute a number resources of to the GYAN IR of IITG. Ofcourse majority of the respondents prefer most preprints and course materials to contribute in GYAN IR of IITG.

Objective 4: *To identify the factors that would make IR a valuable tool in scholarship among students and faculty members in IITG.*

i)   According to the respondents, IR is a valuable tool from various different factors such as easy searching and locates research outputs, long-term preservation of digital materials, to search most current research findings of their colleagues etc.

6.2 Findings from interview:

6.2.1   From interview the researcher found that all the staffs which are engaged in developing the IR are trained.

6.2.2   There are currently 678 items available in institute IR.

6.2.3   They used DSpace software package for developing the IR.

6.2.4   The main motivational factor for establishing GYAN IR were (a) to enhance the visibility of the institutions outputs. (b) To provide free access to the institution research output.

6.2.5   To preserve the institutions research output. (d) To help evaluate researchers and departments.

7. Suggestions

7.1   As the GYAN IR has uploaded only the Masters and Ph. D. theses, it should also include other institutional outputs like books, journal articles, conference proceedings, seminar papers, patents, institutional magazines, question papers etc.

7.2   The contributors of the GYAN IR should be trained for self achieving.

7.3   Library should take some initiatives like user education programme, organizing seminars, workshops etc. to create awareness among the library users regarding the GYAN IR.

8. Conclusion

Communication of research is important for awareness and publicity. But the traditional process of communicating research findings in journals etc. is costly and time consuming. Open access publishing such as Institutional Repositories presents an exciting alternative which is free of cost and very prompt. But the development of IRs is still in the initial stages and lots of research studies are being carried out to make it more successful. Many higher education institutions have already built their own IRs and their study is important to collect data for feedback and necessary improvements in performance and content building. The present study is being conceived with such broad objectives. The present study has tried to throw light on the impact of GYAN IR on the scholarship of IIT, Guwahati. The study has also tried to build awareness among the research scholars and faculty members on IR. This study therefore carries immense importance for academic institutions to understand various issues that need careful attention for successful implementation of an IR.

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Collection Development in College Libraries of Chirang District: A Survey

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Abstract
Collection development is one of the indispensible domains of modern library management. It is considered as the base to serve the needs of the library users. Collection development encompasses many activities pertaining to library collections like users need assessment, collection analysis, selection policy, budget management, planning for the future enhancement of services etc.

The study examines the collection development in five college libraries of Chirang district. The questionnaires were distributed among the librarians of the respective colleges during the year 2016-2017. The data retrieved were analysed using frequency count and simple percentage. The present study demonstrates the process of collection development in the college libraries under study, use of methods and tools for book selection, role of library committee, fund allocation, etc. And the finding reflects lack of library committee and collection development policies, low faculty involvement in book selection, insufficient staff to handle the collections, etc. In conclusion, library professionals should take utmost care in developing a balanced collection, and must have the support from the head of the institution regarding fund allocation, technical support, etc. which enhances the quality of the library.
Keywords : Collection Development, College Library, Chirang District

1. Introduction :

Collection development is the progress of acquiring library materials in the area of librarianship to provide effective services to its users. "Collection development is one of the most challenging and imaginative processes of the library profession whereby, the library staff acquires a variety of materials to meet the demand of its users" (Patel, 2016, 62p.). Permer discussed that "Collection developments involve understanding the nature of requirements of users and anticipating their demands. then follows the selection and matching of available information resources with user requirements and their anticipated as well as

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currents demands in other words selection of items and the actual process of acquiring them constitutes in itself a wide area of professional work. Collection development is not just equivalent to acquisition of documents but much more than that. Acquisition of documents consists of selection and procurement of documents. Document selection is a highly professional work. Acquisition work involves three sets of people viz., (i) Library management and users (ii) Librarian and library staff (iii) Publishers and suppliers".(Permer, 2012,49p.)

Thus, for effective collection development other than the librarian collective cooperation of different experts are required like subject experts, technical experts, collection developers etc.

2. Collection Development What Does It Mean?

Collection development simply means that progress of librarianship activities to manage, build and maintain collections & resources for the particular libraries. According to (Ishwarlal, 2013. 6p.) collection development includes the following:

- ➢ Selecting titles to acquire in all formats.

- ➢ Establishing and managing approval plans.

- ➢ Monitoring the curriculum and developing relationships with the faculty who shape it.

- ➢ Developing the fiscal resources required to support these needs.

- ➢ Determining conservation treatment or replacement.

- ➢ Selecting resources to be reformatted to expand their utility and extend their usefulness.

- ➢ Selecting titles to withdraw from the collection.

- ➢ Negotiating license terms that are cost-effective and permit the broadest possible use.

- ➢ Determining the titles that are moved to off-campus storage and develop recall mechanisms that meet research needs.

It's worth mentioning that collection development in academic libraries engulfs many activities to support the curriculum as well as to cope with future demands of the users.

3. Collection Development Process

The process of collection development consists of different steps which enbales the library professional to collect and evaluate the quality of library materials. According to Ratha (http://www.clib.dauniv.ac.in/E-Lecture/Collection%20Development.ppt) some of collection development processes are following:

- ➢ Decide objectives of collection development.

- ➢ Create a collection development process in written.

- ➢ Make a selection committee.

- ➢ Select reading materials according to different criteria and features.

- ➢ Take a sanction of selected reading materials from library authority.

- ➢ Select distributor or vendor and commit to ordering, delivery and receiving process.

- ➢ Coordinate selected reading materials with available budget.

- ➢ Make a list and ordering of selected reading materials.

- ➢ Receive and check ordered material.

- ➢ Replace damage reading material.

- ➢ Reminder to distributor or vendor.

- ➢ Physical process of reading materials.

- ➢ Shelving of reading materials.

- ➢ CREW (Continuous Review, Evaluation and Weeding)

Thus, collection development processes solicit lot of deliberations while selecting and maintaining the library resources to serve the users. In this instance to assess the future needs of the users Librarians must also have the farsightedness.

4. Need and Importance of the Study

The study aims to focus the some of the aspects of collection development in five college libraries of Chirang district under study namely –Bijni College Library, Bengtol College Library, Sova ram Borgoyari College Library, Upendra Nath Brahma College Library, and Basugaon College Library. For the better services to the users –faculties, students and staff library must have the strong collection catering to the need of the uers. Collection should not only reflect the huge numbers of collection but in the real sense utility of the collection satisfying the various needs of the different users. Thus, the findings of the study are expected to highlight some of the basics of collection development.

5. Statement of the Problem

The major problem in collection development is lack of required support from the head of the institutions, unavailability of collection development policies which is very crucial for the same, lack of adequate library budget and insuffient supporting staff. Therefore, the study is takenup so as to address some of the problems regarding the collection development.

6. Objective of the Study

This study consists of following objectives:

a) To highlight the growth of users and staff strength of the Chirang district college libraries under study.

b) To study the printed collections of the libraries under study.

c) To study the role of members of library committee and the role played by various bodies in the selection of books.

d) To focus on the use of book selection tools and methods of the libraires.

e) To study the purchase and amount spent on library collection of two consecutive years.

7. Scope and Limitation of the Study

a) Out of seven colleges in Chirang district, B.T.A.D, (Assam) the study is limited to five college libraries of the same district.

b) The study will cover the nature of collection building and its management.

8. Methodology of the Study

For collecting primary data, questionnaire method has been used. Besides, many econdary sources of information have also been refered which are required for the study. And for anlysing the primary data collected through questionnaire basic statistical techniques and methods in the form of tables, figures, charts and percentages have been taken up.

9. Literature Review

Many authors have written on various aspects of collection development in different LIS journals and conference proceedings. Besides, many research works have also been reported. To serve the study many related secondary literatures have been reviewed. Some of the reviewed papers/articles are:

Patel (2016) discussed the importance of collection development in libraries. Moreover, he highlited various factors needed to be considered for enhancing the quality of collection of the library.

Rahman and Darus (2004) highlighted the faculty participation in the collection development of the library, thus bring forward some recommendations that might be useful for the library to further improve its services.

Adekanmbi and Boadi (2008) emphasized the various challenges faced by Botswana academic libraries in collection development. And one of the major constrain is lack of proper trained and skills of librarians to manage the libraries.

Stephen (2015) highlighted various strategies by which collection development and management can be actualized and utilized.

Ghosh and Panda (2010) provides a clear image of the current status of serials collection in the libraries attached to the Premier Institutions of India which are concern to the field of science and technology to boost up the academic performances.

10. Data Analysis and Interpretation

The analysis and interpretation of the responses received through questionnaire from the librarians about collection development in the Chirang district college libraries under different headings are given below:

10.1. About the College Libraries of Chirang District Under Study

The 5 college libraries of chirang district under study namely: Bijni college library, Bengtol college library, Sova Ram Borgoyari college library, Upendra Nath Brahma college library, and Basugaon college library have professionally qualified librarians. Three librarians i.e Basugaon College, Sova Ram Borgoyari and Bijni College have MLISc degree whereas the librarians of Upendra Nath College and Bengtol College have both MLISc and Ph.D degree. Out of 5 librarians, only one librarian is female serving in Upendra Nath Brahma College, Kajolgaon. So far the automation of the library is concerned two 2 libraries (Bijni College library and Bengtol College library) is fully automated using SOUL 2.0.

Regarding the work experiences, 2 college librarians i.e. Bengtol College and Bijni College have 6-10 years work experiences. Whereas the librarians of Sova Ram Borgoyari college library, Upendra Nath Brahma college library and Basugaon college library have less than 5years, 11 – 15 years and 16-20 years work experiences respectively.

10.2. Year Wise Growth of Types of Users in the Last Two Years

The year wise growth of different types of users in Chirang district college libraries during the year (2016-2017) is shown in the table 10.2. All the five college libraries have total 7585 growth of users. The table shows that the highest growth of the users are from degree students, scoring 5762 (75.97%) and less are from others, scoring 8 (0.11%). The year wise analysis shows that 2016 is the highest growth of users, scoring 3844 (50.68%) in the last two year.

Table 10.2. Year Wise Growth of Types of Users in the Last Two Years

S/N	Users	2016	2017	Total
1	Faculty Members	(2.4%) 182 (48.02%)	(2.6%) 197 (51.98%)	(5%) 379
2	H.S Students	(9.23%) 700 (50%)	(9.23%) 700 (50%)	(18.46%) 1400
3	Degree Students	(38.77%) 2941 (51.04%)	(37.19%) 2821 (48.96%)	(75.97%) 5762
4	Administrative Staff	(0.22%) 17 (47.22%)	(0.25%) 19 (52.78%)	(0.47%) 36
5	Others	(0.05%) 4 (50%)	(0.05%) 4 (050%)	(0.11%) 8
	Total	3844(50.68%)	3741(49.32%)	7585(100%)

10.3. Staff Strength of Library at Present

The staff strength of Chirang district college libraries are presented in the table 10.3. The table shows that the highest numbers of staff is from Bijni College Library having 8 staffs, followed by Bengtol College Library having 7 staffs. Whereas the Sova Ram Borgoyari College Library and Upendra Nath Brahma College Library have 4 staffs each. And Basugaon College Library has the lowest number of staff of 3.

Table 10.3. Staff Strength of Library at Present

S/N	Name of the college	LI	AL	LA	SS	LAT	TA	DO	SA	OT	Tot
1	Bengtol College	1	1	2	2	1					7
2	Sova Ram Borgoyari College	1		2					1		4
3	Basugaon College	1		1		1					3
4	Upendra Nath Brahma College	1	1	1						1	4
5	Bijni College	1	1	1	1	1	2	1			8

Abbreviations

LI=Librarian, AL= Assistant Librarian, LA= Library Assistant, SS=Supporting Staff, LAT= Library Attendant, TA= Technical Assistant, DO= Data Entry Operator, SA =System Administrator, OT= Others.

10.4. Printed Book Collection of the Libraries

The collection of printed books of Chirang district college libraries are shown in the table 10.4. The table shows that the highest collection ranging 3 (60%) is between 10,000-20,000 volumes of printed books. The table also indicates that 1 (20%) of the libraries have less than 10,000 volumes of printed books and another 1 (20%) libraries has the collection between 20,000 –30,000. And none of the college libraries have the collection more than 300000.

Table 10.4. Size of Printed Book Collection

S/N	Size of Book Collection	No. of Responses	Percentage
1	<10,000	1	20%
2	10,000 –20,000	3	60%
3	20,000 –30,000	1	20%
4	> 300,000	0	0%
	Total	5	100%

10.5. Role of Members of Library Committee

The dominant role played by the members of the library committee at Chirang district college libraries is shown in the table 10.5. It is clear from the table that Principals of all the colleges under study are more concern to the respective libraries scoring 25.25% whereas the least concern is shown by the Chairman of the library committee scoring 15.15%.

Table 10.5. Dominant Role Played by the Members of Library Committee

S/N	Dominant Role Players in book selection Committee	Bengtol College	Sova Ram Borgoyari College	Basugaon College	Upendra Nath Brahma College	Bijni College	Total
1	Chairman	4	1	4	4	2	15 (15.15%)
2	Principal	5	5	5	5	5	25 (25.25%)
3	Members	4	4	3	4	4	19 (19.19%)
4	Department HOD	4	5	2	4	3	18 (18.18%)
5	Librarian	4	4	5	4	5	22 (22.22%)
	Note: Very Good=5, Good=4, Average=3, Poor=2, Very Poor=1						99 (100%)

10.6. Various bodies that play an active role in the selection of books

The active role played by various bodies in the selection of books in Chirang district college libraries are presented in the table 10.6. The table shows that, Head of the Departments are more active than the other bodies 23.91%. and the role of both Library Committee and Book Selection Committee is very remarkable which scores only16.3%.

Table 10.6. Various bodies that play an active role in the selection of books

S/N	Book Selectors	Bengtol College	Sova Ram Borgoyari College	Basugaon College	Upendra Nath Brahma College	Bijni College	Total
1	Library Committee	3	3	2	4	3	15 (16.3%)
2	Book Selection Committee	4	4	4	2	1	15 (16.3%)
3	Head of the Department	4	5	5	4	4	22 (23.91%)
4	Librarians	4	3	5	4	5	21 (22.83%)
5	Teaching Faculty/Users	3	5	2	4	5	19 (20.65%)
Note: Very Good=5, Good=4, Average=3, Poor=2, Very Poor=1							92 (100%)

10.7. Book selection Tools/Method

The details of various methods and tools used for book selection in Chirang district college libraries are shown in the table.10.7. The table depicts that the most of the book are received on approval from library committee and publishers catalogue which scores 14.29% each as compared to the other selection tools which are not referred commonly.

Table 10.7. Book selection Tools/Method

S/N	Book Selection Tools & Methods	Bengtol College	Sova Ram Borgoyari College	Basugaon College	Upendra Nath Brahma College	Bijni College	Total
1	Book exhibitions	3	4	3		4	14 (11.11%)
2	Book received on approval	4	5	-	4	5	18 (14.29%)
3	Book review on newspapers	4	-	-	-	-	4 (3.17%)
4	Bookseller's catalogue	4	-	4	4	-	12 (9.52%)
5	Catalogue of government publication	4	-	5	-	-	9 (7.14%)
6	Check the holding of other libraries	3	-	-	-	5	8 (6.35%)
7	High standards of quality in factual content and presentation	4	-	-	-	5	9 (7.14%)
8	Indian National Bibliography	4	-	-	-	-	4 (3.17%)
9	New Letters	4	-	-	-	-	4 (3.17%)
10	Online book stores	4	-	-	-	5	9 (7.14%)

11	Publishers websites	4	-	-	-	-	4 (3.17%)
12	Publisher Catalogues	4	-	5	4	5	18 (14.29%)
13	Subject Bibliographies	4	-	5	4	-	13 (10.32%)
Note: Very Good=5, Good=4, Average=3, Poor=2, Very Poor=1							126 (100%)

10.8. College/Year Wise Purchase of Books

The year wise purchase of books in Chirang district college libraries from (2016-2017) is shown in the table 10.8. All the five college libraries altogether purchased a total of 74614 books. The highest numbers of books are found from 'Bijni College' Scoring 38170 (51.16%) and less books are found from 'Sova Ram Borgoyari College' scoring 490 (0.66%). The year 2017 indicates the highest number of book purchased, thereby scoring 38187 (51.18%).

Table: 10.8. College/Year Wise Purchase of Books

S/N	College	2016	2017	Total
1	Bengtol College	(8.61%) 58580 (49.97%) yearly	(8.62%) 58640 (50.03%) yearly	117220 (17.23%)
2	Sova Ram Borgoyari College	(7.13%) 48500 (54.8%) yearly	(5.88%) 40000 (45.2%) yearly	88500 (13.01%)
3	Basugaon College	(10.32%) 70200 (50.39%) yearly	(10.16%) 69100 (49.61%) yearly	139300 (20.48%)
4	Upendra Nath Brahma College	(4.7%) 32000 (73.06%) yearly	(1.73%) 11800 (26.94%) yearly	43800 (6.44%)
5	Bijni College	(5.14%) 35000 (47.81%) yearly	(37.7%) 256500 (52.19%) yearly	291500 (42.85%)
	Total	244280 (35.91%)	436040 (64.09%)	680320 (100%)

10.11. College/Year Wise Amount Spent on Printed Journals

The amount spent by various college libraries of Chirang District on printed journals during (2016-2017) is shown in the table 10.11. The table depicts that Chirang district college libraries altogether have spent a total of Rs. 286685 /- on printed journals. The Bengtol College Library scores the highest of 68.12% by spending amount of Rs.195285 /- in printed journals and least amount is spent by Upendra Nath Brahma College Library by spending Rs. 6400 /- scoring (2.23%). The year wise break up indicates that in the year 2017 highest amount is spent on printed journals scoring 53.26%.

Table 10.11. College/year Wise Amount Spent on Printed Journals

S/N	College	2016	2017	Total
1	Bengtol College	(32.36%)92785 (47.51%)	(35.75%)102500 (52.49%)	195285 (68.12%)
2	Sova Ram Borgoyari College	-	-	-
3	Basugaon College	(6.28%) 18000 (45%)	(7.67%) 22000 (55%)	40000 (13.95%)
4	Upendra Nath Brahma College	(1.12%) 3200 (50%)	(1.12%) 3200 (50%)	6400 (2.23%)
5	Bijni College	(6.98%) 20000 (44.44%)	(8.72%) 25000 (55.56%)	45000 (15.7%)
	Total	133985 (46.74%)	152700 (53.26%)	286685 (100%)

10.12 College/Year Wise Amount Spent on E-Journals

The year wise amount spent on e-journal in Chirang district college libraries during (2016-2017) is shown in the table 10.12. In Chirang district only Bengtol College libraries has amount spent a total sum of Rs. 105500/- on e- journals. None of the college libraries spent on e-journals.

Table: 10.12. College Wise Amount Spent on E-Journals

S/N	College	2016	2017	Total
1	Bengtol College	50000 (47.39%)	55500 (52.61%)	105500 (100%)
2	Sova Ram Borgoyari College	-	-	-
3	Basugaon College	-	-	-
4	Upendra Nath Brahma College	-	-	-
5	Bijni College	-	-	-
	Total	50000 (47.39%)	55500 (52.61%)	105500 (100%)

10.13. College/Year Wise Growth of Books

The growth of books in 5 college libraries of Chirang district during the year (2016-2017) is shown in the table 10.13. Chirang district college libraries have altogether total of 77273 growths of books. The highest rate of growth of books is from Bijni College which scores 49.4% (38170) and least rate is from Sova Ram Borgoyari College scoring 0.63% (490). The year wise analysis shows that in 2017 the highest rate of growth is 52.42%.

Table10.13. College/Year Wise Growth of Books

S/N	College	2016	2017	Total
1	Bengtol College	(7.01%) 5417 (49.8%)	(7.07%) 5461 (50.2%)	10878 (14.08%)
2	Sova Ram Borgoyari College	(0.45%) 350 (71.43%)	(0.18%) 140 (28.57%)	490 (0.63%)
3	Basugaon College	(14.59%) 11277 (46.38%)	(16.87%) 13038 (53.62%)	24315 (31.47%)
4	Upendra Nath Brahma College	(2.91%) 2250 (65.79%)	(1.51%) 1170 (34.21%)	3420 (4.43%)
5	Bijni College	(22.61%) 17470 (45.77%)	(26.79%) 20700 (54.23%)	38170 (49.4%)
	Total	36764 (47.58%)	40509 (52.42%)	77273 (100%)

10.14. College/Year Wise Growth of Printed Journals

The year wise growth of printed journals in Chirang district college libraries during the year (2016-2017) is shown in the table 10.14. The table indicates that, Chirang district college libraries altogether have a total of 103 printed journals. Bengtol college library holds highest rate of growth of printed journals by scoring 50.49% (52) and least rate is reflected in Upendra Nath Brahma College library having 15.53%. The year 2017 has the highest rate of growth in printed journals scoring 52.43%.

Table 10.14. College/Wise Growth of Printed Journals

S/N	College	2016	2017	Total
1	Bengtol College	(25.24%) 26 (50%)	(25.24%) 26 (50%)	52 (50.49%)
2	Sova Ram Borgoyari College	-	-	-
3	Basugaon College	-	-	-
4	Upendra Nath Brahma College	(7.77%) 8 (40%)	(7.77%) 8 (60%)	16 (15.53%)
5	Bijni College	(14.56%) 15 (42.86%)	(19.42%) 20 (57.14%)	35 (33.98%)
	Total	49 (47.57%)	54 (52.43%)	103 (100%)

11. Findings

Major findings of the study are presented below:

11.1   Designation of majority of respondents is 'librarian' i.e. 5 (100%).

11.2   Majority of library users are Degree students of the college followed by H.S students.

11.3   Majority of college libraries have printed book collections between 10,000-20,000 volumes scoring 60 %(3) (Table 10.4).

11.4   Principals of the colleges under study play the most dominant role in Library Committee scoring 20.25% (Table 10.5).

11.5   Head of the Departments are more concerned to book selection than other selectors which scores 23.91% (Table 10.6).

11.6   Most of the books are received on approval and by referring to the Publisher Catalogues which scores 14.29% each (Table 10.7).

11.7   Bijni college library purchased highest number of books scoring 51.16% (38170) (Table 10.9) and also spent highest amount of Rs. 291500/- scoring (42.82%) on books (Table 10.8).

11.8   Bengtol college library has spent highest amount of Rs. 195285/- scoring 68.12% on printed journals (Table 10.11). And also has the highest growth rate of printed journals-50.49% (Table 10.14).

11.9   Only Bengtol College library has spent a total of Rs. 105500/- on e- journals during the year 2016-2017 (Table 10.12).

11.10   The highest growth of books is reflected in Bijni college library, scoring 49.4% (38170) (Table 10.13).

The overall impression of the study is that the libraries under study do not have the definite collection development policy. The fund allocation to the library is also not sufficient. Majority of the college libraries of chirang district do not have well coordinated library committee and book selection committee as well.

12. Suggestions

12.1   Fully automated library is instrumental in creating a balanced collection of resources- printed as well as the electronic resources.

12.2   Insufficient professional staff is the issue for all the academic libraries, thus for the collection development in this technological era Libraian are compelled to confine himself/herself in the monotonous work of the library. Thus, required more professionally qualified supporting staff so that the Librarians can be able to engage in the process of proper collection development.

12.3   Users need analysis is prerequisite for framing a comprehensive collection development policy, which in turn helps in proper budget planning/ allocation for the library.

12.4   Every library must have collection development policy and the strong library committee to give internal support to the library.

12.5   Librarians should play active role in the selection of books.

12.6   Every library should use different kind of book selection tools.

12.7   Libraries do not have sufficient journals both printed and non-printed, thus library should subscribe it to fulfill user demand.

12.8   Weeding out policy is also indispensible to accommodate the diverse needs of the users.

Collection development is the collaborative work of library staff, and the academic staff so far the selection of books is concerned. Moreover, technical staff and administration are also indispensable.   So they must work hand in hand. Thus, it involves different interdependent acvtivities:
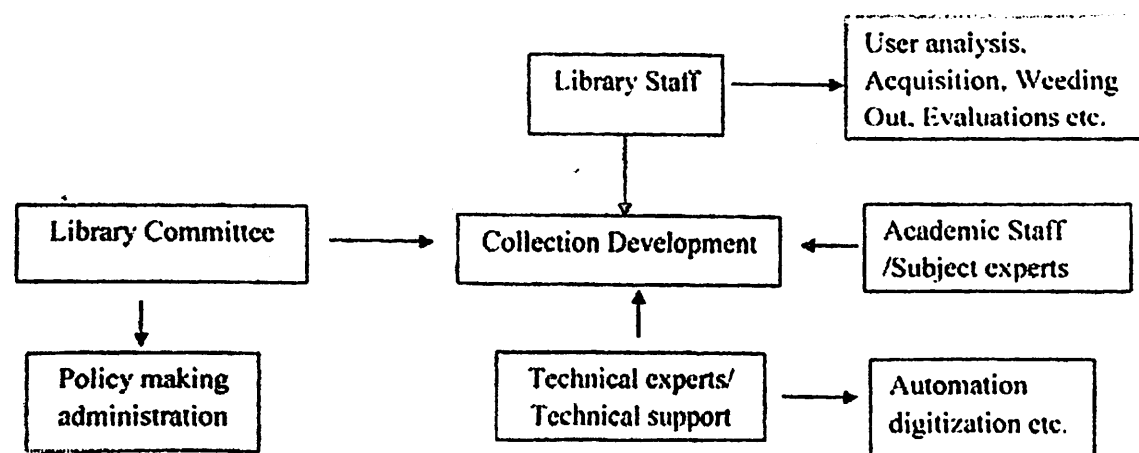
13. Conclusion

Collection development is the process of systematically collecting of the library resources. To provide seamless services to the users, proper collection development must be taken care. Lack of support from the head of the institutions, poor library budget allocation, unvailability of collection development policies, low faculty involvement in the selection of resoucres pertaining to their concern subject, lack of proper use of book selection tools, and inadequate professionally supporting staff should not be the constrain in collection development process. As the education all over world is considered as the tool to vanish barriers among the mankind, educational institutions all over the not only provide academic pursuits but also provide a scope for becoming better human beings. And library is one of the inseparable parts of these instituions so every aspects of the library should be considered crucial for the better tomorrow.

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"Role of Library in Rural Development : An Overview"

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ABSTRACT

Rural libraries have tremendous potential to play an active role in community economic development. Libraries are a national choice for facilitating economic development activities in rural communities short of resources commonly available in more heavily populated areas. Rural libraries are an important entity in local communities, particularly in rural and disadvantaged communities. They are more than shelves of books. Rural library offers an even changing range of cultural resources for the community and they have become a type of social and cultural in situation. The article discussed the broadly accepted conceptualization of information for development of their economic and social condition.

Key Words : Rural Library, Rural community, Economic development, Information seeking, Library services.

1. Introduction :

The rural library plays an important role for local community development and socio-economic development. In this context, the rural library can be viewed as a social and cultural institution that offers an ever changing range of cultural resources for the community. This can be particularly important in rural and disadvantaged communities. This role for rural libraries often remain unrecognized and the major challenge is how to capitalize on the rural libraries' potential contribution to economic and community development. In the development of socio–economic, education, cultural upliftment of the community, there is a need to see the rural library as an agency which emphasizes the development of various groups of the community by providing appropriate information. The library functions should change with the changing social conditions. To improve quality of life and potential of the rural people to participate in knowledge based society. There is a need of rural libraries in a rural area for the spread of knowledge and information to the rural community. For the benefit of rural people and to support the rural activities, there is a need of rural libraries with all the required facilities. Rural library help to the rural community keeping fresh their knowledge by providing needed information of the rural community. Thus there is a need of rural libraries which are useful for upliftment of rural community.

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2. Rural Library : It Concept :

A library is an organised collection of information resources made accessible to defined community for reference or borrowing. It provides physical or digital access to information. A library is organised for use and maintain by a public body an institution or a private individual. Public and institutional collections and services may be intended for use by people who choose not to or cannot afford to purchase an expensive collections themselves. In addition to providing materials, libraries also provides services of Librarians, who are experts at finding and organizing information and at interpreting information needs. Library also provide public facilities for access their E-Resources through Internet to get the information.

According to the mode of services rendered to the users, libraries are divided into different types as- Academic Library, Special Library, Rural Library, ??????? etc. But, in this paper we have to discuss on rural library and its role in rural development. Rural Libraries are huge assets in rural areas. In a knowledge based society it plays an important role in helping rural residents learn and communicate.

3. Dimension and Coverage of the study:

The proposed theme of present paper seeks to study the following objective – Role of Rural Library on Rural Development. This paper investigates how for a Rural libraries activities in practise contribute towards the achievement of social objectives. Several frequently used library services have been selected for analysis for this purpose. The library services include these categories – Library collections, circulations, reference transactions, programming and e-resources. However, through this paper, we have to get that how to develop in rural areas by the Rural Library.

4. Literature Review :

The Review of Literature is key component of any research study and process. It is a source from where research ideas are drawn and further developed into concepts and finally into theories. The Review of Literature suggests new avenues of approach to the solution of chosen problem. Therefore, some of the important articles have been reviewed.

Islam & Ahmed (2012) intended to explain the Library services available to rural people and an outline of focus group discussions conducted in the Northern districts of Bangladesh. This paper is divided into two sections. The first section describes services of Rural Libraries in Bangladesh. The second section discusses the Role of Rural Libraries in the Development of Community.

Ali Anvar (1996), conducted a study on Community Information Services(CIS) where the author shows another Community information services centre that was introduced by Public Libraries. Library services in South East Asia which donot cover most of the rural people, Venture into CIS is suitable to identify there is actual requirement. The Author shows how the CIS is meeting up the demand of information and discusses different CIS models.

Behera & Parida (2014) covers of basic information about Library consciousness, status, facilities in rural areas by the different communities, the membership of Libraries and reasons for not using the libraries by the communities. The purpose of the users to visit the library is to use the library materials. The sources of benefit by users and impact on socio-economic development as global information of social, cultural, political and economical help by the Library. The aim of this study determining and concerning information of society for benefit by different communities in day to day life.

5. Services of Rural Library :

The Rural Library plays an important role in rural society. The library provides various types of services to the rural people. Rural library provides information to develop the socio-economic development of rural areas. The rural Library provides these services –

5.1 Information and Referral Services :

Information and referral services guide people to sources of information and to agencies capable of handling problems or questions. Library participating in information and referral services generally have a referral network and calendar of community events. Libraries are at the forefront in providing information and referral services in rural areas.

5.2 Outreach Programmes:

Outreach Programmes are organised to meet the information needs of the rural Population. The objectives are awareness of library and information resources and the creation of a reading habit among rural dwellers. Distance learning and other educational programmes can also be extended to rural areas. A well planned library outreach programme can improve the quality of life in rural areas.

5.3   Current Awareness Programmes (CAS) :

Rural Library provides current awareness service (CAS). This is service based on farming seasons, pond management, agricultural marketing authorities, market prices etc. as well as general information on health and nutrition, infant care, loans and financial aid. CAS keeps the users up-to-date, saves time, helps create new ideas, saves time and money spent on journals and reduces paperwork.

5.4   Selective Dissemination Programme (SDI) :

To effectively render SDI service, the librarians must have a profile of the client.. When the information needs of the rural population are identified, such service will be relevant to them. Generally rural people are illiterate or semi literate. Libraries exist to serve as many people as possible, disseminate information, preserve culture and contribute to intellectual and social life. Therefore, information pertaining to fishing and farming activities of rural areas needs to be repackaged in local language and dissemination to all of categories of users.

5.5   Library services to Children :

Children need the library for lifelong education in consonance with the national educational policy. Extending library services to children is essential for universal basic education to succeed. Library is a place where teachers and pupils come into contact with the world, that is where they acquire the general knowledge which forms the basis for all further learning.

6. Impact of Rural Library on Rural Development :

A gateway to knowledge and culture, Libraries plays a fundamental role in society. The resources and services, they offer to create opportunities for learning, support literacy and education, which help to shape the new ideas and perspectives that are central to creative and innovative society. Quite simply, Library offer a means by which we can gain access to knowledge...

6.1 Supporting Education :

Libraries are synonymous with education and offer countless learning opportunities that can fuel economic, social and cultural development. Because libraries continue to provide access to knowledge, learning and ideas. Libraries also make interlibrary loans possible, providing local access to materials that normally reside in a library hundreds, or even thousands of miles away.

6.2   Preserving Cultural Heritage:

Recognizing the cultural importance of sharing, Mahatma Gandhi said that, "No can live, if it attempts to be exclusive." Thus stimulus to share and reuse information and knowledge comes in many guises. Perhaps the most deep-rooted of our human instincts is the desire to preserve our culture for future generations. This is one of the most important functions of Libraries. Libraries are rich repositories of historically and culturally significant collections, many of which are not available anywhere else in the world.

Thus, the Rural Library plays an important role on society. The users get the various types information from the Library, which are important for their day to day life. In a knowledge based society, information are most important. A society will be developed by the information.

7. Present scenario of building up Rural Library in Assam :

Libraries in Assam face several limitation for which the library doesn't happen at a distinct height. Though, Rural Library is a important for the rural areas, but there are some drawbacks towards the rural library. The main causes are the insufficient condition of fund and lack of optimistic approach towards

library development. The main problem of Rural Library in Assam is lack of awareness of rural people and to some extent the negative attitude of rural people. Also the libraries have limited budgets and lack of skilled manpower and these are also causes of rural library development. However, the rural libraries of Assam have not made equal progress in rural areas. Librarians, Library sponsors and supporters and above all, the government must help the to develop the rural library to meet the users demands of the users, which helps towards the development of Rural Areas.

8.Suggestion :

The following suggestions are important to library services in Rural Areas.

8. 1   Adequate funds should be made available to the acquisition of information resources and the provision of quality library services to the rural population.

8.2   Training and retraining of staff in ICT and related areas should be continuous exercise in our libraries.

8.3   The government should make a deliberate policy that ensure that libraries in rural areas have internet connectivity.

8.4   Information and Communication infrastructure should be given urgent attention as appropriate to the present global information economy.

9. Conclusion :

Library services are essential to the educational, political and social development of the rural population. The information gap between the urban and rural areas can be bridged by effective library services. Rural development has always be the priority focus of any government. So, the government provide various facilities and rural library is one of these facilities. The purpose of this paper is to discuss the role of rural libraries of development activities and programmes. Rural library has always been viewed as vital thing in the development of communities, particularly in a rural and disadvantaged community. It has been established as an essential element to provide essential information for the Rural Development.

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Bibliometric Study of the Research Publications of the Scientists of Indian Institute of Chemical Biology (IICB), Kolkata

*Dr. Jyotika Borthakur

Abstract

Due to Development of Information and communication Technologies, scholarly communication are challenging Research and Development Institution's libraries to find new ways to engage with research communities. In modern library management system, librarians are engaged in innovative works in the areas of bibliometrics, scientrometrics, etc. The study has been made to find out the research output of the scientists working at Indian Institute of Chemical Biology, Kolkata. The study analyses the year wise, subject wise, source wise, document type wise, country wise distribution of publications. It also made an attempt to find out the most renowned author of IICB during the period of 2009 to August 2018.

Keywords: *Bibliometric Study, Research Publications, Scientists, Indian Institute of Chemical Biology*

1. Introduction

The continuous and progressive trend of achievement of a scientific institution is directly related to availability of latest information to its S & T users. Research and development institutions are the place where knowledge is being generated by the research activities of scientists. The quality of a scientific organization's is measured on the basis of number of patents designed and commercialized, publications, Impact factor (IF) earned. The term Bibliometric is mainly used for quantitative evaluation of the institutions/ organizations publication, journal articles, book publications, etc. It is quantitative evaluation of the publications of the institutions/organizations publications. In this paper

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the author has made an attempt to study the scientific productivity of the scientists of IICB, Kolkata with the help of SCOPUS database. SCOPUS is the largest abstracting and citation database of peer-reviewed literature and quality web sources. The present study has been mainly based on the data extracted from SCOPUS database. The Indian Institute of Chemical Biology was established in 1935 and was included under Council of Scientific and Industrial Research (CSIR) in 1956. It has developed many technologies. Since its inception the institute have promote conducting multidisciplinary basic research on infectious diseases. The research outputs of the scientists of IICB have been published nationally and internationally. The author has made an effort to study the scientific productivity of the Scientists of IICB from 2009 to August 2018 indexed in SCOPUS database.

2. Review of Related Literature

Barooah, et al. (2002) has been conducted a study on bibliometric analysis of citations of doctoral theses submitted to various universities by the S & T workers in the field of organic chemistry since 1977 to 1997. The study has been carried out to determine the use pattern and publication trends of literature in the area of organic chemistry.

Hazarika (2005) has been conducted a study on information use pattern of Indian Forestry Scientists. The study mainly discussed the need, type of information and use of information by the forestry scientists. The study is based on the citation analysis of the research papers published during 2000 to 2002 in the Indian Journal of Forestry. In the study, the author has prepared a rank list of forestry journals published in India and abroad on the basis of number of citation received by the author.

Varghese and Ranjan (2009) in their study mainly analyzed the 632 publications of scientists of Rajib Gandhi Centre for Biotechnology (RGCB) during 1995-2006. The study revealed that the publications of RGCB scientists include journal articles, conference papers, patents, book chapters and PhD guided publications. The productivity of the RGCB scientists shows substantial growth both qualitatively and quantitatively.

Mondal and Raychoudhury (2018) have been conducted to analysed 1909 citations mentioned in 149 published papers of IASLIC Bulletin during 2010-2016.

The study has found the year-wise, trend of publications, types of cited documents, authorship pattern, collaboration, country-wise distribution, etc.

3. Objectives of the Study

The main objectives of the study are given below:

a)   To indentify the year wise distribution of publications of IICB, Kolkata;
b)   To find out subject wise distribution of publications;
c)   To study the productivity of IICB by publications source wise;
d)   To find out the number of publications document type wise;
e)   To analyze country wise distribution of publications;
f)   To find out highly productive author.
g)   To analyze the number of publications by affiliation wise..

4. Methodology

The present study is the Bibliometric analysis of the research publications of the CSIR- Indian Institute of Chemical Biology indexed in the SCOPUS database. It is limited to only impact factor, peer-reviewed article published in the scholarly journals by the scientists of IICB, Kolkata during 2009-2018 and that has been available in SCOPUS database. The data has been exported from the SCOPUS database in the form of .csv file.

5. Trend of Research Publications of IICB

5.1 Year Wise Distribution of Publications of IICB

The table 1 and figure 1 depicts the year wise distribution of publication of the IICB scientists. The study revealed that since 2009 to August 2018, total number of 2035 research publications has been published from IICB indexed in SCOPUS database. The publication trend of IICB shows that highest 274 (13.46%) number of publications has been published in the year 2016 followed by 253 (12.43%) papers in 2014, 237 (11.65%) papers in 2013, 230 (11.30%) papers in 2015, 219 (10.76%) in

the year 2012. The table shows that the less number of papers has been published in the year 2009 with 156 (7.67%) numbers and up to July, 2018 the total number of 134 (6.58%) papers has been published from IICB.

Table 1: Year Wise Distribution of Publications of IICB

Sl. No.	Year	No. of Publications (N=2035)	Percentage %
1.	2009	156	7.67
2.	2010	159	7.81
3.	2011	190	9.34
4.	2012	219	10.76
5.	2013	237	11.65
6.	2014	253	12.43
7.	2015	230	11.30
8.	2016	274	13.46
9.	2017	183	8.99
10.	2018	134	6.58
	Total	**2035**	**100**

Source: Exported from the SCOPUS Database (14-08-2018)

Figure 1: Year Wise Publication of IICB
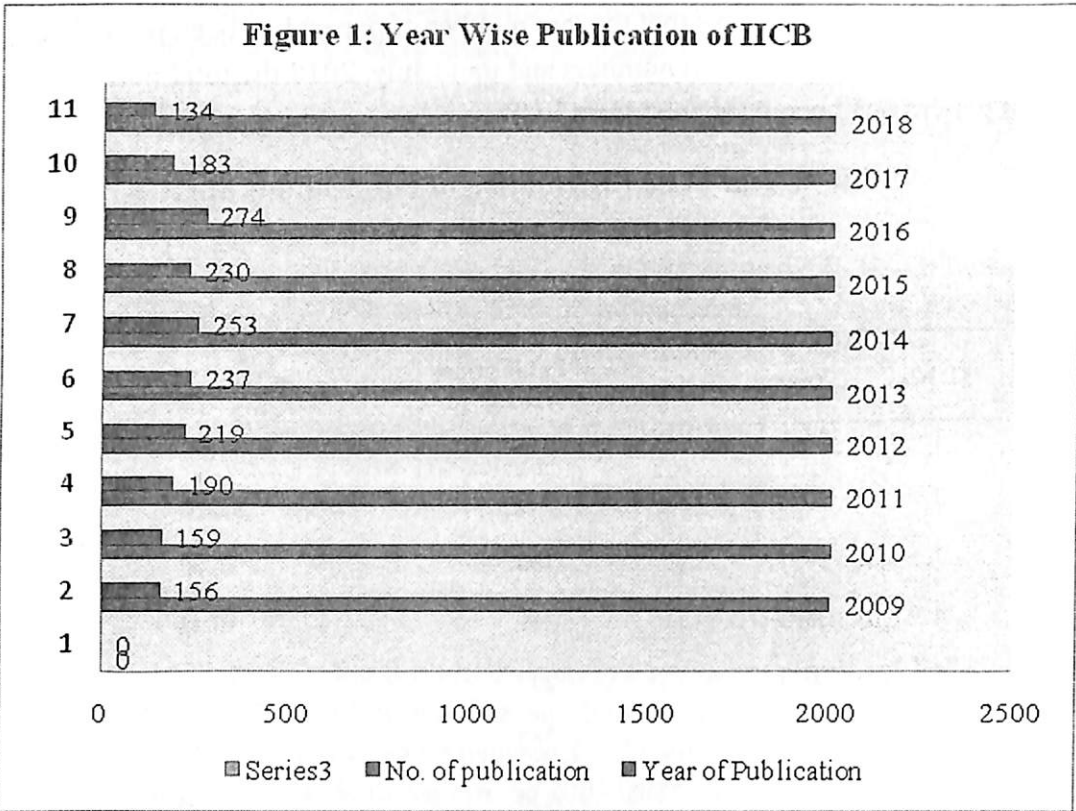
5.2 Distribution of Publications of IICB by Subject Area Wise

The table 2 and figure 2 analyzed the subject wise distribution of research publication by IICB scientists. Out of the total 2035 number of research publications maximum of 1023 (50.27%) documents has been published in the areas of Biochemistry, Genetics and Molecular biology followed by 472 (23.19%) in Chemistry, 343 (16.86%) in Medicine, Pharmacology, Toxicology and pharmaceutics and 207 (10.17%) in Chemical Engineering. In other subject areas the number of publications has been found less than 10%.

Table 2: Distribution of Publications of IICB by Subject Area Wise

Subject Areas	No. of Publications (N=2035)	Percentage %
Biochemistry, Genetics and Molecular Biology	1023	50.27
Medicine	343	16.86
Chemistry	472	23.19
Pharmacology, Toxicology and Pharmaceutics	343	16.86
Immunology and Microbiology	198	9.73
Agricultural and Biological Sciences	163	8.01
Chemical Engineering	207	10.17
Materials Science	171	8.40
Physics and Astronomy	159	7.81
Neuroscience	77	3.78
Environmental Science	74	3.64
Mathematics	46	2.26
Engineering	57	2.80
Multidisciplinary	48	2.36
Computer Science	28	1.38
Health Professions	17	0.84
Social Sciences	15	0.74
Energy	12	0.59
Veterinary	11	0.54
Dentistry	8	0.39
Earth and Planetary Sciences	8	0.39
Psychology	7	0.34
Nursing	4	0.20
Economics, Econometrics and Finance	1	0.05

Source: Exported from the SCOPUS Database (14-08-2018)

Figure 2:Distribution of Publications of IICB by Subject Type

Figure 2:Distribution of Publications of IICB by Subject Type

■No. of Publications (N=2035)
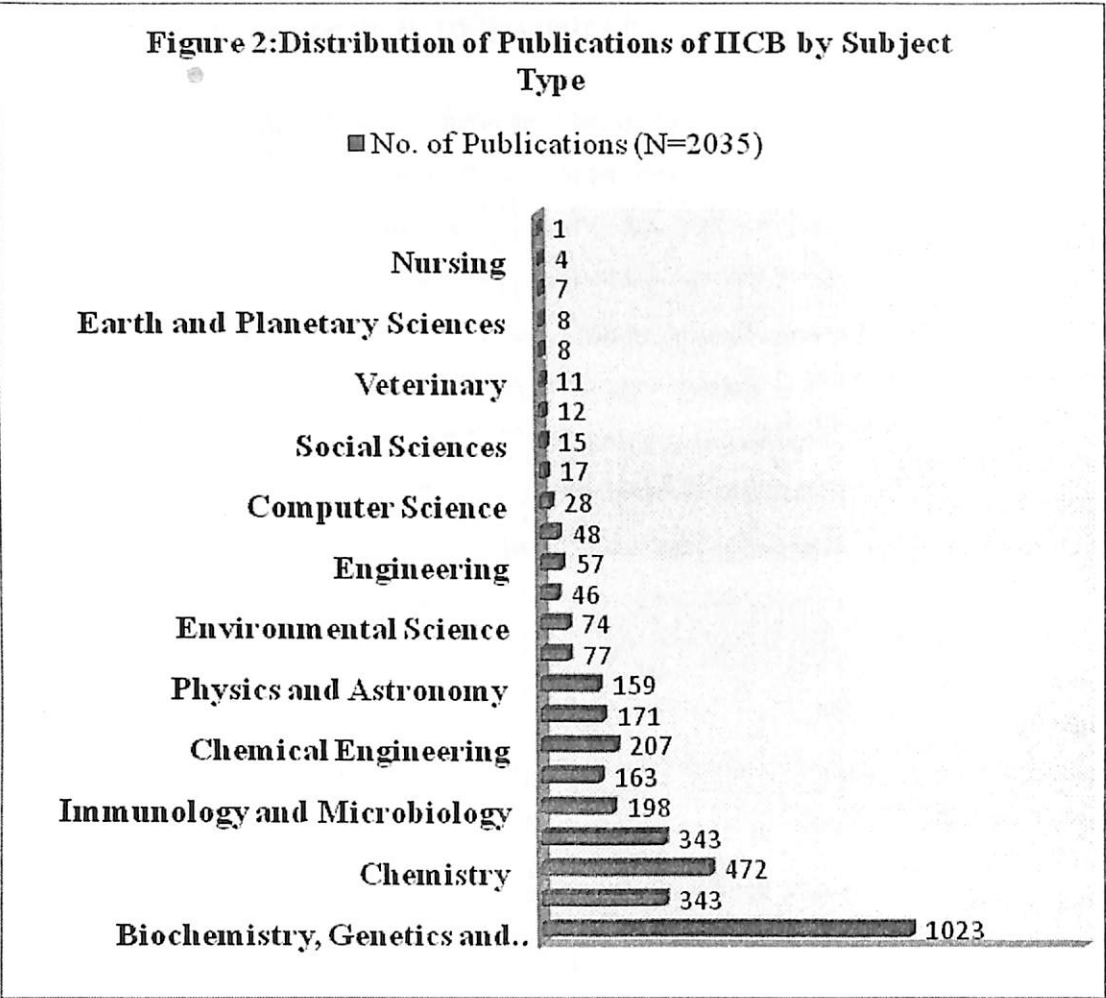
5.3 Most Productive Source Wise Distribution of Publications (IICB)

From the table 3 it has been found that the most productive source of publication during the period is Plos One with 70 (3.44%) publications. The other top productive sources are RSC Advances with 64 (3.14%) publications, Tetrahedron letters with 48 (2.35%) publications and Journal of Biological Chemistry shows 35 (1.72%) publications.

Table 3: Most productive Source Wise Distribution of Publications (IICB)

| Source Title	No. of Publications (N=2035)	Percentage %
Plos One	70	3.44
RSC Advances	64	3.14
Tetrahedron Letters	48	2.35
Journal of Biological Chemistry	35	1.72
Scientific Reports	33	1.62
Journal Of Bimolecular Structure And Dynamics	22	1.08
Journal Of Physical Chemistry B	22	1.08
Journal Of Chemical Thermodynamics	21	1.03
Journal Of Organic Chemistry	20	0.98
Biochimica Et Biophysica Acta General Subjects	19	0.93
Physical Chemistry Chemical Physics	17	0.84
Chaos	16	0.79
Journal Of Photochemistry And Photobiology B Biology	15	0.74
3 sources 14 publications each	14	0.69
3 sources 13 publications each	13	0.64
2 sources 12 publications each	12	0.59
6 sources 11 publications each	11	0.54
3 sources 10 publications each	10	0.49
7 sources 9 publications each	9	0.44
13 sources 8 publications each	8	0.39
12 sources 7 publications each	7	0.34
13 sources 6 publications each	6	0.29
21 sources 5 publications each	5	0.25
36 sources 4 publications each	4	0.20
26 sources 3 publications each	3	0.15

5.4 Distribution of Publication by Document Type Wise

Table 4: Distribution of Publication of IICB by Document Type

Document Type	No. of Publications (N=2035)	Percentage %	Rank
Article	1818	89.34	I
Review	103	5.06	II
Conference Paper	36	1.77	III
Book Chapter	34	1.67	IV
Article in Press	11	0.54	V
Letter	11	0.54	VI
Erratum	09	0.44	VII
Note	05	0.25	VIII
Editorial	04	0.20	IX
Short Survey	03	0.15	X
Book	01	0.05	XI

Source: Exported from the SCOPUS Database (13-08-2018)

The above table 4 and figure 3 below shows that the maximum number of 1819 (89.34%) of research output of IICB scientists has been published as Article form which is ranked as one followed by as review 103 (5.06%), conference paper 36 (1.77%), book chapter 34 (1.67%), article in press and letter 11 (0.54%), erratum 09 (0.44%), note 05 (0.25%), editorial 04 (0.20%), short survey 03 (0.15%). The study reveals that only 01 (0.05%) books has been written by IICB Scientists during this period.

Figure 3: Distribution Publication of IICB by Document Type
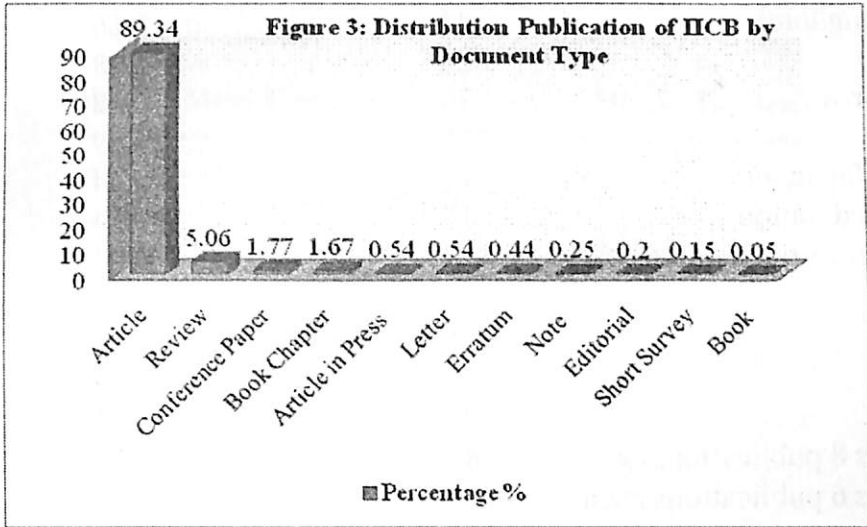
5.5 Country Wise Distribution of Publications of IICB

The table 5 analyses the country wise distribution of publications. The study shows that the total numbers of 2017 (99.12%) research outputs of IICB has been published in India followed by United States 210 (10.32%) publications, in Germany 45 (2.21%) publications, United Kingdom 44 (2.16%), Italy 26 (1.28%) publications.

Table 5: Country Wise Distribution of Publications of IICB

Country/Territory	No. of Publications (N=2035)	Percentage %
India	2017	99.12
United States	210	10.32
Germany	45	2.21
United Kingdom	44	2.16
Italy	26	1.28
South Korea	20	0.98
Canada	18	0.89
Belgium Japan	15	0.74
Russian Federation	15	0.74
4 countries 13 publications each	13	0.64
Australia	12	0.59
Spain	11	0.54
France	10	0.49
Brazil	9	0.44
2 countries 8 publications each	8	0.39
4 countries 6 publications each	6	0.29
Romania	5	0.25
2 countries 4 publications each	4	0.20
8 countries 3 publications each	3	0.15
7 countries 2 publications each	2	0.99
20 countries 1 publication each	1	0.05
18 undefined publication	18	0.88

*Source: Exported from the SCOPUS Database (14-08-2018)*

5.6 Most Renowned Authors of IICB (Top Ten)

The table 6 and figure 4 reflected the most productive authors of IICB during 2009 to August 2018. From the table 6 it has been identified that Kumar, G.S. is the most productive author by contributing 97 (4.77%) numbers of research publications. The other most renowned authors listed in the table are Chaudhuri, K. with 82 (4.03%) publications, Suresh Kumar, G. with 80 (3.93%) publications, Mondal, C. 70 (3.44%) publications, Mondal, N.B. and Roychoudhury, S. with 63 (3.10%) publications, Dana, S.K. and Jaisankar, P. with 54 (2.65%) publications, Roy, S. and Swarnakar, S. with 51 (2.51%) publications, Giri, A.K. 49 (2.41%), Ghosh, S. 48 (2.36%) and Hazra, A. with 47 (2.31%) research publications.

Table 6: Most Renowned Authors of IICB (Top ten)

Author Name	No. of Publications (N=2035)	Percentage %	Rank
Kumar, G.S.	97	4.77	I
Chaudhuri, K.	82	4.03	II
Suresh Kumar, G.	80	3.93	III
Mondal, C.	70	3.44	IV
Mondal, N.B	63	3.10	V
Roychoudhury, S.	63	3.10	V
Dana, S.K.	54	2.65	VI
Jaisankar, P.	54	2.65	VI
Roy, S.	51	2.51	VII
Swarnakar, S.	51	2.51	VII
Giri, A.K.	49	2.41	VIII
Ghosh, S.	48	2.36	IX
Hazra, A.	47	2.31	X

Figure 4: Most Renowned Authors of IICB (Top ten)
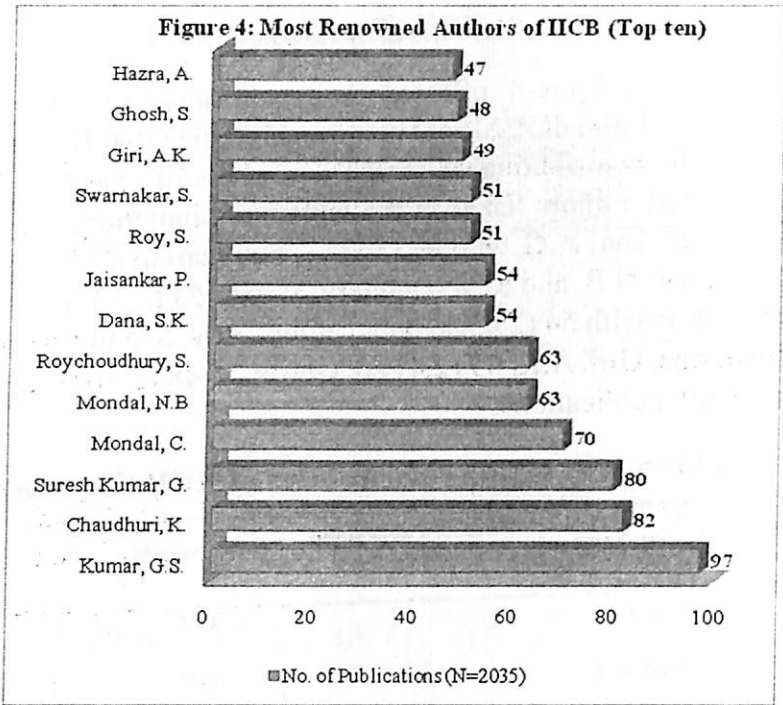
5.7 Distribution of Publications of IICB by Affiliation

The table 7 analyses and find out the affiliating institutions with which the IICB have published highest number of research publications. From the table it was found that IICB individually publishes 2035 publications and with other affiliating institutions namely CSIR 388 (19.07%) publications, with Jadavpur University 195 (9.58%) publications, University of Calcutta 165 (8.11%), Indian Association for the Cultivation of Science 51 (2.51%) publications have been published.

Table 7: Distribution of Publications of IICB by Affiliation

Affiliation	No. of Publications (N=2035)	Percentage %
Indian Institute of Chemical Biology	2035	100.00
Council of Scientific and Industrial Research	388	19.07
Jadavpur University	195	9.58
University of Calcutta	165	8.11
Indian Association for the Cultivation of Science	51	2.51
Chittaranjan National Cancer Institute	50	2.46
Bose Institute	50	2.46
Institute of Post Graduate Medical Education and Research Kolkatta	37	1.82
Saha Institute of Nuclear Physics	35	1.72
University of Kalyani	33	1.62
Central Glass and Ceramic Research Institute	29	1.43
Medical College and Hospital Kolkata	27	1.33
Presidency University	26	1.28
Indian Statistical Institute, Kolkata	26	1.28
Institute of Genomics and Integrative Biology India	24	1.18
National Institute of Cholera and Enteric Diseases	22	1.08
Academy of Scientific and Innovative Research	21	1.03
2 institutions 20 publications each	20	0.98
Banaras Hindu University	19	0.93

Source: Exported from the SCOPUS Database (14-08-2018)

6. Findings of the Study

The followings are the important findings of the study:

6.1 From the year 2009 to August 2018, the total numbers of 2035 research outputs have been published from IICB.

6.2 The highest numbers of 274 (13.46%) research publications have been published in the year 2016.

6.3 In the subject area of Biochemistry, genetics and molecular Biology total numbers of 1023 (50.27%) research outputs have been published.

6.4 During the period the most productive source is Plos. The total numbers of publication is 70 (3.44%).

6.5 The study shows that the scientists of the IICB have published their documents as article which is the 1818 (89.34%) from the total publications.

6.6 The study also shows that the majority of the documents of IICB have been published in India with 2017 (99.12%) publications.

6.7 The most productive author of IICB during 2009 to July 2018 is Kumar, G.S with 97 (4.77%) research publications.

6.8 IICB individually publishes 2035 (100%) papers.

7. Conclusion

The study identifies the pattern and trends of research publications of IICB scientists. From SCOPUS database one can find out the research publications along with citations for individual laboratories. After document search we can find out the publications of the individual laboratories and can export the required data and save it in excel CSV format, RIS format, Bibtex format, etc. The study reveals that the literature growth of IICB, Kolkata is increasing up to 2016 but from the year 2017 the growth is gradually decreases. Overall, IICB has published good numbers of Research papers during this period. The study shows the increasing research trend towards in the areas of Chemical

science, Biochemistry, Genetics and Molecular Biology. The most preferred document type is Journal Article, in which form 89.34% literatures have been published.

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Management and Preservation of Archival Materials in Modern Library System: A case study of Krishna Kanta Handiqui Library, Gauhati University

*Kakali Sarmah

ABSTRACT

A nation does not have its identity without its heritage. The cultural heritage of any country reflects the vast repository of documentary resources that shapes the progress and development of a country. It is indeed the responsibility of a country to properly manage, preserve and conserve the archival materials which reflects the vast repository of documentary resources under safe custody and as such Archives is the best repository of cultural heritage. This paper discusses the need and importance of management and preservation of archival materials in modern library system in relation to Krishna Kanta Handiqui Library (KKHL), Gauhati University. The paper aims to identify various archival materials available in archival cell of KKHL, how the archival materials are acquired and managed, what is the need for preservation of archival materials and how the materials are preserved, what are the future plans to preserving them for posterity, etc.

Keywords: Archives; Preservation, Archival Management, Digitization

1. Introduction

Connecting past and present is essential in order for us to find the right path towards future. It is for this reason why history is an important part of our learning. The historical records of human activities can provide people with information on specific times, events and people, thereby enabling us to understand the status and development of the country's or society's cultural development at different periods as well as the contribution of specific events and people to the country or society. Archival materials are information objects that serve as

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evidence of past events. They record information about past activities and act as memory aids that allow its users to recall and relive them or to re-communicate information about those events at some point in the future. Archival materials are the basis for organizational knowledge, legal evidence, historical research, as well as personal and collective memory.

The term 'Archives' is derived from the Greek word 'Arkheia' meaning 'Public Records'. Record is a document regardless of form or medium created, received, maintained and used by an organization (public or private) or an individual in pursuance of legal obligations or in the transaction of business, of which it forms a part or provides evidence. Archives consist of records that have been selected for permanent or long-term preservation on grounds of their enduring cultural, historical, or evidentiary value. Broadly speaking, an Archives refer to an organized collection of the non- current (25 years and or more) records of an institution, government, organization, or corporate body, or the personal papers of an individual or family, preserved in a repository for their historical value and for future use.

2. Importance of Archives

Archives have been found to serve the purposes of people in all walks of life. They contain a variety of information to satisfy the special interests of each class of people in a democratic society. Archives provide a chronological knowledge about the development of a society's culture. People can gather first hand information, data and evidence from letters, reports, newspapers, journals and other primary sources. Archives are a testimony as to the genesis of work. It is a one stop place for all collection of unpublished documents. Archives provide the knowledge needed for research mainly social science research, it provides evidence of contribution of renowned personalities or organization of the society and also give background information of any milestone event that has taken place during a certain period.

3. Management of Archival Materials

Management of Archival materials in a library or archives is looked after by an archivist. An archivist is an information professional who assesses, collects, organizes, preserves, maintains control over, and provide access to records and archives determined to have long-term value. The duties of archivists include acquiring and appraising new collections, arranging and describing records, providing reference service and preserving materials. In modern libraries archivists often manage oral history projects and sometimes digitization projects as well.

All libraries have a collection that will grow over time. In archives the process of accepting material into the collection is called acquisition. Archival materials can be collected in four different ways by Donation, Transfer, Loan and Purchase. Before accepting any material, whether donated, loaned, transferred, or purchased, archivists need to determine if it is worth bringing into the archives. Appraisal involves determining the archival value of possible acquisitions and their suitability for the institution. Appraisal is perhaps the most intellectually demanding job an archivist will perform. There is no convenient formula for appraising of archival material; each group of records must be assessed in relation to the *administrative value, age, type of material, uniqueness, accessibility and use.*

4. Need for Preservation of Archival Materials

Archives by their very nature are unique both as individual documents and as documents in context. Archives are abode to unsurpassed sources of information of various kinds: political, social, economic, historical and administrative development of the past India in general. Archives are authentic source materials for historian especially to the heart beat of changes taking place over specific period of time in modern India and Assam as well. Archival materials like- books, papers, maps, photographs, old coins, inscriptions, diaries, diplomatic correspondences, manuscripts, reports, gazettes, public/ private records, etc. if lost are irreplaceable, any loss is final, and in most cases reconstruction is impossible. This has given rise to demand for their proper preservation whether they are in Govt. or private custody. It is therefore desirable that those who are entrusted with the care and upkeep of the records should be familiar with the aspects of preservation.

Preservation refers to the set of activities that aims to prolong the life of an archival record. Preservation activities are designed to minimize the physical and chemical deterioration of records and to prevent the loss of informational content. These activities include providing a stable environment for records of all media types, using safe handling and storage methods, copying potentially fragile materials into a usable format (e.g. microfilming and digitization), storing records in housings made from stable materials (for example, document boxes made from "acid-free" paperboard), repairing documents to maintain their original format and establishing a pest control program. Preservation consists of conservation and restoration of records. In general the word preservation and conservation are often used interchangeably, particularly outside the professional literature. But in reality, preservation and conservation have different meanings. Conservation means restoring the documents through treatment

and repair. It is gaining increasing importance world over, as there is greater awareness and a sense of urgency about the need to conserve and preserve natural heritages. It refers to treatment and repair of individual items to slow decay or restore them to a usable state.

5. Digitization as a new means of Preservation for Modern Library System

Developing a digital surrogate of a rare or fragile original object can provide access to users while preventing the original document from damage by handling or display. This was the motivation behind the digitization of many priceless artifacts and such other valuable documents. By digitization we mean any process by which information is captured in digital form, whether as an image, as textual data, as a sound file, or any other format. When speaking of digitization of documents, the term may refer either to the capture of page images- merely a picture of the document-or to the capture of a full text version, in which the document is stored as textual characters. There are many types of library collection which are amenable for digitization, but archival collection is more important and is the need of the hour. The archival materials in the present world play a significant role in the social and cultural context of a nation and are an instrument essential to the advancement of knowledge in particular and to the growth of a society at large. Some of the advantages of digitization:

i) Developing a digital surrogate of rare and fragile archival materials prevents the original from damage by handling.

ii) Excellent Record access, distribution and transmission of Archival materials.

iii) Multi-user simultaneous access.

iv) High quality of printed output is available.

v) No degradation of the master file with duplication and no loss of quality in copies.

6. Approaches for Success in Digitization Process

The success of digital projects hinges not on expensive technology, but rather on sound project planning. Technology should not drive digital projects, rather the goals should be determined first, and only then should appropriate technology be selected. There are certain factors that must be considered when digitization projects are to be embarked on in developing countries and these include;

6.1   Planning: Resources are useless unless they are accessible and for this reason, if an institution is to embark on a digital conversion project, sufficient thought, planning, risk management and correct infrastructure must go into the process or the project will fall short of intended goals. In developing collection policies, institutions must take into account many factors such as suitability of materials to an institutions mission, the value of the materials in comparison to other materials in the collection, the demand of users or researches for such material, restrictions resulting from the legal status of part of the collections, and accessibility and availability of collections.

6.2   Setting Goals: At first, the project objectives should be clearly identified as well as obtaining the technology and resources necessary to achieve the project goals; Secondly, the long-term costs of a digitization capacity must be maintained and supported by the institution and its parent organization and other stakeholders in the project.

6.3   Develop Digitalization Policies: In developing institutional policies on selection of materials for digitization, some of these questions which borders on: whether the materials have sufficient value to ensure interest in digitization; digitization will enhance access or increase use; the rights and permissions for electronic distribution securable; the goals that will be met by digitization; the institution have sufficient expertise in digitization project management; and organizational and technical infrastructure adequate need some answers.

6.4   Legal/Copyright Issues. Who owns it? Selection of archival materials for digitization should first be based on a clear understanding of copyright law and rights of ownership. Physical ownership does not mean that an institution owns the rights to reproduce it. One of the most important selection criteria for digitization will be the copyright status of the original materials. Will it be possible to obtain permission to digitize? After digitization, will the institution be able to protect the digital assets by managing the rights to their use? If the institution does not have the rights to digitize, or the means to manage the digital assets, then digital project should not embarked on.

6.5   Selection Criteria: In developing selection criteria for digitization, the process of selecting specific item to be digitized will employ such standard library selection criteria such as value, significance to the overall collections, user demand and interest, availability and fragility of the original.

6.6   Verifications: Having selected materials for digitization, the next thing to do is to verify or ascertain whether digital copies of such materials already exist. Duplication of efforts is not necessary. However, re-digitization is necessary if the electronic resources created were carried out using older technologies.

6.7   Metadata: Metadata simply means information about information that describes digital objects and enables users to find, manage and use digital objects. It represents the total historic record of the digital object and the totality of information about the object. Metadata helps to identify the work, who creates it, migrated or reformatted it, and other descriptive information; it provides unique identifying information about the organization's, files, and databases that have detailed information about the digital contents; describes the technical environment in which the digital files were created, equipment, used, the software, operating systems and other things.

These are the key issues Archivists should bear in mind whenever they are planning for digitization of their collections.

7.   A Study on Krishna Kanta Handiqui Library (KKHL), Gauhati University

The Krishna Kanta Handiqui Library (Central Library) is the nerve centre of the entire Gauhati University that provides all the reading and lending facilities to the students, teachers and research scholars. Even though the core of the library was set up along with the Gauhati University itself in 1948, it started functioning in its present mode only from 1962. The Gauhati University felt the need for some kind of an archival organization quite early and hence it took the first step by submitting a proposal to the University Grants Commission (UGC) in 1977 to develop the present Manuscript section into a small Archival Department. Because it was realized that Manuscript department is not enough to manage and preserve the large volume of official records and other important papers of the University. In 1981 the University again submitted a proposal to the UGC and accordingly UGC approved the proposal for opening the Archival cell and sanctioned an amount of Rs. 75,000/- for appointing one Assistant Archivist and one Conservationist and also for procurement of essential equipments and chemicals. The Archival cell of the Gauhati University started functioning under the Administrative control of the Librarian, KKHL by March 1985.

7.1 Collections: The archival cell has about 4500 valuable manuscripts written on variety of materials like vellum, skin of wood, leaves, metals, cloth and also paper in later periods.

There are different types of manuscripts like *Sanchipat, Tulapat, Bamboo* leaf, printed and paper manuscripts, etc. written in different languages like Assamese, Sanskrit, Bengali, Nepali, Tai, Barmis, etc. Manuscripts are available in various shapes and sizes. The different categories of manuscripts found in KKHL are *Jyotis, Vidhi Nirnay, Ayurved, Literature, Mahabharata, Ramayana, Bhagavad Gita, Vyakaran, Puran, Mantra* and many more. There are 45 invaluable manuscripts like *Bijnannidhi, Chitra Bhagawat, Ratnamala,* etc. There are also about 6900+ copies of reports in this section which are having tremendous research value. The library also consists of maps and special collections. The special collection in KKHL comprise of *"Krishna Kanta Handique Collection"* named after the first Vice- Chancellor of Gauhati University. It holds his personal belongings of 11 different languages. It has ten books written by him and there are many dictionaries, collections on arts, paintings along with some documents on religion and culture. Another special collection is *"Dr. Bhupen Hazarika Addhayan Kaksha"* named after the legendary composer and singer of Assam. It holds documents on and by him.

7.2 Services/ Facilities: The Archival cell provides research facilities to research scholars and other general public for reference. They can also avail of photocopies of documents as per the need arises.

8. Management and Preservation of Archival Materials in KKHL

From the study conducted in archival cell of KKHL, it was evident that the library staffs of KKHL are well trained in managing, handling and preservation of the archival materials of the library. They received training on preservation and conservation from *National Archives of India (NAI),* New Delhi and *Indian National Trust for Arts and Cultural Heritage (INTACH)* Orissa and Lucknow. Acquisitions of Archival materials are done either by purchasing or through donations consisting of total collection of 19501 documents including manuscripts, rare books, maps and reports. During the study it was also observed that 80% of the materials are in good condition. 20% of the archival materials in the library are in average condition and if proper preservation measures are not applied than these materials may get to deplorable condition. Therefore it is suggested that library should opt for complete digitization and microfilming of documents to provide alternatives access to archival materials and reduce handling of the originals.

Preservation methods applied by KKHL are:

a)   Indigenous Methods: *Neem leaves, Lemon grass, Tulsi paat, Citronella oil, Clove oil, Till oil,* etc. to protect the document from the insects and pests.

b)   Chemical Methods: Use of *Naphthalene Balls, Flit, Baygon, CMC, BHC, Sodium Floride, Silica Gel, Thymol, Paradichloro Benzene, etc.*

c)   Other methods used are Proper storage condition, De-humidifier to control humidity of the library, Deacidification method, Fumigation, Restoration, *etc.*

Digitization of archival material in KKHL is outsourced and carried out by *Indira Gandhi National Centre for the Arts (IGNCA),* New Delhi. More than 75% of the total collections have been digitized so far consisting of manuscripts and reports. The selection criterion considered for digitization are 'content', 'demand' and 'condition' of archival collections. File format used is .pdf for textual resources and .jpg, .jpeg for photographs and the storage medium used by KKHL for storing digitized archival resources are DVD and External Hard Disk.

9. Conclusion

Archival materials in modern library system reflect culture and heritage of our society. Management and Preservation of this wealth of information for posterity needs no emphasis. Many scholars and national and international agencies have emphasized the need for preservation of these resources. UNESCO has brought out the guidelines for preservation of archival materials. Governments of many countries such as UK, USA, France etc., have formulated national Preservation and Conservation policy and they have established National Archives to protect and preserve these resources. Newer techniques and methods are being investigated and adopted not only to manage, preserve and conserve these rare archival materials but also to facilitate better access to this wealth of information. As such, many projects on digitization of archival materials have been initiated both by the various Governments & other institutions & agencies.

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Implementation of ICT in the College Libraries of Golaghat District : Problems and Prospects

* Bhaskar Khanikar

Abstract

This article is about the present status of ICT in the surveyed college Libraries of Golaghat District. It aims at assessing the implementation of ICT in the functioning of College Libraries under study. The authors also try to study about the feasibility of networking among the surveyed libraries. It also tries to identify the problems facing by the library authority in this whole process. For this study six college libraries of Golaghat District were selected randomly and data are analyzed in various heads.
ICT: Information and Communication Technology.
Keywords : *ICT, College Libraries*

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1. Introduction:

The main concentration of library personnel is to satisfy the user the documents available with them. Modern users are highly serious about their time value. And giving importance to their value to time the members of library always keep them alert to serve them with no time. Need of the users are communities are vary to person to person. So it's not a easy task to handle the users with the application of traditional serving technologies. As a result they are using modern tools as they can fulfill the demand of the user community.

The satisfaction of users demands in not depends upon the size of the library or information institute. It depends how the library personnel are aware the demand of the users and their willingness to satisfy them with time based information. No library is able to compete with the tremendous flow of the information generation. As a result they have to depend on others for value information. Use of modern tools is also a reason to overcome these problems. From another angle the libraries especially in Assam are running under the head of a single professional librarian. It's a one man show. With the passage of time we came across various technologies. The development in technological sites has drastically changed the librarianship, the way the librarians defines themselves. By this technological assistance it is possible to meet and serve the various information needs of the user community. But it depends on how well the technologies are implemented in providing the library services.

2. ICT implementation in the college libraries of Golaghat district

Golaghat, a small part of Assam is far from the NH37 surrounding by hills and forests. This small district has a greater impact on the higher educational system of Assam. In the District there are 13 provincialized degree colleges with well-equipped library. Most of the college libraries are running by the Professional Librarian with sound knowledge in the field of technology.

3. Objectives of the study

The basic objectives of the present study is to find out to what extent the libraries of Golaghat district have implanted the new technology and how they have been serving the user communities.

Moreover, a few points are also considered to:

a) Find out the availability and status of the ICT infrastructure.

b) Find out what type of ICT resources available in the surveyed libraries.

c) Find out the availability of internet facilities.

d) Find out the ICT related services.

e) Find out the problems and prospects in implementation of ICT in the surveyed libraries.

4. Area of the study

The area of the present study is constrained to the area of Implementation of ICT in the College Libraries of Golaghat District. But due to limited time and communication factors only the six colleges have been selected in random way. No newly provincialized college is considered for survey.

5. Methodology

First of all it is a survey based study and for this a questionnaire was prepared and distributed among the librarians. Some information was carried out by personal meeting with the librarians.

6. Findings/analysis of data

After the successful survey now the time is to analysis the data and present in tabular format for better understanding. Here the interpretation of surveyed data and information.

6.1 Profile of the Library

Table-1

Sl. No.	Name of College	Year Of Establishment	Name of Library	Year of establishment
1	DebrajRoy College, Golaghat	1949	Central Library	1949
2	Furkating College, Golaghat	1981	Central Library	1981
3	Golaghat Commerce College, Golaghat	1972	Chinta Taranga Chora	1972
4	HemoProvaBorbora Girls' College	1969	Central LIbrary	1970
5	JoyaGogoi College, Khumtai	1991	Central Library	1991
6	Sarupathar College, Sarupathar	1972	Central Library SPR	1972

The entire surveyed college libraries have their separate library buildings. All of them are offering courses under the faculty of Arts, Science and Commerce under Dibrugarh University as well as Higher Secondary courses under AHSEC.

6.2 Records of the aforementioned libraries

Table-2

Sl. No.	Name of the College Library	Total Collection
1	Central Library, DR College	39944 (4090+4100+2300)
2	Central Library,Furkating College	14790
3	Central Library, HPB Girls College	18761
4	Central Library, JoyaGogoi College	10723
5	Chintar Taranga Chora	28000+
6	Central Library, Sarupathar College	16500

The surveyed college libraries are well equipped with a good number of library records. Mainly the print media dominates the whole library collections.

6.3 Services provided to the users

Table-3

Sl. No.	Name of the Library	Cataloguing	Circulation	Reference service	Internet	Reprography	Others
1	DR College Lib.	Yes	Yes	Yes	Yes	Yes	Yes
2	Furkating college Lib.	Yes	Yes	Yes	Yes	Yes	Yes
3	GCC Lib.	Yes	Yes	Yes	Yes	Yes	Yes
4	HPB Girls' College Lib.	Yes	Yes	Yes	Yes	Yes	Yes
5	Joya G.College Lib.	Yes	-	Yes	Yes	Yes	Yes
6	Sarupathar College Lib	Yes	-	Yes	Yes	Yes	yes

The surveyed libraries are available with various facilities to serve their user communities using library management software. They all consider user orientation as one of the best practices. All of them have separate circulation desk, reference section, internet facility, reprographic as well as printing facilities.

6.4 Library Manpower

Table-4

Sl. No.	Name of the Library	Professionals	Semi professionals	Non-professionals
1	Central Library,DR College	02	01	01
2	Central Library, Furkating College	02	01	01
3	ChintarTarangarChora	02	03	01
4	Central Library, HPBGirls' College	02	00	01
5	Central Library, JoyaGogoi College	01	01	01
6	Central Library, Sarupathar College	01	01	01

Shortage of proper manpower is a common problem associated with the functioning of the surveyed libraries. Only the Golaghat Commerce College has more than three library personnel.

6.5 Library Computerization

Table-5

Sl. No.	Name of the College Library	Fully Computerized	Partial Computerized	LMS	Year of Installation
1	Central Library, DR College Lib.	No	Yes	SOUL	2013
2	Central Library, Furkating College lib.	No (yes)	Yes	SOUL	2010
3	Chintar Taranga Chora	No	Yes	SOUL	2010
4	Central Library, HPBGC	No	Yes	SOUL	2015 (2008)
5	Central Library, JayaGogoi College	No	Yes	SOUL	2011
6	Central Library, Sarupathar College	No	Yes	SOUL	2011

SOUL is the main library management software of the surveyed libraries. And all the libraries have almost done the computerization process. Though the surveyed libraries have installed their software much earlier their working speed is going on at a snail's pace.

6.6 Areas of Computerization

Table-6

Sl. No.	NOL	Acquisition	Cataloguing	Circulation	Serial Control	OPAC	Administration
1	CL,DRC	Yes	Yes	Yes	Nil	Yes	yes
2	CL, FC	Yes	Yes	Yes	Nil	Yes	yes
3	CTC, GCC	Yes	Yes	Yes	Nil	Yes	yes
4	CL HPBGC	Yes	Yes	Yes	Nil	Yes	yes
5	CL , JGC	Yes	Yes	Yes	Nil	Yes	yes
6	CL, SC	Yes	Yes	Yes	Nil	Yes	yes

(NOL= Name of the Library)

The above table is showing the areas in which the surveyed libraries have completed their computerization process. Most of them completed 70-80% of cataloguing and bar coding.

6.7 Database record

None of the surveyed college libraries have completed their **computerization** process. Here a percentage wise record of database preparation is given.

Table -7

Sl. No.	NOL	Total records	Database record	Percentage
1	DRC Library	40000+	13000+ (UT)	47%
2	Furkating C. Library			
3	GCC Library	28000+	21000	80%
4	HPBGC Library	15621		66%
5	JoyaGogoi C. Library	10723	2500	23%
6	Sarupathar C. Library	16500	10600	64%

6.8 ICT based facilities

The surveyed college libraries are well equipped with good number of ICT based library equipments. They have purchased server machine, scanner, printers and other facilities for better functioning of the libraries.

Sl. No.	NOL	Server	Scanner	Printer	LAN
1	DRC Lib.	2	2	2	Yes
2	FC Lib.	1	2	2	Yes
3	GCC Lib.	2	2	2	Yes
4	HPBGC Lib.	2	2	2	Yes
5	JGC Lib.	2	2	2	Under process
6	SC Lib.	1	2	2	Under process

7. Problems and recommendations

The major problems in the implementation of ICT in the surveyed libraries are of following type:

7.1 In most of the college libraries except the librarian no any other trained manpower. Again they have no any interest in joining in training programme.

7.2 Proper allocation of money also a problem facing by the library authority in this context.

7.3 According to the Principal and the higher authority ICT means the computers only. They even don't know about how to manage the library using software. So, it's hard to convince them to procure the other related resources to run the ICT programme smoothly.

7.4 Inadequate physical facilities create problems in the process of ICT implementation. On the other hand the power supply is an another drawback. No any library has proper power supply.

8. Recommendations

Not the recommendation but these are our viewpoints which can be considered in proper implementation of ICT in the surveyed libraries.

8.1 Appointment of well trained and skilled manpower.
8.2 Proper allocation of funds.
8.3 Either ACLA or other professional association should organize short term training programme in various aspects (hardware/software) of ICT implementation procedure.
8.4 Proper guidance from the government.
8.5 Need of library networking (intra and inter).
8.6 Need for centralized database, as they are using the SOUL 2.0.

9. Conclusion

Addition of new technologies to the tools of library management is a common demand of the time. The use of the ICT save the time of the users as well as the staff of the library. Implementation of ICT makes it easy to search the availability of documents with in the library or not. Using library management software is the functioning of library make it easier to access the location as well as exchange the books within the network. ICT implementation has given a better platform to the library professional to work in a proper way so that they can serve their user in proper way.

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AUTHOR INDEX

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