**“USE OF ICT IN ACADEMIC LIBRARIES OF LAKHIMPUR AND DHEMAJI DISTRICT:A CASE STUDY”**

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***Abstract***

In this paper, we discussed about the “Use of information and communication technology(ICT)” in academic libraries of Lakhimpur and Dhemaji district. Rapid development of ICT have changed the traditional concept of libraries. Academic libraries are established to support teaching, learning, research activities and development of a culture sharing and imparting knowledge to fulfil the mission and objectives of their parents institutions. Modern Academic libraries are more powerful, dynamic and can reach their users without the restriction of geographical boundaries or barriers. In this internet era libraries fast moving to digital mode and can be accessed universally. Use of ICTs in libraries has become great advantages for its users as they open up opportunities for interoperability and information exchanged. User can exchanged wide verity of information resources such as text, sound ,image etc., according to their needs under one umbrella. Therefore application of ICTs provides considerable impact on the way in which libraries relates to their user communities and become an essential part of evolving 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.

**1.1 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 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).

Libraries of 21st century can help right poverty and narrow gap between rich and poor. For the first time in history, poor are getting opportunity to enhance their wealth through the creation and use of knowledge and libraries are taking a central role in this notable movement(Sing and Nazim,2008) (Debnath, 2017).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 Lakhimpur and Dhemaji 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 Lakhimpur and Dhemaji district under Dibrugarh University of Assam. We have selected five major colleges of each district for the case study.

Selected college libraries of Lakhimpur and Dhemaji district are-

**Lakhimpur District-**

* Madhabdev College, Narayanpur (Deemed University)
* Bihpuria College, Bihpuria
* North Lakhimpur College, Khelmati
* Lakhimpur Commerce College, North Lakhimpur
* Lakhimpur Girls’ College, North Lakhimpur

**Dhemaji District-**

* Dhemaji College, Dhemaji
* Dhemaji Commerce College, Dhemaji
* Moridhal College, Moridhal
* Silapathar College Silapathar
* Murkongselek College, Jonai

**1.2 ICT application in Academic Libraries:**

The emerging new technologies have revolutionized the methods of information storage and retrievals in academic library field. In this internet era more and more librarians in the world make use of these new technologies for storage, retrieval and disseminations of information in more effective ways. Libraries can store huge amount of information using new technologies and transmit this information to anywhere anytime without any geographical barriers. ICTs facilitate for rapid transmission of information globally through its networks. 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-

1. Computer technology(Hardware/Software)
2. Communication technology
3. Network ad Internet technology
4. Web World
5. Printer/Publishing Technology / Reprographic and Micrographic technology(Kaker,2006)

**1.3 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. College library support implementation of objective of the parent institution as well as supplement the curriculum taught 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.

**1.4 Necessities of ICTs in Libraries-**

“Kanakachary (2002) stated the necessities of ICT in libraries for the following purposes-

1. There are many advantages like speed, accuracy and reliability in the process of dissemination of information,
2. In the future, there is also a danger of no availability of hard copies of documents particularly the secondary sources that are available only on CD-ROM
3. Due to escalation in prices of the periodicals and books no single library can afford to acquire all the publications ,requiring active research sharing through network
4. Many international databases like-DIALOG, MEDLARS , AGRIS etc are delivering the information electronically
5. The literature in the almost all the field in increasingly tremendously and in a multidimensional way
6. The information seeking behavior of the users is also changing according to their varied needs
7. The quality services, such as user friendliness, reliability and regularly of library services can be improve through ICT
8. To be able to utilize the growing world of electronic information, application of ICT is must.
9. With the help of ICT, it is possible to gain local, national and international reputation of the library.
10. To be able to provide round the clock access and service to users.” (Saikia, 2019)

**2. Objectives of the study-**

Academic libraries contribute to education and research activities in many ways through exploiting ICT and electronic information resources ,such as e-books ,online journals and web based information services. Over the year, several ICT based applications and services have involve which are being used in libraries to support the process of knowledge capturing, storing and sharing. Modern ICT based tools such as Internet, web 2.0 and social media are increasingly used in libraries as information sharing tools. They are also used in libraries to connect library users with libraries and make relationship between librarians and library users.

According to Haneafa (2007),libraries procure expensive ICT equipments they may not be optimally used. This is the main concern of libraries around the world. There may be several reason for state of affairs like ,lack of qualified and trained library staff. In view of these fact on attempt has been made to study the use of ICT in academic libraries of Lakhimpur and Dhemaji district.

The main objectives of the study are-

1. To investigate the current situation and infrastructure of libraries
2. To find out the 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 satisfaction relating to different services provided by the libraries.

**3. Scope of the study-**

There are so many post graduate and undergraduate degree colleges in Lakhimpur and Dhemaji district of Assam. Out of these selected only ten colleges of urban and rural areas of Lakhimpur and Dhemaji district .We are selected five colleges of each district as a sample to carry out the case study. The study has been focused to present a general survey on procured documents, and services provided by the use of information technology in college libraries of Lakhimpur district and Dhemaji district.

**4. 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.

**5. Literature Review-**

A literature review in the form of a comprehensive summary of a specific topic from the previous research those researches are articles of research, books and other sources. The purpose of a literature review is to survey the journals, articles, scholarly books to prevent duplication of the research paper and also provide the credit of the original researcher of that journals, articles or books. To carry out this research paper different types of literature relating to the study has been consulted and reviewed.

This research is on ‘Use of ICT in academic libraries of Lakhimpur and Dhemaji 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.

**6. 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 Lakhimpur and Dhemaji district, shows the following results. The data collected from the colleges are presented in the Table No.1 to Table No.8.

**Table No.1-Name of the selected colleges of Lakhimpur and Dhemaji district, their location and year of establishment.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No. | Name of the colleges | Name of the college libraries | Location | District | Estd. year |
| 1 | Madhabdev College(Deemed University) | Central Library | Narayanpur | Lakhimpur | 1964(College) |
| 2 | Lakhimpur Girls’ College | Central Library | Lakhimpur | Lakhimpur | 1972 |
| 3 | Lakhimpur Commerce College | Central Library | Lakhimpur | Lakhimpur | 1972 |
| 4 | North Lakhimpur College | North Lakhimpur College Library | Lakhimpur | Lakhimpur | 1952 |
| 5 | Bihpuria College | Bihpuria College Library | Bihpuria | Lakhimpur | 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 | Siapathar | Dhemaji | 1979 |
| 9 | Moridhal College | Moridhal College Library | Jonai | Dhemaji | 1988 |
| 10 | Murkongselek College | Murkongselek College Library | Jonai | Dhemaji | 1984 |

**Table No.2:** **Institution wise status of ICT infrastructure in college Libraries of Lakhimpur and Dhemaji 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 | Madhabdev 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 | SOUL 2.0 | Yes | Yes | Fully |
| 3 | Lakhimpur Commerce College | 6 | 1 | 1 | 1 | 1 | Windows10 | SOUL 3.0 | Yes | Yes | Fully |
| 4 | North Lakhimpur 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 | SOUL 2.0 | Yes | Yes | Fully |

 [N/A-Not Available]

**Table No.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 | North Lakhimpur 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 |
| North Lakhimpur 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 |
| North Lakhimpur 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 | ---- |
| North Lakhimpur 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** |
| North Lakhimpur College | **Yes** |
| Bihpuria College | **No** |
| Dhemaji College | **Yes** |
| Dhemaji Commerce College | **No** |
| Silapathar College | **No** |
| Moridhal College | **Yes** |
| Murkongselek College | **No** |

**6.1 Analysis of ICT infrastructure -**

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 Lakhimpur and Dhemaji Districts.

**6.2 Analysis of Manpower Resources:**

Without the manpower, management of college libraries will be very complex. To maximize the use of a college library, staff must be professionally qualified. It has been observed that there is a shortage of professionally qualified library staff in all college libraries.

**6.3 Analysis of Power supply-**

Proper power supply with back up facility in the libraries under study is not satisfactory at all, due to irregular power supply, the application of automation process in the college libraries of Lakhimpur district and Dhemaji district does not work properly.

**6.4 Financial Position-**

Finance plays a very important role in the organization and management of a library. The main source of funds for the college library is State Government ,RUSA(Rashtriya Uchchatar Shiksha Abhiyan),Ministry of HRD ,Government of India and from the collection of library fees. As the government has adopted the policy of providing free education up to graduation level to the students from economically weaker section. Recently the collection of library fees is comparatively small and has become insufficient for the development of this library. The same situation is also in the field of IT infrastructure development. RUSA grant is availed only NAAC accredited colleges.

**6.5 Library Development Committee-**

Most of the colleges of Lakhimpur district and Dhemaji district having library development committee which helps the librarian to think together and to get suggestion from the members about the effective development and management of library services.

**7. Suggestions-**

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

1. For the development of ICT infrastructure in the libraries of selected colleges under study can take innovative thoughts to create a fund by the librarian and college authority of the colleges. They can take initiative to collect fund from students of the college and some local body etc.
2. For the development of ICT infrastructure and library networking policy making should be given most important. Librarian can take short term and long term action plan with proper support of college authority for the ICT development for the libraries.
3. Due to lack of management policy a few college have ICT infrastructure but innovative services are not functioning properly. In this regard college librarians should take user orientation to their students as well as teacher community in a large scale. Sometime special program must be organized among the user’s to make aware about their e-resources.
4. As a future prospect issue of the college libraries, the librarians and other professional staff should be given advance training in the application ICT or given to do ICT based courses as a career advancement scheme. The orientation and refresher courses of academic staff of the college , the UGC should be more emphasis in this issue.

**8. 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, ensuring and organizing access to educational materials in an electronic environment is an important factor in determining the actual request for development and advancement of education. However, the libraries also cannot ignore their huge numbers of ever-growing printed materials. Therefore, the process of automation should be emphasized. Suitable hardware and software facilities should be provided to the libraries of the college along with compulsory training to the existing library staff to handle this technical part efficiently. 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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