
INFORMATION EXCHANGE OF LIBRARY HOLDING IN THE NORTH EASTERN UNIVERSITIES : STATE OF THE ART PRACTICES

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Abstract

Convergence of technologies has made library and information services across the regional, national and transnational geographic barriers, and reach global users at the ease of time and speed. Developing union catalogues of library holdings is one of the core areas in this regard; which has invited attention for a good number of obvious reasons and objectives. Information and Library Network (INFLIBNET) programme of the University Grants Commission (UGC) had launched this noble venture of creating a Union Database of university holding of the country. This study is lined up to have a close look on the State-of-the-Art scenario of the university libraries in the NE region of the country towards accomplishing this venture.

Keywords : INFLIBNET, UGC Infonet, Union Database, Library Holdings, Bibliographic Database, Database Standards, University Libraries, NE India

1. Introduction

Information and Library Network (INFLIBNET) Center of the University Grants Commission is set out to be a major player in promoting scholarly communication among academicians and researchers in the country by generating and maintaining common gateway for access to scholarly information. This is being accomplished by establishing communication network for linking libraries and information centres in universities, deemed universities, UGC information centers, institutions of national importance and R&D institutions, etc. [1]. Development of Union Databases of holdings of the university libraries of the country is one of the major objectives of the center. Towards this venture, there have been developed various union databases namely (1) Book Database (2) Theses Database (3) Serial Holdings Database and (4) Current Serials Databases etc.

So far preliminary observation and experience is concerned, except few majority of university libraries in the North Eastern (NE) Region of the country, share some common characteristics viz. still in its infancy so far date of establishment, lack of manpower, communication bottlenecks, etc. Keeping in view of the above proposition, this study is conducted to have a close look on the state of the art activities of university libraries in the NE India focusing in the area of bibliographic databases in general, and contributions to INFLIBNET towards accomplishing the very goal of the

centre towards developing the union databases of library holdings of the country under the purview of centre in particular.

2. Objectives

The study has been carried out to have a close look on the status of bibliographic databases, standards followed, relevant infrastructure and the practices of information exchange in the university libraries in the NE region of the country. In order to cover various parameters of the study, the following objectives have been lined up to explore:

1. The status of library holdings category-wise.
2. The status of different bibliographic database created and the standards followed.
3. Status of access to external resources.
4. Parameters of software and network
5. Standards, frequency, agencies and volume of data exchange & import in practice, and
6. Identify core issues to be addressed for harnessing bibliographic data exchange among the libraries in question.

3. Scope and Limitation of the Study

The study has been restricted to the university libraries in the NE region of the country. Due to some obvious reasons, major of which is time constraints, the study has been pursued by on-line questionnaire only and no personal observation could be carried out except in the parent library *i.e.* Tezpur University library. Instead of going to explore the wide and breadth of the libraries, the questionnaire was designed to be brief but exhaustive to synchronize the core parameters lined up in the objective.

All the questionnaire were posted to eleven university libraries of the NE region over E-mail. Mail was bounced from the mail id of library contact person of Mizoram University and Tripura University while feedback could not be collected from Assam University and Guahati University in spite of making all efforts. Out of nine postings, six feedback were received being 67% response, and including the parent library, the total number of libraries covered in this study being seven out of eleven (*i.e.* 64%) NE university libraries. As such the libraries covered in this study are Tezpur University, Tezpur (TEZU), Rajiv Gandhi University, Itanagar (RGU), Nagaland University, Nagaland (NGLU), North-Eastern Hills University, Shillong (NEHU), Manipur University, Imphal, (MNPU), Dibrugarh University, Dibrugarh (DIBRU) and Assam Agricultural University, Jorhat (AAU)

4. Data Analysis and Interpretations

Data gathered through questionnaire from six libraries through questionnaire and the data of the parent University of the author is the source of this study. Feedback was requested in a few vital parameters about the libraries relevant to the study, and analysis and interpretations are carried out in the following headings and subheadings.

4.1 Library Budget

The library budgetary provision may be treated as a mirror of the library holdings. In order to gather data in this regard feedback was requested and responses are tabulated in the Table- 1.

The library budget in the libraries ranges from 10 to 177 lakhs with fluctuation over the three years of survey. Most of the libraries concentrates in the range of 20 to 80 lakh while only two exceeds one crore, without consistency over the three years from 2004/5 to 2006/7.

Table- 1: Library budget of University Libraries in NE India

No. of Libraries against financial year	Library Budget (Rs. Lakh)								
	10-20	20-40	40-60	60-80	80-100	100-120	120-140	140-160	160-180
Number of Libraries 2004-05	1	3	1	-	1	1	-	-	-
Number of Libraries 2005-06	1	2	-	2	1	-	-	1	-
Number of Libraries 2006-07	1	1	1	2	1	-	-	-	1
Total	3	6	3	4	3	1	-	1	1

4.2 Library Holdings

4.2.1 Book Collection

The books collection is one of the major criterions of richness of collection in a library. As such survey was made to know the book stocks in the libraries and feedback are tabulated in Table-2. Data in the table clearly indicating that book holdings in the libraries starts at the range of 30-50 lakhs in two libraries while terminating at 150-170 lakhs.

Table -2: Number of Book Collection in University Libraries in NE India

No. Books (unit in thousand)	30-50	50-70	70-90	90-110	110-130	130-150	150-170	>170
Number of Libraries	2	1	-	1	1	-	2	-

4.2.2 Current Journal Holdings

Journals occupy the lion's share of literature in the university libraries which ultimately impacts the quality and output of research and studies. Ever accelerating cost of scholarly journals, particularly the foreign ones has always been inviting careful selection and sound subscription policy from the part of the libraries. Feedback received against the query on the status of current journal holdings in the libraries, have been presented in Table -3.

Table-3: Current Journal subscription in the University Libraries in NE India

Indian Journals	International Journals	Total No. of Journals	University	Rank
188	273	461	NEHU	1
200	41	241	MNPU	2
87	96	183	TEZU	3
150	5	155	DIBRU	4
90	51	141	AAU	5
46	14	60	RGU	6
7	20	27	NGLU	7
Total 761	480	1241		

The NEHU topped the rank in journal holdings with total 461 having balanced number of Indian and International titles. The rank is followed by MNPU with total 241 titles which is almost 4:1 of Indian and International ones. The same ratio is found to be 15:1 in case of DIBRU. TEZU and AAU are found maintaining a balance in their Indian and International titles. Several factors and considerations might be related while subscribing to journals viz. number of disciplines of research & studies, number of users, volume of e-resources provided by UGC-Infonet e-journal consortium and purchased on their own, and most significantly the fund position, etc., which is very often varies in the universities.

4.2.3 Holdings of Theses and Dissertations

Theses and Dissertation holdings in the libraries reveal the count of research outputs in a given university. These resources give a range of parameter to study not only the quantity but quality of the research outputs in a university and hence invited attention from bibliometric and scientometric point of view. The project *Vidyaniधि* is heavily concentrating in this regard [2]. Feedback received against request in this regard is presented in Table-4

Table-4: Theses and Dissertation holdings in the University Libraries in NE India

Name of the University	DIBRU (1967)	AAU (1969)	NEHU (1973)	MNPU (1980)	RGU (1984)	TEZU (1994)	NAGLU (2002)
PhD	2558	301	2003	1100		71	10
MPhil				300			
MSc		1899		400			1000
Total	2558	2200	2003	1800	1000	71	1010

It is evident from Table-4 that Dibrugarh University with total 2558 nos. of thesis and dissertation holdings topped the rank followed by AAU, Jorhat (*i.e.*2200). Data on theses and dissertations holdings is found close correlation with the dates of establishment of the universities.

The details of the status of bibliographic database maintained in the libraries has been presented in Table-6

4.3 Library automation

4.3.1 Initiation of Library Automation

Year of initiation of automation of the libraries was surveyed and feedbacks are presented in Table-5. It is evident from the table that initiation of library automation in the NE university libraries spans dated 1993 to 2002 with mostly concentrating in 90s, while only two libraries initiated their automation in the early 20s.

Table-5: Year of initiation of library automation

Year of automation	No. of Libraries
1993	1
1994	1
1996	1
1997	2
2001	1
2002	1

4.3.2 Library Holdings and Databases Record

In order to have a look on the status of automation, query was accommodated on the bibliographic databases maintained in the libraries with details. Of the total holdings of books, theses & dissertations, university libraries have retro converted records in the database. University libraries understudy have been presented in descending order based on the percentage of records covered in the databases & presented in table 6. It can be observe from table 6 that the NEHU topped the

rank with cent percent update of record both in books and theses holdings followed by TEZU with 98.77 and cent percent for books and theses respectively. The RGU is found with 100% update in books and 50% in theses & dissertations. MNPU and DIBRU found with 73% and 34% update respectively in case of books while 100% of theses & dissertations. AAU is lagging behind in the run with 23% update of books and meager 0.14% in these & dissertation. However data about serial holdings was not available to the author.

Table-6: Library Holdings and Records in Database of the Libraries

University	Book			Theses			Serial		Rank
	Holding	DB Record	PC of record	Holding	DB Record	PC of record	Holding	DB Record	
NEHU	163000	163000	100	2003	2003	100	NA	NA	1
TEZU	31588	31200	98.77	71	71	100	NA	NA	2
RGU	39000	39000	100	1000	500	0.5	NA	NA	3
MNPU	130000	95000	73.08	1800	1800	100	NA	1200	4
NGLU	50100	34532	68.93	NA	NA	NA	NA	NA	5
BIBRU	163367	56321	34.48	2558	2558	100	NA	1069	6
AAU	107545	25000	23.25	2200	301	0.14	NA	13100	7

4.3.3 OS platform and DBMS packages for automation

The Operating System (OS) platform (*i.e.* Back end) as well as the Database Management Software (*i.e.* Front end) is very crucial for successful implementation of any library database management programme and addressing related issues of sharing data by export and import. Feedbacks in this regard have been tabulated in Table-7.

Table-7: OS Platform and DBMS Packages in the NE University Libraries

OS Platform	DBMS package		Format	No. of Libraries	
Windows 2000	Soul		A ACR2	2	
Windows 2003		Libsys	A ACR2	1	
Windows 2003	Soul		AACR2	1	
Windows XP		Libsys	AACR2	2	
Linux Red Hat		Libsys	AACR2	1	
Total	4	1	2	3	7

The Windows family OS is found to be dominant in the libraries with six libraries while Linux is found in only one. The Soul package is found in three while Libsys in four libraries. So far format of data rendering, the AACR2 is found to be common in all the libraries. As the record structure in

both the SOUL and LIBSYS is generated in ISO 2709 there exists no major technical issue in data exchange so far format for exchange is concerned.

The AACR2 being the common format for bibliographic data rendering, the hurdle of converting and additional tagging of the records may be averted towards planning for data exchange among the libraries in survey.

4.4 Data Export & Import

The groundwork for bibliographic data export and import lies with certain issues of record structure of the database, standards followed and availability of communication facilities, etc. The ISO-2709 is the international standard for record structure of bibliographic data specifically developed for information exchange. The ISO-2709 compatibility is one of the basic requirements for standardization of bibliographic record for data exchange [3, 4]. It is platform independent and there is no contender yet [5].

For export of the bibliographic data, all the libraries have ticked "yes" against exporting data to external database but skipped mentioning the organization with whom the data is being exported. As such no significant inference could be drawn in this regard. The parent library (*i.e.* TEZU) exported its bibliographic data to INFLIBNET at regular interval during last couple of year. Data was generated in ISO-2709 format and mailed in CD-ROM.

Only two libraries have mentioned import of their own data from CDS/ISIS to SOUL. Except this, no significant practice of data import was visualized in this survey.

4.4.1 Bandwidth and mode for Internet access

The bandwidth and access mode of Internet available in the libraries were surveyed and the status is presented in the Table-8. The maximum Bandwidth of 2 Mbps is available in two libraries followed by 1 Mbps in one. The V-SAT is the common access mode for Internet in the libraries. However, leased-line connectivity with 512 Kbps speed has recently been commissioned in the parent library of the author.

Table-8: Bandwidth and mode of Internet in the Libraries

Bandwidth	Access Mode	No. of Libraries	University
2 Mbps	V-SAT	2	RGU, NEHU
1 Mbps	V-SAT	1	MNPU
512 Kbps	Leased	1	TEZU
256 Kbps	V-SAT	1	DIBRU
NA V-SAT	2	AAU, NGLU	

4.4.2 Problems encountered with data exchange

Query was made to visualize problems encountered with data export or import in the libraries, but no significant feedback could be gathered except mentioning about the poor Internet bandwidth. Almost all the libraries put comment that the bandwidth requires to be increased for better connectivity.

4.5 Implementation of INFLIBNET Programme

Out of the seven libraries in this survey five are found to be covered with INFLIBNET programme of E-resource consortium. Table- 9 gives a summary of the E-resources available in different university libraries in question.

Table-9: UGC-Infonet E-Resources available in different Libraries in NE India

University	No. of Sites	No. of E-Journals	No. of Databases
MNPU	21	4120	21
TEZU	20	3590	5
DBRU	—	4500	—
RGU	10	2000	3
NEHU	14	4000	2
NGLU	—	—	—

The communication bottleneck, specifically the poor internet connectivity was cited by all the libraries against the query on "Any problem encountered with the Infonet E-resources", while lack of competent technical staff was indicated by three libraries.

5. Major findings and Recommendations

The following recommendations are lined up for better exchange of the resources in the university libraries in the NE India towards addressing the challenges of providing wider accessibility to scholarly resources to the students, faculties and research communities.

1. The budget status of most of the university libraries in the NE India is ranging between 20 to 80 lakhs. Parallel to increasing the budgetary provision, the collection development policies should be refreshed with the recent standards for quality management.
2. All the libraries have developed bibliographic databases separately for books and theses, but non initiated serial database (Table-6). Creation of database for serial holdings both for back volumes and current ones should be emphasized.
3. The status of e-resources available in the university libraries is not proportionate as against the volume of resources available through different sources. Apart from UGC Infonet, there are

good number of consortium available where the libraries may join and make the resources available to the university communities in a cost effective manner. Open sources may also be indexed and made available to the users through the library web page.

- 4 The Windows family OS platform is found to be common in the libraries except one, while the Libsys and Soul are the common DEMS in four and three libraries respectively (Table-7). ISO-2709 compatibility of both Libsys and Soul is by-passing a major hurdle of interoperability among the libraries. However, the Internet bandwidths in all the libraries need to be upgraded.
- 5 The university libraries in NE India is yet to practice data export and import with external agencies. Special attention from INFLIBNET is urgent in this regard.
- 6 Feedback received against the request to suggest means toward harnessing data exchange among university libraries in the NE India, all are found with the suggestion as: "a separate regional network in the line of INFLIBNET would better facilitate and coordinate university.

Hardware platform	Server with high storage capacity
Networking	At least 2 Mops internet bandwidth
Operating system platform	Linux advanced server
Application platform	Initially Libsys/Soul followed by advanced platform viz. Virtua with MARC21 format for better interoperability at the international level.
Manpower	Adequate professional staff with sound technical background

6. Conclusion

The status of library activities in the universities in the NE part of the country is lagging behind their counterparts in the country. Tremendous developments in the field of information and communication technologies (ICT) has been facilitating standardization and exchange of bibliographic data among different organizations by-passing certain technical issues hitherto talked about. However, the role of an agency for coordination of any such programme is inevitable. Having a national network in one hand, and the communication bottlenecks with the NE India on the other, may very often limit the INFLIBNET center to put sufficient attention to this region. As special mission, a regional centre of the INFLIBNET at the region may be set up for better coordination and acceleration of database development, with special focus on generating a regional database of the university libraries in this region. The regional database might be linked to the union database of the centre.

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