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Present Status of Library Cooperation, Networking, and Resource Sharing in Bangladesh: Web-based Library Cooperation for Access to World-wide Information

Mirza Mohd. Rezaul Islam
Islamic Institute of Technology, drmirza@iut-dhaka.edu

Present Status of Library Cooperation, Networking, and Resource Sharing in Bangladesh: Web-based Library Cooperation for Access to World-wide Information

Dr. Mirza Mohd. Rezaul Islam

**Librarian
Islamic University of Technology (IUT)
Organisation of Islamic Cooperation(OIC)Board
Bazar, Gazipur-1704, Bangladesh**

Abstract

Libraries have been cooperating and collaborating on collection building and resource sharing for many years. The cooperation was based on inter-library loan and preparation and publication of union catalogue. But the ways of cooperation in building resources and access to information resources was not easy and effective. Library cooperation for access to information resources was limited to the formation of networking among the libraries having homogeneous interest. Like many other countries, Bangladesh also formed networks of libraries of different disciplines of knowledge, which could not sustain due to lack of appropriate communication system. To ascertain the status of collection of information resources, networking, resource sharing and automation of libraries of Bangladesh, a questionnaire based survey has been conducted. The library surveyed fall into the following categories (a) academic libraries (b) research / special libraries. It is found that in terms of collection of information resources, the efforts of most of the libraries are confined to acquiring books only. Majority of libraries are not subscribing to current titles of journal. Many libraries have not taken part in resource sharing network and library cooperation programme. However a large number of libraries surveyed subscribe to on-line journals through a library consortium and they already initiated library automation programme. But a great chunk of the libraries developed library software to provide database service to its institution members only. Very few libraries developed software to provide database service to serve worldwide. The establishment of digital library by majority of libraries to provide full text information resources is still a far cry. This study delineates the ways of web-based library cooperation with the conclusion that the automation of libraries and effective formation of country consortium can only promote the effective library cooperation for access to worldwide information and global resource sharing. Current study also recommends that government should take up development project to provide appropriate ICT training at global standard.

Introduction

Libraries have been cooperating and collaborating on collection building for many years. The main objective of library cooperation and resource sharing is to maximize the availability of and access to information and services at a minimum cost. Library cooperation, networking and resource sharing are synonymous with cooperation and collaborative activities of library and information centre (Mannan, 1998).

Resource Sharing is typically composed of two activities. The first is collaborative collection development, whereby subject specializations are intended to be distributed among libraries within a clearly defined geographic region, so that individual libraries need not attempt to collect resources in all fields; but can concentrate on a particular field. The second form of resource sharing is through various document delivery mechanisms. Inter-library loan might suitably fall into this category (Grycz, 1997). No library is able to satisfy all the needs of information resources. Most libraries did not, do not and will not have all the information resources that their patrons need (Hwa-Wei Lee). Needs of information resources can be met through the mechanism of library cooperation of sharing of resources. The appreciation of the need for cooperation leads to the formation of library consortium. To materialize the concept, first of all several libraries are required to come together for the mutual benefit of the respective user in the form of library cooperation. Secondly, libraries linked together with the help of communication system in terms of networking and finally they come together to acquire traditional and e-resources under the umbrella of library consortium (Chatterjee, 2007). It is observed that libraries and their partners traditionally work together for "Selfish" but positive reasons, to leverage shrinking budgets, to learn from each other; to build better tools together and most importantly, to serve their common users better by taking advantage of one another's collections (Borek, 2006). Consortium is used to form to fulfill the following major objectives:

   a.   To facilitate collective acquisition and sharing of traditional and e-resources;
   b.   To cooperate in processing of information resources;
   c.   To access and download the required resources remotely by the users of the participating libraries;
   d.   To help develop a country-wide acquisition policy to avoid unnecessary and wasteful duplication in purchase;
   e.   To develop a more sophisticated search engine enabling simultaneous search of multiple databases;
   f.   To establish an electronic journal centre to serve as a permanent archive for electronic journals;
   g.   To provide extensive facilities to use full text databases and electronic journals;
   h.   To develop digital resources jointly and to provide access to such materials to the members of the consortium; and
   i.   To establish reciprocal borrowing agreements among the participating libraries to share resources etc.

Library Cooperation and Consortia in Bangladesh

Libraries of Bangladesh in the field of science and technology are suffering from scarcity of scientific publications. In order to enhance the availability of research publication, especially of scientific research in the country, Bangladesh Academy of Sciences (BAS) took initiative to collect electronic resources through the programme for Enhancement of Research Information (PERI), a programme of International Network for the Availability of Scientific Publications (INASP). In response to the initiative, several universities and research organizations came forward for subscription to the same. Thus the consortium based subscription to the electronic resources was started in the year 2007. This initiative took the form of a formal and first consortium in Bangladesh with the name of Bangladesh-INASP-PERI Consortium (BIPC). At present there is no local hosting of resources. They are accessible from publisher's web-sites. All the participating libraries have access to on-line journals. Around five thousand titles of journal of different disciplines are available for the users. To run the activities of the consortium more effectively and democratically, the members of the consortium drafted a constitution for the consortium incorporating

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inputs from the stakeholders of spread across the country. In view of the national character the consortium has been renamed as the Library Consortium of Bangladesh (LiCOB) (Bangladesh Academy of Sciences, 2011). Though the participating libraries are subscribing e-journals as members of the consortium; the major objective of the consortium that is collective acquisition of information resources has not yet started. Even the formal agreement of consortium has not yet been signed by the participating libraries. It may be noted that many initiatives were taken to form the cooperative forum in Bangladesh by different categories of institutions. Some of these networks are as follows:

- National Agricultural Information System (NAIS)
- Social Science Research Network (SSRN)
- Heath Literature, Library and Information Science Network (HELLIS)
- Development Information Network on South Asia (DEVINSA)
- National Science and Technology Information Policy (NASTIP)
- Bangladesh University Libraries Network (BULN)
- Bangladesh National Scientific and Library Information Network (BANSLINK)
- Population Information Network (POPIN)

Currently the above mentioned networks are no more in existence due to several constraints (Rahman, 2006).

Methodology

The methodology used for the present study is questionnaire based survey. A structured questionnaire was sent to the leading libraries of Bangladesh within academic and research institutions to ascertain the status of networking, resource sharing and library automation. Also personal interviews and visits to libraries were undertaken to collect the relevant data on the topic. The available literature on the topic has also been studied and reviewed. The filled in questionnaire as received from the libraries have been tabulated and analyzed for the study.

Findings and Discussion

The survey is a recognized and accepted method of conducting research in social science. It is one of the means by which society keeps itself informed, an important tool for making policies on different issues and organizations of increasing size and complexity by obtaining perspective and standards of comparison. In view of the above observation regarding the utility of survey in libraries, this current survey has been conducted. A total of 42 libraries, were included in survey. Accordingly questionnaire was distributed to all these libraries, of which answers were received from 29 libraries. The data found through this survey is organized and analyzed to portray the situation of leading academic and research / special libraries in respect of library cooperation, networking and resource sharing as well as present state of automation of libraries in Bangladesh.

Libraries, Clientele, and Collections

The libraries surveyed have been categorized into two types viz academic and research/special libraries which are shown in table 1. Academic libraries have been further sub-categorized as public university library, private university library and international university library. Research / special libraries have also been further sub-categorized as government and international. Academic libraries serve the highest number of clientele. Table 1 shows that Dhaka University Library has the highest number of clientele followed by Rajshahi University Library. These two universities are the government-funded public universities. In terms of collection of information resources, it has been found that books constitute major chunk of collection.

Few libraries have non-book materials and their collections are not significant. Table 1 shows that Dhaka University Library possesses the highest number of books followed by Chittagong University Library. Dhaka University Library also possesses the highest number of bound volumes of journals followed by

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Rajshahi University Library. ICDDR,B Library also has a good number of bound volume journals. ICDDR'B is an internationally reputed research institution in Bangladesh. In case of subscription of current titles of journal, table 1 shows that Dhaka University Library is subscribing to the highest number of journal followed by ICDDR'B Library. Most of the libraries are not subscribing current titles of journal. It reveals that most of the libraries do not have bound volumes of back issues of journals. A few number of current titles of journals are being subscribed by these institutions which were surveyed. This table also depicted that more than 65% of libraries are situated in the capital city, Dhaka. Among the libraries, ten university libraries are under public university, while the same number of libraries are under private university.

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Table-1: Libraries surveyed their categories, clientele and collection of information resources.

ame of Surveyed Library	ategories of Libraries			o. of lientele	ollection of Information Resources By Type					
	ategories	ector	ocation		o.of ook	o. of ack ol.Journal	D'S	hesis	o. of Current Journal ubscription land	oreign
Ahsanullah University of Science & Technology Library	cademic	rivate	haka	808	4000	50	50	75	3	7
American International University Bangladesh Library	cademic	rivate	haka	-	2817	1	218	384	-	-
Bangladesh Agricultural Research Institute (BARI) Library	esearch	overnmen	azipur	92	3556	01	-	32	6	9
Bangladesh Agricultural University Library	cademic	overnmen	ymensing	443	95500	3000	34	2400	3	9
Bangladesh Atomic Energy Commission Library	esearch	overnmen	haka	95	3343	4980	3	2		5
Bangladesh Bank Library	esearch	overnmen	haka	328	3466	1333	10	-	2	3
Bangladesh Council of Scientific and Industrial Research (BCSIR) Library	esearch	overnmen	haka	250	4000	4000	2	22		3
Bangladesh Institute of Development Studies Library	esearch	overnmen	haka	472	16223	-	38	6	-	3
Bangladesh Rice Research Institute (BRRI) Library	esearch	overnmen	azipur	68	7202	5000	-	50	-	5

ame of Surveyed Library	ategories of Libraries			o. of lientele	ollection of Information Resources By Type					
	ategories	ector	ocation		o.of ook	o. of ack ol.Journal	D'S	hesis	o. of Current Journal ubscription land	oreign
Bangladesh University of Engineering and Technology Library	cademic	overnmen	haka	760	29642	8631	50	000	-	2
Bangladesh University of Professionals Library	cademic	overnmen	haka	40	26	00	00		30	0
BRAC University Library	cademic	rivate	haka	675	3345	-	00	00	-	-
Chittagong University Library	cademic	overnmen	hittagong	-	50000	0000	-	-	-	-
Chittagong University of Engineering & Technology (CUET) Library	cademic	overnmen	hittagong	640	7804	141	25	3	-	-
Chittagong Veterinary and Animal Sciences University(CVASU) Library	cademic	overnmen	hittagong	04	785	38	93	1	1	1
Daffodil International University Library	cademic	rivate	haka	015	2500	560	050	-		-
Dhaka University Library	cademic	overnmen	haka	6000	40000	0000	-	-	2	73
Dhaka University of Engineering & Technology (DUET), Library	cademic	overnmen	azipur	010	5000	-	-	-	-	-
East West University Library	cademic	rivate	haka	385	5000	00	300	00	10	0

ame of Surveyed Library	ategories of Libraries			o. of lientele	ollection of Information Resources By Type					
	ategories	ector	ocatio		o.of Book	o. of Back ol.Journal	D'S	hesis	o. of Current Journal ubscription land	oreign
Independent University Bangladesh (IUB) Library	cademi	rivate	haka	272	9600	000	600	-	0	0
Institute of Nuclear Medicine Library	esearc	overnme	haka	5	500	00	-	0	4	2
International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) Library	esearc	ternatio al.	haka	100	3860	2500	00	00	6	53
Islamic University of Technology (IUT) Library	cademi	ternation	azipu	266	4961	00	00	26	1	4
North South University Library	cademi	rivate	haka	0570	0000	700	3000	00	1	1
Rajshahi University Library	cademi	overnme	ajsha	3046	01874	1483	-	-	4	
Shahjalal University of Science & Technology Library	cademi	overnme	yhlet	920	1000	-	00	-	5	4
Southeast University Library	cademi	rivate	haka	742	4417	01	9	-	-	-
The University of Asia Pacific Library	cademi	rivate	haka	180	6000	50		00	-	-
United International University Library	cademi	rivate	haka	210	0726	-	30	34	-	-

Resource Sharing

The resources of the libraries cannot keep pace with the exponential rate of growth of literature, inflationary effect on learning materials, shrinking library budgets and increased demand of users for information. No single library can satisfy the needs of its users; however big or resourceful it may be. All the libraries have to seek the cooperation of other libraries to augment the resources through synergy in order to meet the needs of their users. Therefore, it is imperative to coordinate the resources of libraries of all types at national and international levels for the democratization and dissemination of knowledge and information available in different libraries ensuring optimum utilization of resources.

Table 2 shows that only 07 libraries (24.13%) have participated in resource sharing network. Almost 75% libraries did not take part in resource sharing network. Only 02 (6.90%) libraries have cooperation agreement between them. More than 90% libraries are out of any cooperation process. However, the table 2 reveals that more than 80% libraries have joined newly formed library consortium of Bangladesh (LiCOB).

Table-2: Participation of libraries in resource sharing network and consortium.

Categories of Libraries	Participation in Resource Sharing Network		Participation in Library Consortium of Bangladesh (LiCOB)		Library Cooperation Agreement	
	Yes	No.	Yes	No.	Yes	No.
Academic Libraries: Public University	02	08	09	01	---	10
Private University	01	09	09	01	01	09
International University	---	01	01	---	---	01
Research / Special Libraries: Government	03	04	04	03	---	07
International	01	---	01	---	01	---
Total =	07	22	24	05	02	27
Percentage	24.13%	75.86%	82.76%	17.24%	6.90%	93.10%

Library Automation

As a consequence of unprecedented development in ICT, information explosion has been taking place with the ever rising proliferation in the amount of information. Due to information explosion, automation of library services is imperative for efficiency and effective working of library and information centre (Singh, 2010). Library automation in the areas of databases and information retrieval, computerized library network and use of telecommunication require a careful handling and systematic planning (Rajput, 2010).Libraries in Bangladesh have realized the value and importance of computerization in order to improve their services to users. Even though computer systems have been introduced in modest scale in a few government departments in the late 1960's; a very few libraries have started to use computers by the beginning of the 1980's (Zabed, 1997).

Table 3 shows the status of initiation of library automation. Around 80% libraries have initiated library automaton programme. As part of automation process, the same percent of libraries are in a process of development and installation of library software.

More than 55% libraries developed library software to provide database service to its own institution members. Only 07 (24.13%) libraries developed software capable of providing world wide service of

information resources. Table 3 shows that all libraries have Local Area Network (LAN) and internet connectivity to provide information services to the users.

Table 3: Initiation of computerization / library automation and development / installation of library software and availability of computer network and internet.

Categories of Libraries	Initiative Taken for Automation		Development/ Installation of Library Software		Nature of Software		Availability of Computer Network			Connectivity of Internet	
	Yes	No.	Yes	No.	Intra	Web-Portal	LAN	CAN	WAN	Yes	No.
Academic Libraries :											
Public University	07	03	07	03	05	02	07	02	02	10	---
Private University	10	---	10	---	05	05	10	05	05	10	---
International University	01	---	01	---	01	---	01	---	---	01	---
Research / Special Libraries:											
Government	05	02	05	02	05	---	05	---	---	07	---
International	01	--	01	---	01	---	01	01	---	01	---
Total =	24	05	24	05	17	07	24	08	07	29	
Percentage	82.76%	17.24%	82.76%	17.24%	58.62%	24.13%	82.76%	27.59%	24.13%	100%	

As part of library automation, out of 24 libraries, 18 libraries have started to computerize bibliographical information of books and documents. The table 4 shows that Dhaka University Library automated around 62% of bibliographical information against their collection. In the same way, libraries as shown in table 4 have started bar-coding of book for appropriate retrieval and circulation service.

Now a day's digitization of library resources is the extended part of library automation for the availability of full text of information resources. Table 5 shows that only 07 (24.14%) libraries have initiated for building digital library and 22 (75%) libraries are out of this digitization process.

Table 6 shows that BRAC University Library, East-West University Library, ICDDR, B Library, Islamic University of Technology (IUT) Library and North South University Library, have established the digital library for providing full text information resources of their own throughout the world. These libraries belong to private university and international organization.

Table- 4: Computerization of bibliographical information and bar-coding.

ame of the Library	otal Collection of ooks)	o. of Bibliographical formation Automated / omputerized (B)	ercentage B/A)	o. of Books/ Documents ar-coded (C)	ercent /B
Ahsanullah University of Science & Technology Library	14,000	12,050	86.07%	---	---
American International University Bangladesh Library	32817	32817	100%	--	---
Bangladesh Agricultural Research Institute(BARI) Library	33,556	3,432	10.23%		---
Bangladesh Agriculture University Library	195500	3490	1.79%	--	---
Bangladesh Institute of Development Studies Library	116,223	41,714	35.89%	--	---
Bangladesh Rice Research Institute (BRRI) Library	17,202	5,045	29.33%		---
Bangladesh University of Engineering and	129,642	129,642	100%	129,642	100%

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Technology Library					
BRAC University Library	23,345	15,500	66.40%	15,500	100%
Chittagong University of Engineering & Technology (CUET) Library	47,804	47,804	100%	47,804	100%
Dhaka University Library	640,000	400,000	62.50%	400,000	100%
Daffodil International University Library	22500	22500	100%	--	
East West University Library	25,000	25,000	100%	25,000	100%
Independent University Bangladesh (IUB) Library	19,600	16,000	81.63%	19,500	100%
Institute of Nuclear Medicine Library	3,500	1,000	28.57%	--	---
International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) Library	13860	13860	100	--	---
Islamic University of Technology (IUT) Library	34,961	34,961	100%	34,961	100%
North South University Library	40000	40000	100%	40000	100%
Southeast University Library	14,417	10,000	69.36%	---	---

Table- 5: Initiation of digitization for building digital library.

Categories of Libraries	Initiation Taken for Digitization		Establishment of Digital Library
	Yes	No.	
Academic Libraries : Public University	---	10	--
Private University	05	05	03
International University	01	---	01
Research / Special Libraries: Government	---	07	---
International	01	---	01
Total =	07	22	05
Percentage	24.14%	75.86%	17.24%

Table 6: List of digital library of surveyed libraries.

Name of Library	Location	Web Address of Digital Library
BRAC University Library	Dhaka	http://dspace.bracu.ac.bd/
East-West U university Library	Dhaka	http://koha.ewubd.edu:8030/greenstone/cgi-bin/library.cgi
ICDDR,B Library	Dhaka	http://dspace.icddrb.org/dspace/
Islamic University of Technology (IUT) Library	Gazipur	http://lib.iutoic-dhaka.edu/
North South University Library	Dhaka	http://library.northsouth.edu/

In order to ascertain the problems of introducing automation, respondents were asked to give their views on a range of their limitations. The table 7 reflects that of the problems stipulated, lack of trained manpower topped their areas of concern.

Table-7: Library automation problems.

Automation problems	Categories of Libraries and Responses					Total	%
	Academic Libraries			Research/Special Libraries			
	Pub.Univ	Priv.Univ.	Int'l Univ.	Govt.	Int'l		
Paucity of fund	05	02	--	01	--	08	27.59%
Lack of administrative support	03	05	--	04	--	12	41.38%

Lack of trained staff	07	07	01	05	--	20	68.97%
Lack of fund for recurring expenditure	05	02	--	04	--	11	37.93%
Hesitancy of learning computer	04	01	--	03	--	08	27.59%

(Multiple Response)

Web-Based Library Cooperation

Development and use of common standard is one of the most important tasks for library cooperation. Dewey Decimal Classifications, Library of Congress Classification, Sears List of Subject Headings are major development of standards in the field of library science and information management. The inherent capabilities of networked technology have presented libraries with opportunities to take their services to new levels. Integrated Library System (ILS) continues to be a key part of library consortium activity (Webstar , 2006). The spread of web and its associated hypertext transfer protocol (HTTP) have all but eliminated the technical difficulties associated with moving computer files from one place to another. Library document delivery networks typically rely on the use of specialized software created specially for the purpose of streamlining the digitization and internet transmission of print documents. Infotrieves Ariel Software is by far the dominant player in this niche and it is sometimes referred to as the de-facto standard for document exchange between libraries (Durno, 2006).

Open source software is another example of collaboration at work in libraries. Thousands of libraries around the world rely on common applications developed through the open source process, such as Linux operating system, the Apache web-server software, or MySQL and PHP, web-database tools. These open source applications have become the informal standard in many libraries around the world. The Koha Integrated Library System is an excellent example of open source library software (Webster, 2006). The emergence of internet, particularly the world wide web (WWW) as a new media of information delivery triggered proliferation of web-based full text on-line resources (Laxman Rao, 2006).

Internet search engines, particularly Google have become very important centralized information services. Google initiatives to expand the public internet content have received a great deal of attention. These include the Google Scholar Scholarly materials search engine and Googles partnership with prominent libraries to digitize library collections. Google is partnering with a large number of e-content vendors and indexing projects to make growing volume of journals available via public web-search. The On-line Computer Library   Centre (OCLC) open worldcat project is an important centralized service that is now making library holdings information accessible world wide via internet search engine like Google, Yahoo (Webstar, 2006).

It is understood clearly that the communication technology is the only ways and means of library cooperation to fulfill the needs of information users. Many libraries are procuring same materials from the same source and spending large amount of funds putting strains on their limited budget resulting in difficulty to procure alternate resources. With a view to accessing to information from any corner,   library consortium may be formed among the libraries with the help of communication technology.

To materialize the concept of consortium for sharing information resources for access to world wide information each and every library has to develop web-based database of its own through a recognized compatible library software. Open source software Koha Integrated Library System or Evergreen system may be the appropriate one for building web-based database of the respective library. These open source software are free of cost and any library can download it for creating the database of information resources. If each and every library host its database in a web, information consumer from any part of the world will be able to enter the database of any library. Database of the libraries altogether will form the central database of information resources by maintaining the MARC21. Creation of web-based central database by the nation will generate international library cooperation and collaboration for access to world wide information. Central database will serve the purpose of union catalogue. All participating libraries of consortium will be required to sign a legal contract specifying the procedure of works, functions, their

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rights, privilege and obligations and they will be able to contribute to their part in line with library consortium for the benefit of the information users.

Besides the development of web-based database each and every library may build the web-based digital library by digitizing the text of information resources. It may not be possible to digitize all the information resources of the library. The process may start with the digitization of important and rare collection. Digitization will be required in case of traditional information resources procured in the printed form. Now a day's built-in digitized information resources are also available for digital library. Digitization programme may be conducted by the participating libraries under the policy of the library consortium within the purview of the copy right act. If the libraries have web-based digital library as per guideline of library consortium, then the information consumer from any part of the world will be able to access to the full text of information resources.

Digital library software from open source may be used to build the digital library. D-Space, E-Print, Greenstone etc. are the user friendly digital library software of the open source for building web-based digital library. These software are free of cost and may be downloaded from the web. It reveals from the above discussion that collaboration and cooperation among the libraries may be strengthened by forming library consortium utilizing information & communication technology. National consortia of library of different countries may pave the way on the establishment of World Library Consortium.

Conclusion

It is evident that the modern information & communication technology (ICT) has changed the scenario of the availability of information resources. Library automaton has increased the use of information resources through the creation of database and information retrieval. The libraries face series of challenges in their operational areas of acquisition, processing and dissemination of information resources. In order to meet the challenges of the 21st century, applications of ICT has to be expedited by a coordinated and collective national effort. In the age of globalization, communication networks and consortia are indispensable ways to achieve the cost effectiveness by bridging and digitizing the libraries at national and international levels. The result of the survey has given concrete indications for the following recommendations to overcome the constraints of library cooperation and collaboration:

a. Library consortia should be formed and allocation of budget should be given for ICT development in libraries;
b. With a view to ensuring the optimum utilization of the scarce resources by availing of the effect of synergy, libraries should be brought under consortia;
c. The library associations of the country should organize seminars and workshops to create awareness among librarians about the advantage of automation and library consortia;
d. The government should take up development project to provide appropriate ICT training of global standard to meet the increased demand of the users.

References

Bangladesh Academy of Sciences (2011). The constitution of the library consortium of Bangladesh (LiCOB), Dhaka.

Borek, Dian, et.al (2006). Perspective on building consortium between libraries and other agencies. *Library Trends*, 54(3), 448-462.

Chatterjee, Amitabha (2007). Resource sharing among libraries in digital era: role of consortium. Retrieved from www.isical.ac.in/serial/consortia/CBSOR-02.pdf

Durno, John (2006). Eden: a web-based model for electronic document exchange. *Library Trends*, 54(3), 346-358.

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Grycz, Czeslaw Jan. (1997). Resource sharing in the systemic context of scholarly communication. *Library Trends*, 45(3), 499-517.

Hwa-Wei Lee. Return to the basics: The importance of library cooperation and resource sharing. Retrieve from http://ir.lib.nctu.ed.tu

Laxman Rao, N (2006). Knowledge sharing activities in India. *Library Trends*, 54(3), 463-484.

Mannan, S.M. & Bose, Manik Lal (1998). Resource sharing and information networking of libraries in Bangladesh: a study on user satisfaction. *Malaysian Journal of Library & Information Science*, 3 (2), 67-86.

Rahman, Md. Anisur, Nahar, Mahmudun & Akter, Razina (2006). Resource sharing, networking and library consortium: problem and prospects in Bangladesh. Paper presented at the 4th convention planner (2006), Mizoram University, Aizawl, 9-10 November, 2006 (pp.370-379).

Rajput, P.S. & Gautam, J.N. (2010). Automation and problems in their implementation: an investigation of special libraries in Indore, India. *International Journal of Library and Information Science*, 2(7), 143-147.

Singh, Gurpreet (2010). Status of library automation in the institutions of higher studies in Punjab: a comparative study of Amritsar and Jalandhar city (internet). Version 3. *LIS Compendium*. 2010 Sep 16 (revised 2010 Sep 15). Retrieved from: http://knol.google.com/k/gurpreet-singh/status-of-library-automation-in-the/3smlepz7shaew/4#

Webster, Peter (2006). Interconnected and innovative libraries: factors tying libraries more closely together. *Library Trends*, 54(3), 382-393.

Webster, Peter (2006). Introduction. *Library Trends*, 3(54), 343-345.

Zabed, S.M., Munshi, Md. Nasiruddin & Ahmed, Minhaj Uddin (1997). Computerization of libraries in Bangladesh. *Malaysian Journal of Library & Information Science*, 2(2), 37-43.

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