"USE OF ICT IN ACADEMIC LIBRARIES OF DHEMAJI AND LAKHIMPUR DISTRICT: A CASE STUDY"

Abstract

In this essay, we spoke about how academic libraries in the Dhemaji and Lakhimpur district use information and communication technology (ICT). The traditional idea of libraries has evolved as a result of the rapid development of ICT. Academic libraries are created to promote teaching, learning, research, and the growth of a culture of knowledge sharing and transfer in order to accomplish the goals and missions of their parent institutions. A contemporary academic library may accommodate customers without constraints or limitations. Through the advancement of information and communication technologies, libraries are expanding quickly in the twenty-first century and are now widely accessible. The growth of ICT gives library patrons the chance to learn and share their information and expertise. Depending on their needs or purposes, readers can communicate a range of information resources, including text, images, sound etc. Therefore, ICT applications give libraries a vital setting where they may communicate with their user population at any time and anywhere. They also become a crucial component of the developing information society.

Keywords: Information and Communication Technology(ICT),ICT application, ICT services, Academic Libraries, College Libraries, Digitization, Data Analysis, ICT Infrastructure, E-Resources, ICT equipment, E-Books, Online Journal, Library Automation.

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I. INTRODUCTION

Information and Communication Technology is currently taking centre stage and transformed the whole world into a global village with global economy, which is increasingly depend on the creative management and distribution of information. The enormous advantages, it has in easing the delivery of information around the world. Therefore it has changed the nature of work significantly in academic libraries and other types of libraries as well as. Academic libraries helps and support to their parent institution in teaching, learning and research activities.

Academic library or college library established to support teaching, learning, research activities to their parent institution. Academic libraries or college libraries also play a vital pivotal role in ensuring the success of higher degree of research. The important activities of academic libraries include collection development, reference services, document delivery, access to organized collections hold by the libraries and assist users information search and retrieval(Cholin,2005;Malhan,2006).

Modern libraries plays an important role in establishing equality between rich and poor where poor are getting opportunities to use of knowledge.ICT and digital library system plays an important role in present days to fulfill users needs. Colleges are important sector of higher education system in Assam (Northeastern state of India). Assam is the North Eastern state of India. The state of Assam is a part of North Eastern India, which is divided into 35 administrative units. Out of these35 units we are selecting Dhemaji and Lakhimpur district for the area of study. In Northern part of Lakhimpur district is covered by Siang and Papumpara district of Arunachal Pradesh and East part is bounded by Dhemaji district and Subansiri river Majuli district stands on the west. It has divided into two sub-divisions namely Dhakuakhana and North Lakhimpur where North Lakhimpur is the headquarter this district.

North and East part of the Dhemaji district is covered by hill areas of Arunachal Pradesh where in south part surrounded by mighty Brahmaputra river, west side is covered by Lakhimpur district .Silapathar is the commercial headquarter of Dhemaji district and administrative headquarter located in main Dhemaji town.

The infrastructure of ICT development and digital library system are in developing stage in college libraries of Dhemaji and Lakhimpur district under Dibrugarh University of Assam. We have selected five major colleges of each district for the case study.

Selected college libraries of Dhemaji and Lakhimpur district are-

Lakhimpur District-

1. Madhabdev College(M.D), Narayanpur (Deemed University)
2. Bihpuria College, Bihpuria
3. North Lakhimpur College(N.L), Khelmati
4. Lakhimpur Commerce College, North Lakhimpur
5. Lakhimpur Girls' College, North Lakhimpur

Dhemaji District

1. Dhemaji College, Dhemaji
2. Dhemaji Commerce College, Dhemaji
3. Moridhal College, Moridhal
4. Silapathar College Silapathar
5. Murkongselek College, Jonai

II. ICT APPLICATION IN ACADEMIC LIBRARIES

The methods of information storage and retrieval in the academic library area have undergone a revolution thanks to the emergence of new technology. In the age of the internet, librarians all around the world are using these new technologies for more efficient information storage, retrieval, and dissemination. Using modern technology, libraries are able to store enormous amounts of knowledge and transfer it instantly and globally. Through its networks, ICTs enable the quick transfer of information around the world. It helps library professionals to manage their house- keeping operation and documentation activities such as circulation ,acquisition, maintenance of catalogue ,periodical management etc. in the libraries by automating them. The innovative technologies made convenient platform for the scholars to make use the information as well as to explore them. The other automated services such as SDI, compiling bibliographies, indexing/abstracting etc. Traditional library housekeeping operations are now carried by using modern technologies. Following technologies have applied in libraries to face their housekeeping problems and to seek better solution-

Computer technology(Hardware/Software)
Communication technology
Network ad Internet technology
Web World
Printer/Publishing Technology / Reprographic and Micrographic technology(Kaker,2006)

1. **Preview of college Library:** The college library is the heart of an educational institution. Colleges are such a place where library plays an important role in dissemination of information, knowledge and wisdom to fulfill the various academic degree of the student and help to the PG course student to fulfill their research works. Academic and administrative staff also get their verities of information and knowledge from the college library to carry out their professional activities. Goal of college libraries is to support the parent institution as well as supplement the curriculum in the institutions.

   By the use of ICT in college libraries, obviously student as well as teacher community will be a healthier experience of explosion of current development of knowledge in various discipline of the digital world. Application of ICT can help the student to prepare for the competitive examination to make their future.

2. **Necessities of ICTs in Libraries**

- **Storage:** As a growing organization library always focuses on increasing its collections where lake of space to keep the collections. But applications of ICT can solve the problem by creating digital library.
- **Speed:** All library Management operations can be done by hardware and software. Searching of information, compilation of bibliographies ,cataloguing, indexing, circulating, storing are can be done in a few hours.
- **Accuracy:** Computer can easily perform various ICT base functions very accurately.
- **Reliability:** The data of a library can store in computer to become reliable if maintain properly.
- **Repetitiveness:** In computer data can be used repetitively to process information.
  - ➢ Gaining local, national and international reputation of library can be support by the help of ICT.
  - ➢ To utilize the information of growing world by users ,ICT is must.
  - ➢ All international database(DIALOG,MEDLARS,AGRIS) are providing information electronically by using ICT.
  - ➢ With use of ICT status of library can be improve.
  - ➢ 24*7 hours service can be offered.

III. OBJECTIVES OF THE STUDY

Academic libraries use ICT and electronic information resources, like e-books, online journals, and web-based information services, to support education and research activities in many different ways. Over the past year, a number of ICT-based services and apps have emerged that are utilised in libraries to help the process of gathering, storing, and disseminating knowledge. Internet, web 2.0, and social media are modern ICT-based tools that are increasingly employed in libraries for information sharing. They are also used in libraries to foster relationships between librarians and patrons and to link patrons with other libraries.

Libraries purchase pricey ICT equipment, but Haneafa (2007) claims that these items may not be utilized to their full potential. This is the primary issue facing libraries all across the world. There may be a number of causes for the current situation, including a shortage of skilled and trained library workers. Given these facts, an effort has been made to research how ICT is used in academic libraries in both districts.The main objectives of the study are-

1. To investigate the current situation of libraries
2. To find out the significant role of ICT applications in academic libraries
3. To know the status of library automation in the college libraries
4. To find out the users satisfactions and various services provided by the libraries.

IV. SCOPE OF THE STUDY

In the Assam, districts of Dhemaji and Lakhimpur, there are numerous postgraduate and undergraduate institutions. Out of these, only ten colleges from the Dhemaji and Lakhimpur district's rural and urban districts were chosen. To conduct the case study, we

chose five institutions from each district as a sample. The goal of the study is to provide an overview of the services and materials that college libraries in the districts of Lakhimpur and Dhemaji have access to.

V. METHODOLOGY

Case study approach is adopted for this study. Required data are collected from the Librarian of the selected colleges through interview method and survey method is adopted for the document analysis and verifications. A good response has been found from the Librarians and clear picture of college libraries has been visualized. The secondary data are collected from institutions websites, homepage, annual reports etc.

VI. LITERATURE REVIEW

A complete description of the prior research on a particular subject drawn from journal articles, books, and other sources constitutes a literature review. The goal of a literature review is to examine academic journals, articles, and books in order to avoid plagiarism in research papers and to provide credit to the original authors of those journals, articles, or books. The study's literature has been consulted and reviewed in order to conduct this research work.

This research is on 'Use of ICT in academic libraries of Dhemaji and Lakhimpur district'- for which different types of existing literature were referred and studied for better understanding of the topic and gaining knowledge. **Tekale(2019)** The author in his work highlighted library services which are depend on the information communication technology(ICT).The study endeavours to focus on various modern ICT components to automate their core functions which are being used in libraries and information centres. **Wawu(2019)** The author analysed and identifies some exact reason to use computer and related technologies in libraries and he also focused on functions, impact and challenges of ICT based on library management system.The study attempt to explore the journey of modern technologies used in libraries or distinguished old and new library technologies. **Patin(2018)** The author largely describe in developing information communication technologies using by libraries to manage their housekeeping operation and information retrieval. Through the study, he described all activities of a academic library done by using of ICT like- acquisition, cataloguing, classifications, serial control, stock verification, retrieval service and other services by using library software. Significant contribution of ICT in the development of academic libraries were also discussed. **Dadhe & Dubey(2020)** The Author in their work analyzed the scenario of covid19 period where they tried to study some specific IIT libraries that what special services and new technologies they provided to library users .Total numbers of 23 IIT libraries they had selected and the studied based on their websites/WebPages. What types of services they have had provide (remote access/open access) ,special services during pandemic period, safety plan for library workforce etc. were focused through this study. They analyzed some significant service/initiative taken by IIT libraries that can be followed by other libraries in post covid19 pandemic periods. **Costllo(2018)** The author in his work described about the product cycle which are being used in software development. Through structured product cycle, the libraries can get profit to contribute in the management of technology development. The author mainly wants to focus on a product cycle for library technology management.

VII. DATA ANALYSIS AND FINDINGS OF LIBRARIES

Data Analysis is the most important part of research. After the successful survey ,now the time is to analysis the data and present in tabular forma for better understanding. The survey, which was taken among the ten reputed college libraries of Dhemaji and Lakhimpur district, shows the following results. The data collected from the colleges are presented in the Table No.1 to Table No.8.

Table 1: Name of the Selected colleges of Both District and their Location and Year of Establishment.

Sl.No.	Name of the colleges	Name of the college libraries	District	Location	Estd. year
1	M.D College(Deemed University)	Central Library	Lakhimpur	Narayanpur	1964(College)
2	Lakhimpur Girls' College	Central Library	Lakhimpur	Lakhimpur	1972
3	Lakhimpur Commerce College	Central Library	Lakhimpur	Lakhimpur	1972
4	N.L College	N.L College Library	Lakhimpur	Lakhimpur	1952
5	Bihpuria College	Bihpuria College Library	Lakhimpur	Bihpuria	1973
6	Dhemaji College	Dhemaji College Library	Dhemaji	Dhemaji	1965
7	Dhemaji Commerce College	Dhemaji Commerce College	Dhemaji	Dhemaji	1982
8	Silapathar College	Silapathar College Library	Dhemaji	Siapathar	1979
9	Moridhal College	Moridhal College Library	Dhemaji	Jonai	1988
10	Murkongselek College	Murkongselek College Library	Dhemaji	Jonai	1984

Table 2 : Institution Wise ICT Infrastructure in College Libraries of Dhemaji and Lakhimpur District.

Sl. No..	Name of College	Total No. of computers	Total Server	Printer	Scanner	Xerox Machine	Operating Software	Library software	Barcode reader	Internet	Library Automation status
1	M.D College(Deemed University)	26	3	4	5	2	Windows10	SOUL 3.0	Yes	YES	Fully
2	Lakhimpur Girls' College	10	4	1	1	1	Windows10	SOU L 2.0	Yes	Yes	Fully
3	Lakhimpur Commerce College	6	1	1	1	1	Windows10	SOUL 3.0	Yes	Yes	Fully
4	N.L College	13	2	1	5	1	Windows10	SOUL 2.0	Yes	Yes	Fully
5	Bihpuria College	3	1	1	1	1	Windows7	N / A	N / A	Yes	N / A
6	Dhemaji College	15	2	2	2	1	Windows10	SOUL 2.O	Yes	Yes	Fully
7	Dhemaji Commerce College	7	1	1	1	1	Windows7	SOUL 2.0	Yes	Yes	Partially
8	Silapathar College	10	2	1	1	1	Windows10	SOUL 3.0	Yes	Yes	Fully
9	Moridhal College	7	2	3	3	1	Windows10	SOUL 3.0	Yes	Yes	Fully
10	Murkongselek College	5	1	1	1	1	Windows7	SOU L 2.0	Yes	Yes	Fully

[N / A-Not Available]

Table 3: Human Resource Survey.

Sl. No.	Name of College	Existence of Librarian	Qualification of Librarian	Advance Training on ICT	Staff of Library
1	Madhabdev University	Yes	M.LI.Sc,M.Phil,Ph.D	Yes	5
2	Lakhimpur Girls' College	Yes	M.LI.Sc,M.Phil	Yes	4
3	Lakhimpur Commerce College	Yes	M.LI.Sc,M.Phil	Yes	3
4	N.L College	Yes	M.LI.Sc,M.Phil	Yes	6
5	Bihpuria College	Yes	M.LI.Sc.	No	4
6	Dhemaji College	Yes	M.LI.Sc,M.Phil,Ph.D	Yes	4
7	Dhemaji Commerce College	Yes	M.LI.Sc,M.Phil	No	2
8	Silapathar College	Yes	M.LI.Sc,M.Phil	No	2
9	Moridhal College	Yes	M.A,B.Lib	Yes	5
10	Murkongselek College	Yes	M.LI.Sc	No	2

Table-4: Use of New Scanning Object by Colleges

Use of new scanning object	Number of Colleges	Percentage (%)
YES	4	44.1
NO	6	55.9
Total	10	100

Table 5: Use of Computer Network by College Libraries for Information Sharing

Name of Colleges	Using Network (LAN/MAN/WAN/PAN)
Madhabdev University	Local Area Network
Lakhimpur Girls' College	Local Area Network
Lakhimpur Commerce College	Local Area Network
N.L College	Local Area Network
Bihpuria College	Local Area Network
Dhemaji College	Local Area Network
Dhemaji Commerce College	Local Area Network
Silapathar College	Local Area Network
Moridhal College	Local Area Network
Murkongselek College	Local Area Network

Table 6: Using security policy by college libraries for internet surfing

Name of College	Using Security policy
Madhabdev University	Yes
Lakhimpur Girls' College	Yes
Lakhimpur Commerce College	Yes
N.L College	Yes
Bihpuria College	No
Dhemaji College	Yes
Dhemaji Commerce College	Yes
Silapathar College	Yes
Moridhal College	Yes
Murkongselek College	No

Table 7: Use of repository software by College libraries

Name of College	Yes/No	Name of software
Madhabdev University	Yes	DSpace
Lakhimpur Girls' College	Yes	DSpace
Lakhimpur Commerce College	No	----
N.L College	Yes	DSpace
Bihpuria College	No	----
Dhemaji College	Yes	DSpace
Dhemaji Commerce College	No	----
Silapathar College	No	----
Moridhal College	Yes	DSpace
Murkongselek College	No	----

Table 8 : Digital library service provided by College Libraries

Name of College	Digital Library service(Yes/No)
Madhabdev University	Yes
Lakhimpur Girls' College	Yes
Lakhimpur Commerce College	No
N.L College	Yes
Bihpuria College	No
Dhemaji College	Yes
Dhemaji Commerce College	No
Silapathar College	No
Moridhal College	Yes
Murkongselek College	No

1. **Analysis of ICT infrastructure :** The application of ICT in libraries and information centers is very essential in 21st century to carries of information to their users.ICT basically use to become more accessible of information, improve the quality of library services, provide up to date information, workload reduce of library staff etc. In this survey we have seen that not all libraries can implement ICT infrastructure and implemented colleges also could not be able to implement fully the ICT infrastructure. Therefore it is most urgent to develop ICT infrastructure in the libraries of Dhemaji and Lakhimpur district.

   The application of ICT for libraries and information centers is very essential as these centers are the carriers of information resources which are essential for all. The use of ICT in libraries and information centers has become more important in the digital era of information explosion to serve the users efficiently, effectively and comprehensively. Therefore, there is an urgent need to discuss about the development of ICT infrastructure of the College Libraries of Dhemaji and Lakhimpur districts.

2. **Analysis of manpower resources:** Without a strong man power system, a library could not growing with the changing world. There should be professionally qualified staff and they should be trained with updated technologies. Because a library totally depend up on the manpower activities. In this study it has been observed that there are a shortage number of qualified library staff in all the college libraries. So libraries of both district should give attention in this matter.

3. **Analysis of power supply:** Power supply is an important factor in a ICT infrastructure. A ICT base library cannot be thought of without proper power supply. But this survey we have seen that it is not satisfactory at all because of its irregular power supply. So the application of automation process in the libraries does not work properly.

4. **Financial Position:** Finance plays a very important role in a library. The ultimate source of funds for the academic library is State Government ,RUSA(Rashtriya Uchchatar Shiksha Abhiyan),Ministry of HRD ,Government of India and from the library fees. Collection of library fees is comparatively small and has become insufficient for the development of a library, so governmental policy for the library is main source of financial support for libraries. For example government is providing free education to the economically weaker students of the country through various schemes. But the situation in the field of IT infrastructure development. RUSA grant is availed only NAAC accredited colleges. So huge no of colleges couldn't be able to develop their IT infrastructure.

5. **Library Development Committee:** Each of the ten college libraries in the two districts covered by our survey has a library committee. The committee consists of the principal., the librarian and other members. This committee focuses on advising and solving all the aspect related to the library. A strong library committee can help librarian to build a quality library.

VIII. SUGGESTIONS

Based on implementation of ICT infrastructure and digitization on selected college libraries of Lakhimpur district and Dhemaji district, a few suggestions has been drawn according to the study report-

1. The librarian and college authorities of the colleges can come up with creative ideas to produce a fund for the development of ICT infrastructure in the libraries of the selected colleges under study. They can take the initiative to raise money from local organizations and college students etc..
2. The development of ICT infrastructure and library networking should place a high priority on policy making. With the necessary cooperation of the college administration, a librarian can create a short- and long-term action plan for the advancement of ICT in libraries.
3. A few colleges have ICT infrastructure, but novel services aren't running smoothly due to a lack of management policies. In this sense, college librarians should widely spread user orientation among both their student body and the teacher community. It is occasionally necessary to develop a specific programme to educate users about their online resources.
4. As a future concern for college libraries, librarians and other professional staff members should receive advanced training in the use of ICT or be permitted to enroll in ICT-based courses as a means of career progression. More emphasis should be placed on this issue in the orientation and refresher courses offered to the college's academic staff by the UGC.

IX. CONCLUSION

Due to the globalization of web based, ICT, networks and internet, the information environment around the world is changing every second of time. Therefore, it is very important that the library as an information center provides up to date information and educational materials and create an environment for how students can access e-resources. However, the libraries also cannot ignore their huge numbers of ever-growing printed resources. When making a digital library ,emphasis must be placed on its proper use and management .A digital library can not be conceived without proper hardware, software ,proper library professionals(To handle technical part) and their compulsory training. In college libraries where the post is lying vacant, there should be an urgent need for professionally qualified staff as per the formula approved by the government. For the use of advanced information technology equipment in the college library , adequate budget should be ensured for the collection of documents as well as for infrastructural development of college libraries to fulfill the five laws of Ranganathan , that is Information are for used ,Every user has his or her information ,Save the time of the information seeker and Library is a growing organism.

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