# Status of ICT infrastructure and Development of College Library Network among the major colleges of Barak Valley, Southern Assam: A Case Study

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## Abstract

*A brief outline about the importance of ICT infrastructure and development of Library networks at the college libraries of Barak Valley were studied. The paper identified the problems and measures to be taken for development of the library system. Use of information communication technology (ICT) and computer technology made library services more effective towards fulfillment of academic requirements. Library networks create effective environment towards knowledge generation and resource sharing. Connectivity among each other is very much essential in this present era. College Libraries play an important role in imparting education and academic supportiveness to higher education system. ICT and Networking tools with different library networks/Communication networks provide the library services more effective in different ways e.g. resource sharing, inter-library loan system and digital library concept. Nine (09) no's of College libraries of Barak Valley, Southern Assam have been included in the present research study.*

**Keywords:** ICT, Library Networking, College Libraries

## 1. Introduction

Information communication technology (ICT) and library networking system play an important role in present day's higher academic system. As colleges are important sector of higher education system, development of ICT and networking system of libraries are demand of time to fulfill the information needs of users. Barak Valley a remote area of Southern Assam comprises of Cachar, Karimganj and Hailakandi Districts. Colleges of Barak Valley are affiliated to Assam University. ICT development and networking system is still in a very initial stage among the college libraries of his region. Nine major colleges of this region are selected for this study. These colleges are taken into account to study on the basis of year of establishment and importance in collection/ services.

List of the Colleges of Barak Valley covered under the study are:

**G C College, Silchar**

**Karimganj College, Karimganj**

**Srikishan Sarda College, Hailakandi**

**Cachar College, Silchar**

**Womens College, Silchar**

**Janata College, Kabugabj, Cachar**

**Nabin Chandra College, Badarpur, Karimganj**

**Radhamadhab College, Silchar**

**M C Das College, Sonai, Cachar**

Institute of higher learning like colleges needs a good library system with present days networking environment. ICT development and Library networking is very much essential for the connectivity among libraries to maintain co-operation, resource sharing through institutional repositories. College

Libraries of Barak Valley, Assam can be networked under Assam University acting as a nodal agency for the greater community participation in the knowledge society.

Motivation behind the study of ICT development and networking of college libraries of Barak Valley compared to overall development with the other colleges of north eastern States. The present research study is an earnest attempt in filling the gap with national development in the field of ICT and library networking to trace out genesis, the growth of the college libraries in this region of Barak Valley, Assam.

## 2. Statement of Problem

Without problem no research has been done. When problem arises people think about its solution. In everyday life we have to face various problems. In the field of library ICT and development of networking in college libraries of Barak Valley has various problems, which are taken into account through this study. After reviewing the published literature in the field of ICT application in the college and university libraries of Barak Valley, South Assam and North East India as well as Indian scenario, the present case study is an earnest attempt to find out the real situation that prevails in major college libraries of Barak Valley. In the changing environment of ICT and Library networking era the colleges of Barak valley are lagging behind from national developments. After finding the gap of development in ICT infrastructure and library networking systems the hiding problems have been accounted in this study through a case study of major colleges of Barak Valley.

## 3. Objectives of the present study

❖    To find out the level of growth and development in the field of ICT infrastructure and

automation to develop a network environment among the selected College libraries of Barak Valley, Assam.

❖    To find out the details of bandwidth and internet speed used by the libraries of selected Colleges of Barak Valley with power backup systems.

❖    To find out about networking components and its use in ICT environment of College libraries and their membership with important library networks and Consortium of India.

❖    Feasibility study to set up a library network among the college libraries of Barak Valley.

## 4. Scope and Limitations of the Study

The present study about the status of ICT infrastructure and development of college library networks among the major colleges of Barak Valley, Southern Assam has a wide scope as well as limitations also. Due to lack of field research in this study area of networking in this region of Barak Valley, Assam will create various scopes for further studies. The colleges of Barak Valley can be connected with university library System through networks by which colleges can access the resources of university library. When a networking system is established the users of college libraries will get more benefit in their study and research aspects. Development of the college libraries with networking environment will create better scope for academic development. As a sample basis major / important colleges have been undertaken for this study. So entire population is not covered in this study and that is a prime limitation. Due to lack of infrastructural development all research instrumentation is not applicable for this study.

**5. Research Methods Adopted**

For the present study "Status of ICT infrastructure and development of college library network among the major colleges of Barak Valley, Southern Assam: A Case Study" the research method is basically field survey method with questionnaire as a tool for data collection. As a case study of ICT infrastructure and development of Library network under total population of the colleges of Barak Valley nine (9) major colleges are taken for this study. Basic research question of this study is how far libraries of selected research area developed in ICT and networking? Quantitative and Qualitative techniques are used wherever necessary in this study.

Data Source: Both primary and secondary data has been used in this study programme. Primary sources like journal articles, conference/seminar papers, secondary sources like books relating to the study area has been consulted.

Statistical Technique: Descriptive statistics of raw data collected from research area is represented in tables and nerrated.

**6. Data Analysis and Interpretation:**

Data Collected from the study area through questionnaire have been analyzed below. Table No. 1 to 5 displays the number of ICT components of nine college libraries of Barak Valley under this study.

**6.1. Adequacy of Basic ICT Infrastructure** (Hardware)

To find out the basic ICT infrastructures of selected college libraries of Barak Valley data has been collected ad represented in Table-1. The colleges are arranged in accordance o year of establishment. It has been found that most of the colleges don't have adequate ICT infrastructure. Among the colleges only GC College, Silchar has a standard computer laboratory for internet browsing and e –resource access to the users of the library.

**Table No. 1: Basic ICT Infrastructures Level (Hardware)**

| Name of the College | Year of establishment | Total | Total No's | Printers | Scanners | Photocopier |
|---|---|---|---|---|---|---|
| Gurucharan College, Silchar | 1935 | 20 | 03 | 01 | Nil | 01 |
| Karimganj College, Karimganj | 1946 | 03 | 01 | 01 | Nil | 01 |
| Srikishan Sarda College, Hailakandi | 1950 | 04 | 01 | 03 | 02 | 01 |
| Cachar College, Silchar | 1960 | 04 | 01 | 01 | Nil | 01 |
| Women's College, Silchar | 1963 | 09 | 01 | 01 | 01 | 01 |
| Janata College, Kabuganj, Cachar | 1964 | 05 | 02 | 01 | 01 | 01 |
| Nabin Chandra College, Badarpur, Karimganj | 1969 | 06 | 02 | 04 | 01 | X |
| Radha Madhab College, Silchar | 1971 | 08 | 02 | 01 | 01 | 01 |
| MCD College, Sonai, Cachar | 1972 | 11 | 01 | 02 | 01 | 02 |

Source: Primary data.

**6.2. Internet Connectivity Type and Power Backup Systems**

To find out the internet connectivity pattern and its details with power backup the data was gathered and represented in able 2. Most of the colleges have UPS, Generators, Inverters but the functional level of these power back up systems are not sufficient to fulfill the requirement.

**Table No. 2: Internet Connectivity types and Power backup Systems**

| Name of the College | Internet Connectivity Type | Bandwidth Provider | Service backup | Power |
|---|---|---|---|---|
| Gurucharan College, Silchar | Broadband | 1mbps | BSNL | UPS |
| Karimganj College, Karimganj | Broadband | 556kbps | BSNL | UPS/Generator/Inverter |
| Srikishan Sarda College, Hailakandi | Broadband | 556kbps | BSNL | Generator/Solar Battery |
| Cachar College, Silchar | Broadband | 556kbps | BSNL | UPS/Generator |
| Womens College, Silchar | Broadband | 256kbps | BSNL | UPS/Inverter |
| Janata College, Kabuganj, Cachar | Broadband | 556kbps | BSNL | Generator |
| Nabin Chandra College, Badarpur, Karimganj | Broadband | 256kbps | BSNL | Inverter |
| Radha Madhab College, Silchar | Broadband | 256kbps | BSNL | UPS/Generators |
| MCD College, Sonai, Cachar | Broadband | 256kbps | BSNL | UPS |

Source: Primary data

## 6.3. Operating Systems and ILM Software used in the libraries

To find out the status of library automation data has been gathered from the selected college libraries under study and tabulated data is presented in Table 3. The data displays information about the operating systems and integrated library management software used by the college libraries. Except S S College Hailakandi all other colleges are using the library software SOUL 1.0 and Soul 2.0., S. S. College, Hailakandi are using the Exabyte Solutions of Exabyte Solutions Ltd. for their library housekeeping operations.

**Table No. 3: Operating Systems and Software uses in the libraries with area of automation**

| Name of the College | Operating Systems | Software for Libraries | Software functioning areas | Satis factory Level of Librarians |
|---|---|---|---|---|
| Gurucharan College, Silchar | Windows 7 | SOUL 1.0 | Cataloguing/OPAC | Good |
| Karimganj College, Karimganj | Windows 7 | SOUL 1.0 | Cataloguing/OPAC | Good |
| Srikishan Sarda College, Hailakandi | Windows XP & Windows 7 | Exabyte Solutions | Cataloguing/Circulation | Good |
| Cachar College, Silchar | Windows 2000 | SOUL 1.0 | Cataloguing/Circulation | Good |
| Womens College, Silchar | Windows 7 | SOUL 1.0 | Acquisition, Cataloguing, Serial Control,Circulation | Good |
| Janata College, Kabuganj, Cachar | Windows 7 and Windows 8 | SOUL 1.0 | Cataloguing | Poor |
| Nabin Chandra College, Badarpur, Karimganj | Windows 7 | SOUL 1.0 | Acquisition, Cataloguing, Serial Control, Circulation | Good |
| Radha Madhab College, Silchar | Windows XP | SOUL 2.0 | Cataloguing/Circulation | Very Good |
| MCD College, Sonai, Cachar | Windows XP Professional | SOUL 1.0 | Cataloguing, Serial Control, Circulation | Good |

Source: Primary data

## 6.4. Association of College Libraries with National Library Networks

To find out the level of networking of the college libraries under study area all colleges data gathered and tabulated in able -4. The table reveals that all colleges have membership with INFLIBNET. S S College, Hailakandi is member of INFLIBNET as well as DELNET (Developing Library Networks). No other library network is being used by these colleges at present.

**Table No. 4: Associated Library Networks of the College Libraries**

| Name of the College | INFLIBNET | DELNET | CALIBNET | Any other's |
|---|---|---|---|---|
| Gurucharan College, Silchar | √ | X | X | —— |
| Karimganj College, Karimganj | √ | X | X | —— |
| Srikishan Sarda College, Hailakandi | √ | ' | X | —— |
| Cachar College,Silchar | √ | X | X | —— |
| Womens College, Silchar | √ | X | X | —— |
| Janata College, Kabuganj, Cachar | √ | X | X | —— |
| Nabin Chandra College, Badarpur, Karimganj | √ | X | X | —— |
| Radha Madhab College, Silchar | √ | X | X | —— |
| MCD College, Sonai, Cachar | √ | X | X | —— |

Source: Primary data

## 6.5. Consortium membership of College Libraries

It has been found that all the college librries of present study are members of N-List (National Library and Information service) provided by INFLIBNET. Table no.5 displays the details.

**Table No. 5: Consortium member Libraries**

| Name of the College | UGC Infonet | INDEST | N-List | Any other's |
|---|---|---|---|---|
| Gurucharan College | √ | X | √ | _ |
| Karimganj College, Karimganj | √ | X | √ | _ |
| Srikishan Sarda College, Hailakandi | √ | X | √ | _ |
| Cachar College,Silchar | X | X | √ | _ |
| Womens College, Silchar | X | X | √ | _ |
| Janata College, Kabuganj, Cachar | X | X | √ | _ |
| Nabin Chandra College, Badarpur, Karimganj | X | X | √ | _ |
| Radha Madhab College, Silchar | X | X | √ | _ |
| MCD College, Sonai, Cachar | X | X | √ | _ |

Source: Primary data

All the above descriptive statistics data are presented on the basis of questionnaire response as well as interview with the librarians/library professionals of the selected college libraries. It is a real time study to find out the actual situations that prevailed in the college libraries of Barak Valley, Southern Assam in ICT and development of library networking systems

## 7.  Findings

After a critical analysis about the ICT infrastructure and Library automation and  networking scenario of selected major colleges of Barak Valley some findings are given below

i.   Most of the college's are not having proper infrastructure level of ICT application in their libraries. In comparison to the establishment and geographical area colleges located in town area have better level of infrastructure development in ICT compared to rural colleges.

ii.  From the above study it has been traced that all libraries have ICT infrastructure more or less in a position. But after the evaluative study it has been noticed that library housekeeping operations were not fully operated. It is meant that libraries are partially automated and have to complete their automation system. INFLIBNET centre continuously supporting to develop library automation through SOUL. Cataloguing and OPAC systems of all the colleges are functioning properly without any hindrance.

iii. In user's point of view the internet connectivity of few colleges are used only by the librarians at all times. Students are not getting the internet facility to search for other search purpose except for using of OPAC due to inadequate number of computers.

iv.  With regard to networking it has been found that most of the college libraries under this study associated with INFLIBNET and its N-List service. Only one college library S S College library, Hailakandi associated with DELNET. At present in Assam and North-East India no local or regional library network systems was established in functional level. Studies and proposal are going in this regard. Barak Valley a small area of three district with one university i.e. Assam University library can be networked as all the college libraries have network connectivity systems through internet.

## 8.  Suggestions

As a suggestive measure of the current study towards development of ICT and library  networking in the college libraries of Barak Valley, Southern Assam libraries towards achieving innovative services of current trends few recommendations are given below

i.   Librarians and College authority can take innovative thoughts to create a fund for the development of ICT infrastructure in their colleges. Librarian and college authority can take initiative to collect fund from State Govt, local bodies, Tea garden's, PSU's etc.

ii.  Most importantly the policy making is important in this matter. Librarian can take short term and long term action plan with proper support from college authority for ICT development in libraries.

iii. Due to lack of management policy few colleges have ICT infrastructure but innovative services are not functioning properly. In this regard college librarians should conduct user orientation to all their students as well as teacher community in a large scale. Sometimes special programmes can be taken with the support of Assam University library and other prominent publishers which are eager to impart awareness and advertise about their e-resources.

iv. Continuous effort of development in the field of ICT infrastructure with latest technological equipment and innovative thought could enable college libraries of Barak Valley to be networked for resource sharing. Assam University Central Library can be taken as an important nodal agency for this development of library networking system which will be supported by all librarians as well as the scholar/academic community of this region.

## 9. Conclusion

In present era of ICT (information communication, technology), Library automation & networking, library consortia, digital library concepts overwhelming all over the world. No one can deny the importance of sharing resources that relates to economic issues of development in this globalization period. As an interior area Barak Valley is not equally developed in comparison to other districts of Assam. Amongst the college libraries under study, except two or three most of the colleges are not properly equipped with latest information and communication technology. In few colleges computers are there but without functioning which should be changed. An innovative idea and proper policy should be framed by the college authorities that are of much concern which are briefly discussed in this research study. As a conclusion, there are so many issues and challenges in library development which can be supported by helping each other through collaboration. Hopefully College libraries of Barak Valley libraries can be changed to update its status by establishing a network system in connection with national development.

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