

Dedicated
TO MY PARENTS

**Use of Information and Communication Technology
(ICT) for Automated Networking and Resource
Sharing in the Selected Public and Private University
Libraries in Bangladesh: A Study**

**USE OF INFORMATION AND COMMUNICATION
TECHNOLOGY (ICT) FOR AUTOMATED NETWORKING AND
RESOURCE SHARING IN THE SELECTED PUBLIC AND
PRIVATE UNIVERSITY LIBRARIES IN BANGLADESH: A
STUDY**



This thesis submitted to the Department of Information Science and Library Management, University of Dhaka, as a partial fulfillment of the requirement for the Degree of Master of Arts of the year 2008.

**BY
MD. ABUL KALAM SIDDIKE
EXAMINATION ROLL NO. 3307
REGISTRATION NO. HA-827
EXAM. SESSION 2007-2008.**

**Department of Information Science and Library
Management
University of Dhaka
June 2010**

CERTIFICATE

I have the pleasure to certify that the Thesis entitled **“Use of Information and Communication Technology (ICT) for Automated Networking and Resource Sharing in the Selected Public and Private University Libraries in Bangladesh: A Study”** submitted by Md. Abul Kalam Siddike, Examination Roll No. 3307, for the degree of Master of Arts in Information Science and Library Management, University of Dhaka, is his original work carried out under my supervision and is worthy of examination.

Dr. S. M. Mannan
Professor

PREFACE

The main objective of the thesis **“Use of Information and Communication Technology (ICT) for Automated Networking and Resource Sharing in the Selected Public and Private University Libraries in Bangladesh: A Study”** is to fulfill the partial requirements for course ISLM-505 of the Masters Degree in Information Science and Library Management. It is believed that this type of work is inevitably the result of the collaboration of many great helpers, otherwise continuing alone with a gigantic mass of scattered materials and on the subject and their presentation in a form most coherent and consistent can outbalance the patience of a feeble mind as him. All available papers, relevant documents, international journals’ articles and some brochures have been minutely scanned through.

The present study has been discussed under seven broad chapters. The study discusses the methodology, scope and objectives adopted for collection, presentation and analysis of data for this study. It focuses the meaning, need and scope of resource sharing and library networking and use of ICT facilities for automated networking and resource sharing and traces the historical growth and development, functions and services of some selected public and private university libraries in Dhaka city.

The study also attempts to discuss the present status of resource sharing and networking of libraries, particularly public and private university libraries in Dhaka city. It also covers the previous situation, present condition and future prospects of resource sharing in the public and private university libraries in Bangladesh and a suitable proposal for library networking and resource sharing among the public and private university libraries has been made.

The findings and recommendations from the study should hopefully lead to a clarification of many problems in the formulation of planning and

policy making regarding resource sharing and library networking. It is assumed that it would help the librarians, policy makers and concerned authority to develop and implement a suitable system to accelerate library resource sharing activities in Bangladesh.

However, all the possible investigations have been made to collect data related to the study in order to give a complete picture. It may be useful as a basic work for future investigators. If the work is found useful to the planners, librarians and information specialists, the efforts undertaken would be successful.

Md. Abul Kalam Siddike

ACKNOWLEDGEMENTS

The thesis has been conducted under the supervision of **Dr. S. M. Mannan, Professor, Department of Information Science and Library Management, University of Dhaka**. I can not express my high regard and gratitude in any finite number of words to my supervisor. Without his tireless and welcoming support, I would not have been able to finish this work. I am indebted and thankful to my learned and revered supervisor for his upbeat personality, kindness; encouraging support and willingness to help have tangibly and greatly improved the quality of my work and brought up to its present standard.

My deep appreciation is extended to all of my respected and doted teachers of the Department of Information Science and Library Management, University of Dhaka for their co-operations, suggestions and guidance to complete the thesis perfectly.

In pursuing the study, I had to depend on different public and private university libraries. I am grateful to the librarians and information professionals of those public and private university libraries who provided me necessary information and extended all possible helps for this work. I owe my deepest gratitude to the authors whose work I have used in this study as I had to depend on different national and international publications for the completion of thesis.

I am deeply grateful to my father and my mother whose scarifies, prayers and persistent support made it much easier to accomplish this work. I owe all of my beloved brothers and friends a great debt of gratitude, as well, for their unlimited support and encouragement all along.

Above all, I am deeply grateful to Almighty Allah, the Most Gracious and Most Merciful, for giving me mental power and ability to accomplish this study.

Md. Abul Kalam Siddike

TABLE OF CONTENTS

	Page No.
Preface	v
Acknowledgement	vii
Table of Contents	viii
List of Tables	ix
List of Figures	xii
List of Abbreviations	xiv
Chapter 1: Introduction	1
Chapter 2: Literature Review	12
Chapter 3: Networking and Resource Sharing: theoretical considerations	18
Chapter 4: Existing Public and Private University Libraries in Bangladesh	41
Chapter 5: Findings of the Survey	63
Chapter 6: Model Plan	104
Chapter 7: Recommendations and conclusions	114
Appendix 1 Questionnaire for Library Survey	118
Appendix 2 Questionnaire for User Survey	133
Bibliography	141

LIST OF TABLES

Table 1	Distribution of libraries by type	64
Table 2	Distribution of libraries by status of resources	65
Table 3	Distribution of libraries by specialization in collection development	65
Table 4	Distribution of libraries on the basis of subscribed e-journals	66
Table 5	Distribution of libraries by status of collection	67
Table 6	Distribution of libraries by using the cataloguing code	67
Table 7	Distribution of libraries by form of catalogue used	68
Table 8	Distribution of libraries by used catalogue systems	69
Table 9	Distribution of libraries by status of classification scheme followed in the libraries	70
Table 10	Distribution of libraries by status of subject heading followed in the libraries	70
Table 11	Distribution of libraries by various divisions	71
Table 12	distribution of libraries by number of personnel	72
Table 13	Distribution of libraries by their adequacy of manpower	73
Table 14	Communication facilities available among the libraries	74
Table 15	Distribution of libraries according to the equipments and technologies used for providing library services	75
Table 16	Distribution of libraries according to the computer hardware and software used for library and information services	76
Table 17	Reprographic facilities available in the surveyed libraries	76

Table 18	Distribution of libraries by their initiation of automation	77
Table 19	Distribution of libraries by status of operation	77
Table 20	Distribution of libraries by automated services	78
Table 21	Distribution of libraries by the software used for automation	78
Table 22	Distribution of libraries by their internet facilities	79
Table 23	Distribution of libraries by status of internet connection	80
Table 24	Distribution of libraries by using browser software	80
Table 25	Distribution of libraries by using search engines	81
Table 26	Distribution of libraries according to the library databases	81
Table 27	Distribution of libraries by automated serial control, bar code identification, and system administrator	82
Table 28	Distribution of libraries by status of inter-library services in different scale	83
Table 29	Distribution of libraries by inter-library loan	87
Table 30	Distribution of libraries according to their access of networking and intention to join	87
Table 31	Distribution of libraries according to their opinion about the importance of networking and resource sharing	88
Table 32	Distribution of libraries according to their specific subject for networking and resource sharing	89
Table 33	Distribution of libraries according to the response time taken by the participating libraries	89
Table 34	Feelings of readers after obtaining materials from other libraries	90
Table 35	Distribution of libraries according to the time taken to process the request	91

Table 36	Distribution of libraries according to the means used for conforming availability of material in the concerned libraries	92
Table 37	Distribution of libraries according to their opinion for the main constrain of networking and resource sharing	93
Table 38	Distribution of libraries by the status of Taka	94
Table 39	Status of the gender of users	95
Table 40	Characteristics of the users by status	96
Table 41	Response of the frequency of availing services from institutional library	100
Table 42	Response of the frequency of availing services from outside library	100
Table 43	Mean result for the need of information services	101
Table 44	Suggestions of the users for improving library services	102

LIST OF FIGURES

Figure 1	Category of library	63
Figure 2	Adequacy of collection	66
Figure 3	Distribution of libraries by status of cataloguing code used by the libraries	68
Figure 4	Distribution of libraries by used of catalogue form	68
Figure 5	Catalogue system used in the libraries	69
Figure 6	Proportion of different categories of users	71
Figure 7	Percentage wise numbers of users using the library per day	72
Figure 8	Percentage wise statuses of staffs	73
Figure 9	Adequacy of manpower	73
Figure 10	Availability of communication facilities	74
Figure 11	Status of automation	77
Figure 12	Percentage of libraries by internet connections	79
Figure 13	Percentage of internet connection	80
Figure 14	Status of inter-library loan services	84
Figure 15	Inter-library loan received	84
Figure 16	Inter-library loan offered	84
Figure 17	Photocopy services received	84
Figure 18	Photocopy services offered	84
Figure 19	Answer of reference queries received	85
Figure 20	Answer of reference queries offered	85
Figure 21	Online/offline search received	85

Figure 22	Online/offline search offered	85
Figure 23	Translation received	85
Figure 24	Translation offered	85
Figure 25	Manpower received	86
Figure 26	Manpower offered	86
Figure 27	Equipment received	86
Figure 28	Equipment offered	86
Figure 29	Any other received	86
Figure 30	Any other offered	86
Figure 31	Evaluation of inter-library loan services	87
Figure 32	Access to network	88
Figure 33	Importance of networking and resource sharing	88
Figure 34	Loan periods for lending materials	90
Figure 35	Request processing time	91
Figure 36	Conformation means used for the availability of materials	92
Figure 37	Major constraints for networking and resource sharing	94
Figure 38	Gender of users	96
Figure 39	User's visit to the library	97
Figure 40	Number of libraries visited by the users	97
Figure 41	Percentage of user satisfaction	98
Figure 42	Percentage of information frequently searched in the library	98
Figure 43	Alternative measures taken to meet the users need	99
Figure 44	Use of national/international database	99
Figure 45	Sufficiency of library collections	102

LIST OF ABBREVIATIONS/ACRONYMS

AACR 2	Anglo American Cataloguing Rules 2 nd Editions
ACM	Association of Computer Machinery
ACU	Association of Commonwealth Universities
AGRIS	International Information system for the Agricultural Sciences and Technology
AIC	Agricultural Information Center
BAEC	Bangladesh Atomic Energy Commission
BANBEIS	Bangladesh Bureau of Educational Information and Statistics
BANSDOC	Bangladesh National Scientific and Technical Documentation Centre
BANSLINK	Bangladesh National Scientific and Library Information Network
BAS	Bangladesh Academy of Sciences
BIDS-LDC	Bangladesh Institute of Development Studies-Library and Documentation Center
BIPC	Bangladesh INASP-PERI Consortium
BLCMP	British Libraries Co-operative Mechanization Project
BLDSC	British Library Documentation Service Centre
BLISE	British Library Automated Information Services
BLRDD	British Library Research and Development Department
BSMMU	Bangababdhu Sheik Mujib Medical University
BSMMUL	Bangababdhu Sheik Mujib Medical University Library
BU	BRAC University
BUETL	Bangladesh University of Engineering and Technology

BUETL	Bangladesh University of Engineering and Technology Library
BUL	BRAC University Library
CALIBNET	Calcutta Library Network
CAS	Current Awareness Service
CD	Compact Disc
CD-ROM	Compact Disc-Read Only Memory
CDS/ISIS	Computerized Documentation System/Integrated Set of Information System
DDC	Dewey Decimal Classification
DELNET	Developing Library Network
DEVINSA	Development Information in South Asia
DL	Digital Library
DU	Dhaka University
DUL	Dhaka University Library
E-BOOKS	Electronic Books
E-Mail	Electronic Mail
EWU	East West University
EWUL	East West University Library
FIG.	Figure
FP	Focal Point
FTP	File Transfer Protocol
GD-NET	Global Development Network
GLAS	Graphical Library Automation System
GoB	Government of Bangladesh
HeLLIS	Health Literature Library and Information Services

HINARI	Health InterNetwork Access to Research Initiatives
HSC	Higher Secondary Certificate
IBM	International Business Machines
ICDDR'B	International Center for Diarrhoeal Disease research, Bangladesh
ICT	Information and Communication Technology
IDRC	International Development Research Center
ILL	Inter Library Lending
ILLNET	Illinois Library and Information Network
INASP	International Network for the Availability of Scientific Publications
INFLIBNET	Information and Library Network
IT	Information Technology
IUBL	Independent University of Bangladesh Library
JANET	The Joint Academic Network (UK)
JSTOR	Journal Storage
LAN	Local Area Network
LASER	London and South Eastern Library Region
LC	Library of Congress
LIS	Library and Information Science
LISU	Library and Information Service Unit
MARC	Machine Readable Cataloguing
MEDLINE	MEDLARS Online
MS	Microsoft
MOU	Memorandum of Understanding
N	Node

NAIS	National Agricultural Information System
NALDOC	National Agricultural Library and Documentation Centre
NHLDC	National Health Library and Documentation Centre
OPAC	Online Public Access Catalogue
OUP	Oxford University Press
PC	Personal Computer
PERI	Program for Enhancement of Research Information
PG	Postgraduate
POPLINE	Population Network
R&D	Research & Development
R&P	Research & Publication
RIRC	Rural Information Resource Centre
RS	Resource Sharing
SDI	Selective Dissemination of Information
SOLINET	Southeaster Library Network Inc.
SSC	School Secondary Certificate System
UG	Under Graduate
UGC	University Grants Commission
UK	United Kingdom
USA	United States of America
VTLS	Virginia Tech Library System
WiFi	Wireless Fidelity
WiMax	Wireless Maximum Forum
WLN	Western Library Network
WWW	World Wide Web

CHAPTER 1

INTRODUCTION

Chapter 1

INTRODUCTION

Background

Across the disciplines, technology is spawning brand new carries in even as it changes in the way we performed old ones. Standing at the edge of 21st century probably there is no dispute over the recognition of technologies in information activities. Unprecedented changes in the use of information are reshaping our personal activities, our community and organizational practices. Information and Communication Technologies (ICT) bring the global information to our finger end. With the emergence of Internet, information kept in different locations has become asset of the world community bringing – almost every day in equal platform. To control over the world information resources different specialized information systems and networks are playing vital role in accumulating and generating indigenous literature on the information super-highway.

In the present day, libraries and information centers have become multimedia due to adoption of new technological advances and innovations, and changing nature of their information storage, retrieval and services. In fact, Information and Communication Technology (ICT) is an indispensable part of modern information systems development, management and services.

In the present information age, it is simply impossible to keep track with development activities in the absence of a dependable information system in the country. A workable information system is an essential pre-requisite for research and development in every field of study. Scientists and researchers need to know about the information tools and resources available for better utilization of information. Failure to provide accurate and adequate information to the scientists, researchers, planners and administrators may lead to faulty results which will, in turn, hinder national development. The solution lies in identifying the available information resources and ensuring quick dissemination of information to the concerned users through various channels of communication. In this regard libraries and information centers can be considered crucial media, which can play a dynamic role in the universal diffusion and advancement of knowledge and can provide right information to the right user at the right time.

Presently Bangladesh lacks a well organized and planned library and information system. However, both the government and private bodies in recent times have shown an awareness of the importance and need of

information system. The existing libraries and information centers in Bangladesh are not properly organized and suffer from different problems such as, acute shortage of funds, inadequate information resources, lack of qualified staff, modern technological facilities and a lack of willingness of the authorities. In such circumstances it is simply impossible for any single library in Bangladesh to meet the information needs of its users. To overcome this stagnant condition of research and development activities, library networking and resource sharing is a must. The major reason of this networking is to share available library resources effectively. The resources can include information, equipment, facilities, qualified staff, time and money. The sharing of resources usually means the sharing of library materials and other information resources irrespective of geographical barriers. The library and information system of Bangladesh is in need of catching up with modern development. Already, many libraries of the country from different fields have started to realize that networking and resource sharing is one of the most effective ways to solve the problem of providing information in time to the users. But many of them are undecided about what models they should adopt, because of a lack of experience, technological facilities or necessary financial allocation, etc. Library and information centers of Bangladesh are now seeking models adaptable to Bangladeshi circumstances.

In this current study an attempt has been made to propose and design a suitable plan for automated networking and resource sharing in the selected public and public and private university libraries in Bangladesh.

Rationale and objectives of the study

Library networks have grown mostly during the last thirty years in different geographical environment in order to cater to the specific needs of the users. In the United States there has been a proliferation of them. Library networks in other countries are also growing. The development countries like Bangladesh are lagging behind in library cooperation. The reasons for the same are poor funding and the non-existence of the spirit of give and take or exchange is delaying the prospects of resource sharing programs. It has been observed with regret that the concept of resource sharing is generally missing among academic libraries in Bangladesh. Most of the libraries are working on the policy of “self-sufficiency”. In some instances it has been found that two academic and research libraries located at a distance of 5-15 minutes walking distance are spending substantial amounts from their budget on the subscription of same journals and procurement of same books, whereas they can easily share their resources with each other. Therefore, there is a need to motivate librarians and information professionals for resource sharing and networking of libraries to ensure optimum utilization of available financial, physical and manpower resources. Now it becomes imperative to know the reasons of negligence towards the revolutionary concept of resource sharing which no nation today can afford to give such casual attention. The

information and communication technology (ICT) relating to library systems and services has come into force at the present information age in Bangladesh. This technology has been adopted by some academic libraries in carrying out their duties and responsibilities on information services and management and the existing situation is not that frustrating. The explosion of data and the ever increasing cost of information present libraries of all kinds real challenges to collect enough library materials to meet the growing information demands of their users; on the other hand, the advancement of computer and telecommunication technologies also provides library information service professionals genuine opportunities to bring virtual libraries into reality.

Since the start of computer revolution the impact of electronic networking on education in general and library services in particular has been profound. High-speed transmissions of information through electronic networks are reducing the physical boundaries to information and are changing the role of the publisher and the library intermediaries in the chain of scholarly communication. The development of Z39.50 standard, World Wide Web (WWW) browsers and client/server technology has revolutionized the way information is being transferred. With the rise of the internet and the National Information Infrastructure (NII), geographic barriers are finally broken and equal access to electronic information is increasingly affordable. For library users the information super highway is becoming a primary way of accessing information. The ultimate aim of networking and resource sharing is to provide the right information expeditiously to the user as and when required. Keeping all these in mind, the present study has been proposed mainly to develop a model university library networking plan for resource sharing in Bangladesh.

So, the study has been designed to ascertain:

- The present scenario of library services in major public and private university libraries of Bangladesh;
- The strength and weakness of collections of various public and private university libraries and their dependence on other libraries;
- The present status of resource sharing, networking and telecommunication in public and private university libraries in Bangladesh;
- The availability of infrastructural facilities, manpower, finance and other resources required for networking and resource sharing in the said libraries;
- Information seeking behavior of academic community, scientists, researchers, and administrators; their information needs, degree of dependence of their institutional libraries and those outside;
- Suitability of types of standard and computer network;
- Lastly, based on the study, developing a suitable network plan for resource sharing in the selected public and private university libraries of Bangladesh.

It is expected that the findings of the study will provide useful guidelines in planning and designing an effective network plan for resource sharing in the selected public and private university libraries of the country.

Scope of the study

The need and importance of use and application of information and communication technology (ICT) in the university libraries of Bangladesh have already been realized, and beginning has already made by the major public and private universities, such as DU, BUET, EWU, BRACU, and IUB. In the present age of information and communication technology (ICT), the information needs of the users have been increased so enormously that no single library on its own can meet their information needs. This has necessitated the need for effective linkages and cooperation between libraries and information centers for sharing of available resources and information through networking. In Bangladesh, several resource sharing and networks initiatives were taken by different organizations in different sectors to launch resource sharing and networking systems. However, the implementation of such plans experienced several problems. Authentic survey works regarding information needs, availability of resource sharing are still inadequate.

The present study concentrates on a review of the following issues out of a large number of issues that can be studied in relation to set up information networking and resource sharing in the public and private university libraries in Bangladesh, since there are the ones that the most pertinent to the study:

- Availability literature on networking and resource sharing;
- Status of public and private university libraries in Bangladesh;
- Status of networking and resource sharing among the libraries in Bangladesh;
- Survey of some selected public and private university libraries in Bangladesh;
- A model plan for automated networking and resource sharing in the selected public and private university libraries of Bangladesh; and
- Recommendations for smooth operation of the proposed automated networking and resource sharing plan.

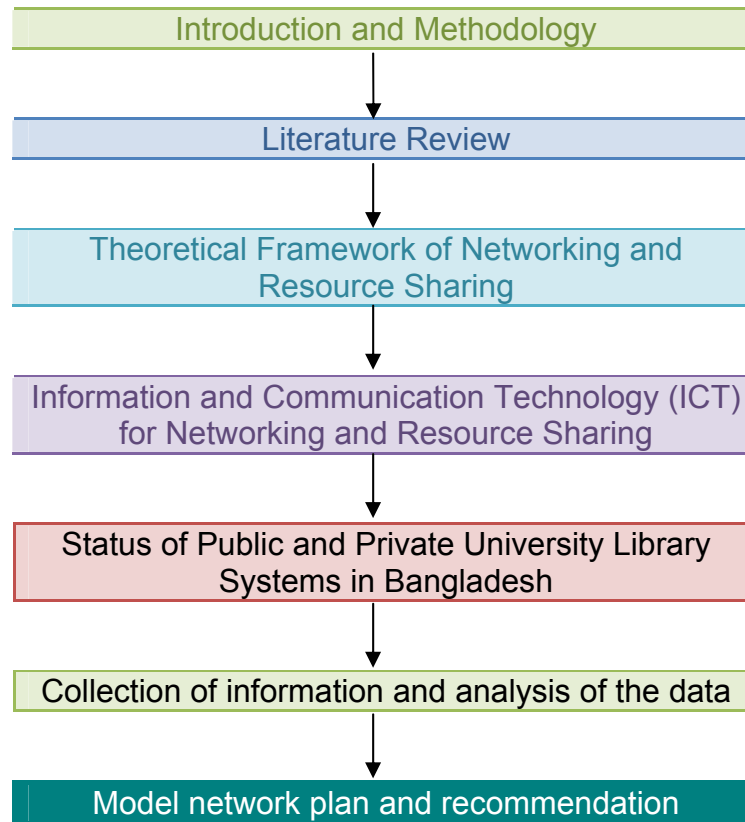
Methodology

The choice of an appropriate research methodology is important for any research study. Authentic research findings need sound scientific methodology. In the present study, the following methodology has been adapted:

I) Study Design

The present study can be visualized as in Figure-1

Figure-1: Schematic view of the study



II) Literature Review

Existing literatures on the topic were studied and reviewed to examine the status of library and information system and networking and resource sharing activities among the public and private university libraries in Bangladesh. A comprehensive bibliography of the available literature has been compiled, and given at the end of the thesis.

III) Sample Design

(A) For ensuring representativeness from public and private university libraries and considering the services and usefulness to the users, six public and private (3+3) university libraries of the country were purposefully selected and brought under investigation at the first stage (sample size).

Figure-2: Libraries brought under the survey

SL. No.	Name of the library	Type	Year of establishment	Location
01	Dhaka University Library	Public	1921	Dhaka
02	Bangladesh University of Engineering and Technology (BUET) Library	Public	1961	Dhaka
03	Bangababdhhu Sheik Mujib Medical University (BSMMU) Library	Public	1998, But IPGMR was established in 1965.	Dhaka
04	Independent University of Bangladesh (IUB) Library	Private	1993	Dhaka
05	East West University Library	Private	1996	Dhaka
06	BRAC University Library	Private	2001	Dhaka

(B) At the second stage, one hundred users from various groups like students, teachers, researchers and other categories have been interviewed.

IV) Survey

Information was collected using two sets of structured questionnaire of which one was prepared for the survey of the sample libraries and another for the interview of the users. Both the questionnaires were duly pre-tested and finally structured keeping in view of the objectives of the study.

Based on the analysis of the general and specific objectives of this study information on fifteenth broad categories of variables for libraries and ten broad categories of variables for users identified.

The variables and indicators of the questionnaires for libraries and users are shown in Table-1 and Table-2 respectively:

Table-1: Variables and indicators for university libraries

SL. NO.	Type of variables	Indicators
01	Organizational Information	Name of the University, Year of Establishment, Name of the Library, Year of Establishment, Present Address, Telephone no, Email, Fax, Website.
02	University Statistics	No. of Department/Schools, No. of Teachers, No. of Students, No. of Officers.
03	Library Staff	Qualification, Number of Professional Staff, Semi/Para Professional Staff, Non-professional Staff, Others Guards/Housekeepers/Cleaners.

04	Users	Students, Teachers, Researchers.
05	Library Resources	Books, Thesis, Reports, E-resources, Journals/Magazines, Audio Cassette, CD-ROM, DVD, Video Cassette, Library E-Resources, Bibliographies, Abstract, Full Text, Numeric, Graphic, E-journals, Catalogue, Classification.
06	Library Divisions	Acquisition, Processing, Circulation, Reference, Documentation Service, Reprographic, Audio-Visual, Periodical, Galleries, Achieves.
07	Networking and Resource Sharing	Inter-library services being received and ordered-inter-library loan, Photocopy services, Answers of references queries, Online/offline search, Translation, Manpower, Equipment, Areas of resource sharing, Importance of networking of public and private university libraries in Bangladesh in the prevailing situation, Constraints of networking, National Focal Point of Networking.
08	Inter-Library Loan	Items borrowed, Items lent out, Photocopies procured, Photocopies provided, Photocopies obtained from international services, Source and expenditure, Loan period, Response time, Readers reaction, Postal charges, Agreements, Transacting problem(s), Means for confirmation of the availability of materials.
09	Technologies Used in Library	Technologies in library, Total number of computers, Total number of printers, Fax machine, Internet connection, Home page/Web pages, Total number of photocopy machines, Television, Microfilm/Microfiches reader, Number of card cabinet with tray, Air-conditioning system, LAN, Audio player, CD/DVD writer, Spiral machine, Video player, Laminating machine, Telephone, Computer hardware and software, Operating software.
10	Reprographic Facilities	Types of reprographic facilities, Photocopy, Printing, Scanning, Charges.
11	Library Automation	Library automation software, such as, DRA/ATLAS, DOBIS/LIBIS, GLAS, KOHA, VTLS, CDS/ISIS.
12	Internet Services	Usage of internet, Basis of internet usage, How many computers have internet connection, Status of internet connection, Browser software, Internet service provider (ISP).
13	Library Database	Number of publications, Database inputting bibliographical record, Automated catalogue-

		WINISIS, GENISIS, MS Access, GLAS, Automated serial control system, Bar code identification system, and administrator.
14	Library Budget	Total budget for the library, Inter-Library loan allocation.
15	Any proposal or recommendation	Proposal and potentiality, any other developments for the questionnaires.

Table-2: Variables and indicators (Users)

SL. No.	Types of variables	Indicators
01	User information	Name, Gender, Name of the University.
02	Category of Users	Student-graduate, Post graduate, M. Phil, PhD, Faculty Members, Researcher- Junior, Senior, and Administrator.
03	Specialization	Area of Specialization.
04	Library Use	Information look in library, Reference materials, Current information, Periodicals, Text books, Audio-visual materials, Visiting the library, Library hours, Searching reading materials, Borrowing reading materials, Updating due date of books.
05	Need of Information Services	CAS & SDI, Bibliographic services, Reprographic services, Reference & referral services, Indexing and abstracting services, Using periodicals, Audio-Visual services, Internet services, Translation services.
06	Valuation of Library Resources and Services	Level of satisfaction/dissatisfaction- Manuscripts, Books (text), Periodicals, Journals, Reference Books, Computer services, Photocopy services, Document loan, Audio-visual services, Abstracting services, Reference services, Inter library loan, Microfilm, Library staffs skill/trained, New arrivals of the library.
07	Databases	User of any national / international databases, usefulness of databases.
08	Use of Library Services	Borrowing of books, Inter-library loan, Photocopying of book materials, Photocopying of articles from journals, Translations, Computerized data search such as, CD-ROM search, Online access, In-house database, Inter-library loans, Internet/E-mail facilities, Electronic journals.
09	Recommendations	Number of library staffs, Collection of the library, Use of ICT for library functions, Proposal to improve the library services, Opinion/Proposal for efficient library and information services.

V) Data Collection

For the purpose of authenticity and reliability of data, the interview method based upon structured questionnaire was preferred over the other applicable methods.

(A) Libraries

The librarian and information professionals of the selected public and private university libraries were interviewed carefully with the structured questionnaires and necessary data were collected for the purpose of the study. The sample was as follows:

Public University Library	03
Private University Library	03
Total	06

(B) User (s)

Based on random sampling, one hundred twenty structured questionnaires were distributed among the different category of library users. This group includes students, teachers, researchers, scientists, administrators and others from the selected public and private university libraries of the country. One hundred questionnaires were received filled up the users which have been tabulated and analyzed (Both the questionnaires are given in Appendix -1 & 2). The sample consists of the following:

Students	75
Faculty Members	10
Researchers	5
Library Staffs	10
Total	100

VI) Sample

The following samples were selected for the study:

- University libraries which have undertaken or planned for networking in near future.
- University libraries which have promoted marginal infrastructure needed for resource sharing.
- Libraries which have satisfactory UGC ranking.
- Libraries which are used by the users frequently were selected.

VII) Data processing and analysis

Two sets of questionnaire of this study were duly edited to verify that the data recorded in the questionnaires have been carefully and accurately filled in.

All the questionnaires were duly coded after editing for computer input. The steps followed in the process of data input are:

- Entering data on the computer;
- Conducting validation checks to ensure that data have been correctly entered on the computer;
- Preparation of output tables.

VII) Implementation

The study was implemented in three steps:

Step-1: Reviewing of all available relevant literatures, presentation of reading list/ bibliography for background study;

Step-2: Designing and testing of questionnaires, sample design, data collection, data analysis, presentation; and

Step-3: Development of network plan.

Organization of the Text

The text of the thesis has been organized as a logical progression in the following seven chapters including preliminaries and appendices.

Chapter One is devoted to the background of the study, objectives, scope and importance, methodology applied to the study, implementation and organization.

Chapter Two deals with the review of related literature on networking and resource sharing, information and communication technology (ICT) for automated networking and resource sharing.

Chapter Three deals with the theoretical framework of networking and resource sharing and use of information and communication facilities for networking and resource sharing. It also deals existing networking and resource sharing activities among the libraries in Bangladesh.

Chapter Four consists of status of public and private university libraries in Bangladesh and their networking and resource sharing activities.

Chapter Five covers data processing, analysis, presentation along with finding and discussions.

Chapter Six provides presentation and discussion of the proposed networking and resource sharing model.

Chapter Seven provides a summary of the results, recommendations and conclusions of the study.

Limitations of the study

The study suffers the following problems:

- It is confined within selected public and private university libraries in Bangladesh.
- The scope of the study might be limited due to the small size of sample both users and libraries. A large sample would certainly bring better result with more specific information.
- Choosing the Focal Point may commence the question of bias. However, reason and criterion for selecting the Focal Point has been mentioned.

CHAPTER 2

LITERATURE REVIEW

Chapter 2

LITERATURE REVIEW

Introduction

The review of literature is an essential component of any research investigation, which gives necessary input to the investigator to frame the research study on the chosen topic (Vinayagamoorthy, 2007: 33). In this chapter an attempt has been made to review the literature on networking and resource sharing and related topics. In order to provide comprehensive conceptualization, the literature reviewed has been categorized under the following headings:

- Library networking, resource sharing and consortia;
- Information and communication technology for networking and resource sharing.

Library networking, resource sharing and consortia

Patterson (2009: 87-93) proposed an outline on current resource-sharing initiatives in Irish academic libraries that support increased research activity in line with national policy. She suggested that the greatest obstacle for finding library research is that libraries do not publish their research.

Anie and Achugbue (2009: 8-10) carried out to assess the views of librarians about the impact of ICT policies on the utilization of library resources and services.

Alidousti, Nazari and Ardakan (2008: 711-728) discussed the results of a study on success factors of resource sharing and cooperation in Iranian academic libraries.

Petterson (2008: 120-122) argued that resource sharing is alive and well throughout the world.

Moghaddam and Talawar (2008: 94-104) reviewed consortia efforts in developing countries. They also outlined the advantages and disadvantages of consortia in developing countries, particularly in India.

Ruenwai and Morris (2008: 278-292) defined a clear strategy for the future development of S&T services for resource sharing in Thailand.

Bakewell (2007: 1-48) defined resource sharing as an important element in the national planning of library and information services to meet the needs of

information, education and culture of the whole community in Europe. He also discussed some problems associated with the practice of resource sharing.

Dobson (2007: 102-143) served to update readers on different approaches to assist public libraries to connect to the Internet on the Library Association Millennium Bid and Project EARL (Electronic Access to Resources in Libraries).

Wanner, Beaubien and Jeske (2007: 92-98) described innovations in resource sharing in the US library community with an international perspective. They provided important insights into current thoughts on resource sharing in the USA.

Ghosh, Biswas and Jeevan (2006: 608-620) reviewed the state of libraries in India and summarize the strategic cooperative undertaken to improve user access to electronic information services.

Meng and Lieu (2005: 343-351) explored construction pattern and issues involved with the development of national science and technology library (NSTL), in China. They described the rapid progress in constructing a sci-tech information resource sharing system and offering web-based information services to the patrons of scientific and technical communities all over China.

Martey (2004: 15-19) took a critical look at the proposed consortium of Ghanaian academic libraries with a view to determine its future direction and possible impact on the consortium.

Hendris (2004: 176-182) traced the demise of joined up ILL across the Regional and National Libraries of the UK by the setting up of Unity (Combined Regions) and the change of status of LASER. She discussed the history of electronic messaging and resource sharing from view data through to Viscount and on to V3.Web.

Haider (2003: 55-64) made awareness of resource sharing in Pakistan in its present day from is a phenomenon of the 1980s. He identified some problems encountered by libraries with regard to the paucity of resources, lack of funds and absence of bibliographic and physical accessibility to limited resources.

Alemna and Antwi (2002: 234-238) discussed evolving trends in library consortia building against the backdrop of recent developments in some African countries. They also suggested the way forward in successful consortia building among university libraries in Africa.

Cohen (2002: 107-111) observed the growing use of technology. She also pointed out low-technology projects fostering resource sharing throughout the region and directions for future use.

Martey (2002: 239-251) explained the management issues involved in library networking project in Ghana. He discussed the challenges and success of the project of networking and resource sharing in Ghana.

Mishra (2001: 31-36) analyzed the results of a survey on factors affecting the development of local library networks in India. He also reveals that the library networks should try to raise the levels of awareness among participating libraries to develop the local library networks successfully.

Rao (2001: 167-178) focused on the status of the existing communication networks, libraries and information networks (LINS) and challenges for networking in India.

Anwar and Al-Jasem (2001: 225-231) highlighted the resource-sharing in kuwaiti libraries and present the results of a survey of 17 libraries in Kuwait. They found not only that the current resource sharing activities are at a minimal level, but also that all libraries actively participate in resource sharing activities in Kuwait.

Gorman and Cullen (2000: 373-384) explored evolving trends in library cooperation against the backdrop of practices in various Asian countries. They reviewed the rationale for cooperation and both barriers and positive factors, and present an overview of various models for cooperation.

Gorman and Cullen (2000: 135-144) proposed and discussed the standard knowledge model applied to library networks in Asia. They also viewed the limited evidence that some library consortia in Asia are moving in this direction, but for the most part Asian consortia and networks are of the traditional, static variety.

Jalloh (2000: 166-176) reported on the preliminary investigations and formulations carried out to assess the feasibility or viability of a library network or consortium for Swaziland. He evaluated the existing resources and facilities, affirms and confirms the perceived need for resource sharing and library networking, establishes present obstacles for library cooperation, and proposed a scheme or framework within which the network can be achieved for optimum use.

Wood and Walther (2000: 173-181) examined the depth of the format change issues, including changes in data preservation and conversion, personnel and facilities issues and a close examination of scholarly communication and distance education issues facing higher education and academic libraries.

Khalid (2000: 57-63) built a framework for cooperation and networking in library and information systems of advanced countries.

Yang (1999: 231-245) found out the problems encountered in the establishment of NBINet and the solutions related to computers and networks, NBINet's utilization on the Internet, and user expectations of NBINet.

Mannan and Bose (1998: 67-86) conducted an analysis of 25 libraries and 100 users of different categories to measure the satisfaction level of users on library networking and resource sharing activities in Bangladesh.

Mannan (1997: 1-304) stated networking and resource sharing among the libraries and information centers in Bangladesh with its present condition and future prospects.

Smith (1995) devotes to the major initiative, Project EARL and the motivations for the project are outlined and three tiers of planned services for EARL participations are described: connect information and developments.

Tedd (1995: 323-326) revealed the global impact of networking and resource sharing for library applications in Malaysia.

Friend (1994: 17-21) discussed on electronic document delivery system through library co-operation and networking by using Super JANET and also showed future possibilities of using Super JANET pilot project.

Kaske (1994: 47-60) focused on the college library technology and cooperation grants program in the United States of America. He also made an attempt to identify trends within the short history of the program in the USA.

Haines (1993: 22-27) argued on facilitating better health service delivery to Londoners by forming or developing HMIC (Healthcare Management Information Consortium).

Massam (1993: 17-24) revealed basic considerations like definition, benefits, problems, funding, and future, etc. of networking and resource sharing.

UKOLN (1993: 109-113) provided ten basic issues or implementing factors for implementing library networking and resource sharing in UK.

Man (1992: 23-24) highlighted the role of library, appropriate librarianship curriculum, technology transfer and resource sharing activities in South Africa.

Tameem (87-99) provided insights into trends and critical issues regarding co-operative activities between school and public libraries. He also defines the nature of co-operation as well as the functions of the agencies involved in co-operative activities.

Wheelhouse (1988: 136-143) reviewed the ever growing field of literature on resource sharing in order to try to discover what resource sharing, what need there is for it, what it is intended or hoped to achieve, what sort of resource sharing plans and schemes have been implemented, and in particular to try to find any evidence in the literature on the real benefits and actual costs involved in resource sharing which could be used as justification for such schemes in comparison with other methods of maximizing access to resources.

Hildreth (1987: 222-228) described the emergence of the bibliographic utilities and services they are able to offer to libraries in face of the high costs and risks of computerization for library networking in the North America.

Ballard (1986: 35-39) considered to which extent resource sharing occurs in the United States, several factors have to be taken into account including the many networking patterns, interlibrary loans, interlibrary loans and reciprocal borrowing.

Feller (1984: 3-9) seemed to be two very simple questions: when is an academic library ready to engage in resource sharing? What data should a library collect and analyze in order to decide what cooperative arrangements would be most advantageous?

Middleton (1983: 203-217) stated the status of library automation in Australia and provides background for an exploration of issues arising when local network operations consider their relationship to the national Australian Bibliographic Network.

Information and Communication Technology (ICT) for networking and resource sharing

Islam and Islam (2007: 1-10) enunciated the ICT based library and information services activities of some selected academic and special libraries in Bangladesh. They also revealed the ICT based services, resources, number of records in the database, used software and internet technologies, etc.

Ani, Esin and Edem (2005: 701-708) investigated the extent of adoption of information and communication technology in university libraries in Nigeria. They identify major obstacles that influence effective adoption of ICT in university libraries are inadequate funds and the poor state of electricity in Nigeria.

Adeyoyin (2005: 257-266) ascertained the levels of ICT literacy among library staff in a range of Nigerian libraries.

Schofield; McMenemy and Henderson (2004) indicated that both libraries had been successful in providing access to ICTs for people who would otherwise have had no access, although the age of the technology available in the more established learning center had a negative impact on users, and the take-up of online learning opportunities had not been as prominent as would be expected.

Gulati (2004) discussed the status of information and communication technologies usage in Indian libraries with special reference to special libraries and the efforts made by various institutions to propagate e-information products and services. He highlights the consortia efforts in India like JCCC Consortium, INDEST Consortium, CSIR E-journal Consortia, and UGC InforNet.

Talagala and Gamage (2003: 1) examined the development of library automation activities in Sri Lanka and also discuss the utilization of software

in the automation of libraries, different software packages used in library automation and the extent of their use in library operations in Sri Lanka.

Mannan (1998: 101-118) stated that the advancement of library automation in Bangladesh is not up to mark and the barriers traced out for these conditions are mainly lack of legal sanctioned by the concerned authorities, adequate financial support, proper policy and technological facilities.

Alam (1998: 47-63) explored IT application trends in some special libraries in Bangladesh.

Munshi (1998: 77-88) determined the extent of use of IT and its impact on libraries and information centers in Bangladesh.

Ahmed (1998: 39-46) showed the applications of computer in the libraries in Bangladesh are still limited and less than optimal, and still at the experimental level.

CHAPTER 3

NETWORKING AND RESOURCE SHARING: THEORITICAL CONSIDERATIONS

Chapter-3

NETWORKING AND RESOURCE SHARING: THEORETICAL CONSIDERATIONS

The emergence of the internet, particularly the World Wide Web, as a new medium of information storage and delivery in the 21st century. In this age of information explosion, the most challenging tasks for the information professionals and information centers all over the world is to supervise the huge information that are being produced and developed in the world. It is impossible for a single library to monitor all the explosion of knowledge fields and accumulate for the users. To cope up with this situation, the phenomenon of formation of resource sharing or consortia has become very important in the last few years. Initially the term used for resource sharing activities was library cooperation. Though cooperation theoretically could embrace almost all library activities, practically it was confined to inter-library loan of library documents (Islam and Mezbau-Islam, 2007:1-2). But due to physical distance and other reasons even this limited system of cooperation was not being practiced widely. However, with the advent of Information and Communication Technology (ICT) and its application in library activities, new opportunities opened up for greater cooperation among libraries. At the global level Internet and at the national and local level several library networks came in vogue and databases created for information sharing. In recent years availability of information resources in digital or electronic medium has further facilitated exchange of information resources among libraries, thus creating favorable condition for increased resource sharing. Emergence of library consortia is a very promising development in this direction (Chaterjee, 2002: 2). Consortium of libraries is well known for sharing of resources all over the world (Islam and Mezbau-Islam, 2007: 2).

Librarians or information professionals have talked a great deal about resource sharing. It is a mode of operation whereby many libraries share their resources and services. Resource sharing between libraries has a long history. Every now and then, the academic community and the management encourage librarians to cooperate, as if it is a new idea. As a matter of fact, librarians have always shared information about the library holdings and inter-library loans are the classic examples. Digital resources and networking, although not without their own challenges, have created new opportunities for the organization of services, maintaining virtual/digital libraries and venturing to co-operative arrangements in collection development (Zamir, 2009: 83). A goal of resource sharing is to maximize the availability of materials and services and to minimize expenses. The emphasis is on access rather than procession. Resource sharing arrangements among libraries provide the library user with access to resources beyond the local collection. However, resource sharing among various libraries will broaden the scope of resources from which to meet the users' needs (Dugan, 1983: 20-21). The goals of resource sharing include:

- Facilitating users to have better access to library holdings or services.
- Positive effect on library budget in terms of cost or more services at lesser cost than can be undertaken individually.
- Exchanging of library resources and information to benefit users.
- Enabling the users to be more aware regarding the resources not available in their own library.
- Advocate and support creative use of library/information resources.
- Develop shared policies for ILL, borrowing and reciprocal agreements for special collections and non-circulating materials.

Factors Influencing Resource Sharing

The effectiveness of library services depends on the ability of librarians to provide quick delivery of documents requested by users either from physical stock or through networks (Zamir, 2009: 84). The electronic resource sharing is often mentioned, as an effective way for meeting customer needs. On one hand the availability of voluminous data in electronic format and its cost presents challenges for libraries to meet the growing demands of users; on the other hand, the information and communication technologies provide library professionals an opportunity to bring virtual library into reality. The other factors influencing resource sharing could be (Zamir, 2009: 84):

- Financial stringencies or lack of institutional funding makes libraries to look at alternative ways of improving and extending library resources.
- How to make the existing library resources readily accessible to the members and other interested parties.
- Skyrocketing journals subscription rates.
- Publishers' restrictions on electronic dissemination.

Library Consortia

It is impossible for one library or information center to hold the full stock of information resources or to procure all information, which may be in demand by its users. Even not a single library or information centers can meet the thrust of knowledge of all the readers from its holdings. To solve this problem, library cooperation started long ago, such as inter-library loan, document delivery, library networks etc. At present the more accepted system of resource sharing is library consortia. Consortia approach is one of the any ways of maintaining cooperation and coordination among the libraries and in fact it has emerged as the 'state of the art' in library cooperation in recent years (Zamir, 2009: 84-85).

The word 'consortia' was originated from the Latin in the early 19th century in the sense of partnership. Oxford Advanced Learners Dictionary describes Consortia as 'a group of people, countries, etc. who are working together on a particular project'. A library Consortia is an association of a group of libraries that agree to share their resources to satisfy the needs of users. Consortia may be formed on a local, regional, national, or international basis; on a functional or format basis; or on a subject basis (Zamir, 2009: 84-85).

Benefits of Consortia

The benefits of Consortia are many:

- A comprehensive collection is possible.
- Building communication among different libraries.
- Avoid duplication of core collection especially for core journals.
- Scope of electronic archives.
- Easy access to resource sharing on Internet by developing common resources databases.
- Effective document delivery systems.
- Better scope for developing a union catalogue.
- Reduce cost of information.
- Time saving.
- Improved resource sharing.
- More professional services to users.
- Help to develop a competitive professionalism among LIS professionals.

Library Network

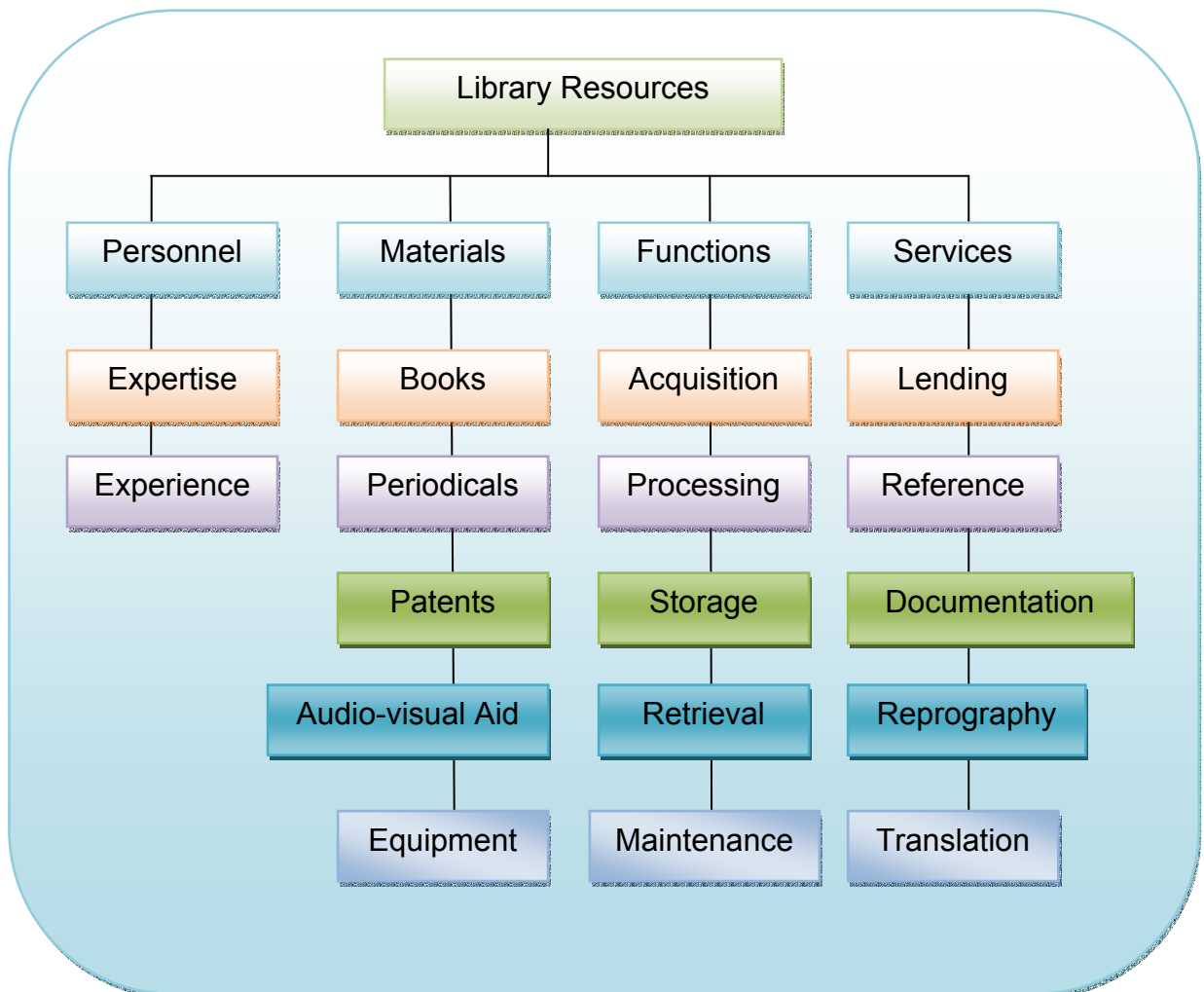
According to Rajashekharan (1987:312) a library network is defined as a “set of interrelated information systems associated with communication facilities which are cooperating through more or less formal agreements and institutional agreements in order to jointly implement information handling operations, with a view to pooling the resources and better serving the users. They generally follow identical or compatible rules and procedures”. Therefore, a library network takes in a formal organization, composed of member libraries that have some shared objectives which they realize in part through reliance on computing and telecommunications technologies (Wordsworth, 1991: 1-2).

Resource Sharing

The area and the scope of resource sharing are wide, comprising of mainly people, process, materials or any other possession of the library. Purdy (1969:54) describes scope of resource sharing under eight headings:

- “Union catalogue and lists
- Cooperative development of resources
- Sharing resources in terms of use
- Communication
- Centralized processing
- Co-operatively sponsored planning and surveys
- Co-operative storage and
- Co-operative computer centre.”

The library resources are represented in the following tabular form:



Need for Resource Sharing

The tradition of cooperative collection development and resource sharing among libraries stays alive as means to alleviate problems of space and costly duplication, in particular for little used materials. The need for resource sharing stems from (Zamir, 2009: 86):

- The explosive growth of all forms of literature;
- Increasing reliance or demands on information;
- Inflation in the cost of materials;
- Reduced or stagnated budget provisions;
- Impossible to be self-sufficient to meet increasing demands of its users from own collection and it is not desirable to develop huge collections anticipating future demands.

Economics and technology are the main driving forces of electronic resource sharing. Now with networks facilitating cooperation, the lines are blurring as to what constitutes ownership and resource sharing. Collection building is no

longer an issue to be addressed by librarians rather it is the access to electronic information that will play a critical role. Electronic networks facilitate effective resource sharing with speedy document delivery directly to the users at reduced cost. With raise to Internet, the geographical barriers are broken and equal access to electronic information is increasingly affordable (Zamir, 2009: 87).

Electronic resource sharing is not interlibrary loan. Although inter-library loan (ILL) is an important function, ILL by itself can no longer meet the information needs of today's users. Traditional ILL is labor-intensive and costly. High-speed transmission of information through networks reduces the physical boundaries and operating expenses (Zamir, 2009: 87).

Networking

Networking means to share, to commit to connect information, resources, time as well as efforts with others that have similar goals. It is very powerful link of the coordination and dissemination library resources as well as resource sharing. Classifying networks is an important task. They may be classified as followings (Zamir, 2009: 87):

- The signals they carry; e. g. digital network.
- Their logical structure; e. g. centralized or star network.
- Their institutional focus; e. g. academic library network.
- The functions they perform; e. g. inter-library loan network.
- The subjects they treat; e. g. social science information network.
- The equipment they employ; e. g. computer network.
- The geographical area they encompass; e. g. regional network.

Library Resource Sharing and Networking

The term resource applies to a thing, person or action to which one resorts to in times of need and sharing indicates allotting, apportioning or contributing something that is owned, to benefit others. Resource sharing, therefore, refers to reciprocity, implying a partnership where each member has something useful to contribute to others and which is willing and able to make available when needed (Zamir, 2009: 88).

Resource sharing is an empty concept, but for the approach permitting resource sharing to work is that which;

- Entails having resources to share;
- Having a willingness to share them; and
- Having a plan for accomplishing resource sharing.

Resource sharing is an integral part of modern library services. In the developed countries, no library services can be thought without sharing of resources. In the past, RS was limited to the inter-library loan system. In the modern age, with the development of science and technology and innovations

of techniques and devices, resource sharing has become easier and fruitful due to the availability of databases, information network, and online sharing facilities. Thus, the resource sharing system helps one library to access to resources of other libraries. When resource sharing is agreed upon by participating institutions, then the following aspects must be planned (Zamir, 2009: 88-89):

- Identify and locate major collections, sources and materials.
- Assemble, publish and distribute collective information for all participating bodies.
- Workout the basis for sharing, reference service, lending service, copying service, access to materials, delivery service, and lists of holdings.
- Establish means of sharing ideas, development and problems in the form of a newsletter.
- Plan for new developments in the knowledge of what others are doing.
- Developing a National Information Policy.

The following are the most important benefits of resource sharing to participating institutions:

- Easy access to materials.
- Enable co-operating institutions to extend limited resources.
- Allow greater staff specialization.
- Avoids unnecessary duplication.
- Reduces the number of places which will need to go for services.
- Improves working relationships between cooperating libraries.

Resource sharing refers to a joint use of resources available on a system or a network by ser or peripherals. In the language of information management, when we talk about resource sharing we simply mean collective use of information of all kinds of various ends users from a control coordinating unit or from within a network component at a reduced cost with easy accessibility. Library cooperation and resource sharing activity can take place in several forms and can happen at many levels, which include (Zamir, 2009: 88-89):

- Inter-library loans/reciprocal borrowing privileges.
- Exchange or sharing of expertise, resource, and facilities.
- Exchange of publications and photocopies and other reprographic services.
- Sharing of bibliographic information.
- Cooperative acquisition, cooperative cataloguing, and cooperative collection development and preparation of union list of holdings.
- Cooperative relationship and network development.

The implementation of resource sharing is largely depends on library networking. It gives an easy and wider access to information as members have an expanded information-base and service. A network is a form of arrangement or an administrative structure that links a group of individuals or

organizations who have agreed to work together and/or share resources. Information networking entails the sharing of resources so that the information needs of both actual and potential users of information- from the local to national level – of all network participants are met.

The network enables the participating bodies to facilitate and expand their user's access to literature and information without corresponding investment in purchase, and processing of information is exchanged through the network on a formal basis. The network may be responsible for coordinating, organizing and providing information and literature support at the national and international level.

The main activities and functions of the network are as follows

Acquisition of materials

- Joint purchasing of materials
- Assignment of specialization in material acquisition
- Coordinated subscription
- Exchange of holdings

Technical services

- Co-operative cataloguing
- Abstracting and indexing services
- Inter-library loan
- Reciprocal borrowing privileges
- Reference and/or referral services

Publication program/repackaging information

- Union catalogue/list of periodicals
- Mutual notification of purchases through lists of new arrivals or acquisition list
- Bibliography development
- Newsletters
- Joint directories of personnel, projects, consultants, resource persons, etc.
- Manuals

Coordination services

- Clearing house functions
- Retrieval and storage function
- Referral center

Research, training and other special services

- User interest surveys
- Joint research projects
- In-service personnel training
- Workshops and meetings
- Translation services.

Barriers to Networking and Resource Sharing

The American Library Association attempted to identify the barriers of networking and resource sharing (at that time inter-library cooperation) by holding a series of ten one-day meetings in 1968 in various parts of the country and invited a variety of people associated with libraries to speak the question of preventing cooperation. According to Fetterman (1974: 13-14), the participants identified forty-six major barriers and Orin Nolting has summarized these under the following five headings:

“– Psychological barriers:

- a. Fear of loss of local autonomy
- b. Clash of personalities
- c. Inertia and indifference
- d. Unwillingness to experiment, etc.

– Lack of information and experience:

- a. Lack of knowledge of the needs of the users
- b. Unpredictability of demands on the library by its legitimate users
- c. Failure of small libraries to realize the value of resources of larger libraries, etc.

– Traditional and historical barriers:

- a. Lack of adequate funds
- b. Fear of large libraries of being overused and under compensated
- c. Inadequacy of libraries to serve their own needs
- d. Limitations on access to academic and special libraries

– Physical and geographical barriers:

- a. Distance between libraries and distance of users from libraries
- b. Difference in size of collections
- c. Lack of space in public libraries to serve students
- d. Delays in satisfying needs and request of users.

–Legal and administrative barriers:

- a. Too many government units
- b. Lack of communication across jurisdictional lines
- c. Lack of bibliographical tools and controls
- d. Incompatibility of equipment and procedures and rules between libraries
- e. Lack of properly trained staff
- f. Lack of appropriate state-enabling legislation
- g. Lack of creative administrative leadership etc.”

Networking and resource sharing activities in Bangladesh

In Bangladesh several resource sharing and networks initiatives were taken by different organizations in different sectors to launch resource sharing and networking systems. Some of these are as follows:

- Bangladesh Agricultural Information Network (BAIN): The Agricultural Information Center (AIC) was taken an initiative to develop a network of agricultural institution. But this could not be materialized (Mannan and Begum, 2000: 2).
- Social Science Research Council (SSRC): Social Science Research Council, Dhaka was taken an initiative to develop a social science information network in Bangladesh (Mannan and Begum, 2000: 3). But it is not functioning currently.
- Health Literature, Library, and Information Service (HeLLIS) Network: The HeLLIS network was developed by SEARO (WHO), New Delhi, India and National Health Library and Documentation Center (NHLDOC), Dhaka in 1979 and official recognition by Bangladesh Government received in 1981. All the health libraries of Bangladesh were brought under this network. The project period was over in 1995 (Mannan and Begum, 2000: 3).
- Development Information Network on South Asia (DEVINSA): The DEVINSA network was organized by CSCD (Committee on Studies for Cooperation for Development in South Asia) through the Marga Institute, Colombo, Srilanka in 1980. All SAARC countries, except Bhutan, were the participants of this network. BIDS LDC is as the apex body in Bangladesh (Mannan, 1997:125-28). Currently it is functioning.
- Information Network on Rural Development (INRD): Center on Integrated Rural Development for Asia and the Pacific (CIRDAP), Dhaka was taken an initiative to develop a regional network on rural development in 1992 with other organization like BARD. But from 1995 the activities of INRD became dormant, due to various reasons (Mannan, 1997: 132).
- Bangladesh Development Support Information and Communication (BDSIC) Network: Bangladesh Academy for Rural Development (BARD), Comilla has developed a network of rural development institutions in Bangladesh termed the Bangladesh Development Support Information and Communication (BDSIC) Network. But now it is not working due to some problems (Mannan and Begum, 2000: 3).
- Women Information Network (WIN): Center on Integrated Rural Development for Asia and the Pacific (CIRDAP), Dhaka was taken another initiative to develop a network on women information (Mannan and Begum, 2000: 3). This network is also not working.

- National Science and Technology Information Policy (NASTIP): Under this policy, a four-tier science and technology information networking system has been recommended. But the project did not materialize (Mannan and Begum, 2000: 3).
- Sustainable Development Network Program (SDNP): SDNP is a UNDP funded program, which started a union catalogue services in 2002 in their virtual library program. The SDNP virtual library prepared this union catalogue of 13 libraries, all of which are using CDS/ISIS software for bibliographic record keeping. The SDNP virtual library union catalogue is a web-based Online Public Access Catalogue (Zamir, 2009: 94-95).

Bangladesh being developing country can not effort to waste its resources. To avoid this, an effective resource sharing and networking system is necessary. At present the following resource sharing and networking systems are working in the country:

- Population Information Network (POPIN): The National Institute of Population Research and Training (NIPROT) has taken an initiative to establish an information networking system in the field of health, population, family planning and maternal and child health in collaboration and cooperation with the government and non-government organizations, autonomous bodies, voluntary organizations and international organizations (Zamir, 2009: 95).
- National Health Library and Documentation Centre (NHLDOC) and International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) signed an agreement in 1976 to facilitate library cooperation through an interlibrary loan system and agreed to cooperate with each other to avoid duplication of journal subscriptions. The system has been working well (Zamir, 2009: 95).
- United Nations Library Network in Bangladesh (UN L-Net BD): In March 2002, United Nations Information Centre (UNIC) Library has taken an initiative to establish the UN Library Network in Bangladesh (UN L-Net BD). Initially the network consisted of twenty major libraries of different government, NGOs, includes the UN agencies in Bangladesh. At present there are 26 members in this network. The major objective of the network is to disseminate and share UN information resources among different libraries, government and NGOs, training institute, and exchange the publications among the member libraries (Zamir, 2009: 95-96).

Current Status of Resource Sharing and Networking among the Public and Private University Libraries in Bangladesh

Unfortunately the resource sharing and networking activities among any sort of academic libraries in Bangladesh are absent. Today, there are 31 public and 51 private universities in Bangladesh. The picture of library networking among the academic libraries is very disappointing. The survey of this study presents that the selected public and private university libraries also do not practice resource sharing activities. However, it was found that the needs and benefits of library networking and resource sharing among the selected university libraries are appreciated by the library professionals.

Most of the heads of the libraries have completed their library educational degrees under the department of Information Science and Library Management of the University of Dhaka. This is an inspirational fact which makes the selected public and private university libraries practicing least amount of informal resource sharing among the libraries. But this is neither a part of any formal library networking nor have any basic agreement of resource sharing.

All inter connections present among the libraries are based on the mutual and personal relationships of the chief librarians.

It is quite understandable that academic libraries are not any autonomous institutions rather parts of the respective institutions. Employing any decision and action taken for the libraries must keep harmony of the goals and objectives of the institutions. So unwillingness and unawareness of the public and private universities governing bodies' regarding the library networking and resource sharing are considered to be the most vital causes for such an unsatisfactory library scenario in Bangladesh.

Various initiatives were taken by the University Grants Commission and various public and private university libraries of Bangladesh. The present scenario of networking and resource sharing among the public and private university libraries in Bangladesh are as follows:

The University Grants Commission of Bangladesh (UGC), in collaboration with the Asia Foundation, took an initiative to compile a union catalogue of the collections of different universities Bangladesh and to establish an information network within the universities, but it does not see the light of success (Awal, 2005).

Dhaka University Library attempted to develop an information network of university libraries by preparing a union catalogue of the holdings of university libraries. But unfortunately the project did not materialize (Mannan and Begum, 2000: 3).

North South University Library, back in 2005, took an initiative for sharing online journals with some major public and private university libraries. Unfortunately this was only limited to the table-talks and never see the light in action due to some unknown reasons (Zamir, 2009: 1997).

BRAC University Library has undertaken the project of Integrated Library System (ILS) to support the academic and research activities of the university. Complete library automation using open source software KOHA is the motto of the project, which will eventually make the library as a local resource, and in turn help to build capacity in other libraries who may want to move to automation using KOHA.

The proposed project also focuses on the data conversion from the existing library system to standard format, i. e. MARC 21, which will enable the library any future migration into new generations of library systems (Brochure of BRAC University Library).

Greenstone Digital Library Network

According to the Librarian of East West University, EWUL initiated a digital library program by using the Greenstone Digital Library Software from the June 2010. Public and private university libraries having well infrastructural and ICT facilities can join the network. In this regard EWU Library will be acted as a focal point and they will provide training and other facilities.

International Network for the Availability of Scientific Publications (INASP)

The public and private university libraries enrich their journal collections through some international networks of journals and publications. One of the notable examples is International Network for the Availability of Scientific Publications (INASP). The public and private university libraries participated to this network to subscribe science and other related publications.

The aims and objectives

- To promote research in pure and applied sciences and their practical applications to problems of national welfare in Bangladesh.
- To disseminate scientific knowledge among the people.
- To publish proceedings, journals, memoirs, transactions and other publications on scientific subjects.
- To hold conferences, symposia, seminars, workshops, lectures etc on scientific topics of national and international importance either alone or in collaboration with local or international organizations and institutions.
- To establish and maintain scientific libraries, laboratories, museums and research institutions.
- To provide grants, scholarships and fellowships for approved scientific research and award prizes and medals for outstanding scientific work.
- To undertake such scientific work of national and international importance as the Academy may be called upon to perform by the public and by the Government, and to advise the Government on scientific matters of national importance.

- To act as the leading scientific organization of the scientists of eminence in Bangladesh and to represent internationally the scientific community of the country.
- To obtain and administer funds, donations, endowments and grants for the promotion and development of Science in Bangladesh and for the attainment of the aims and objectives of the Academy.
- To act as the adhering body of the International Council of Scientific Unions (ICSU) and other similar International Unions or Organizations.
- To do and perform all other acts, matters and things that may assist in or conduce to, or be necessary for the fulfillment of the above mentioned aims and objectives of the Academy.
(<http://www.bas.org.bd/general/aims-and-objectives.html>).

A Participatory Discussion Meeting (workshop) on exploring activities and services of INASP that may be useful to possible stake-holders like policy makers, managers, teachers, students, researchers, library staff, journal publishers, journal editors was arranged on 13 May 2006 by the Academy in collaboration with INASP in the Conference Room of the Academy at NMST Bhaban, Agargaon, Dhaka-1207. Ms Carol Priestly could not make time to come. Ms. Sara Gwynn, the Coordinator of PERI, INASP was the facilitator of the workshop and representatives of public and private universities, research institutions & laboratories participated in the day long workshop. The workshop made some important recommendations to the Academy to take the initiative for the INASP program in Bangladesh. MoU between BAS and INASP, 2006.

As a first step a MoU was signed between the BAS & INASP and Bangladesh became a member of the network. Through this network a large number of journals of world renowned publishers are made available to the Bangladesh stake-holders who can down-load all these information at their work places at any time.

Bangladesh-INASP-PERI Consortium (BIPC), 2007

Consequently, Bangladesh INASP-PERI Consortium (BIPC) was formed with the Primary Contact Officers of the participating organizations. The BIPC is being operated by a National Coordination Committee with Dr. M A Mazed, Director, BAS, as coordinator with all Primary Contact Officers as members. An Advisory Committee was formed during a meeting when the Vice Chancellors of the public and private universities, Chairman/Director Generals/ Directors of R&D organizations were present. Prof. Dr. M Shamsheer Ali, President, BAS, became Chairman of the Advisory Committee and Prof. Dr. Naiyyum Choudhury, Secretary; BAS became the Member-Secretary of the Advisory Committee for BIPC in Bangladesh. An on-line journal network under the Program for Enhancement of Research Information (PERI) started in 2006, on trial basis free of subscription. From January 2007, Bangladesh started subscribing PERI/INASP and 13 organizations paid subscription for the network for an amount of US\$ 67,000. In 2008, the number of members rose to 22 and the network paid US\$ 87,000 to INASP. By last year, more than 30 organizations joined the network and more

organizations are showing interest to join because of the immense benefit received in a cost effective way. The subscription paid to INASP A by now is in the tune of US\$ 1, 60,000.

Under this program, three training programs of the IT staff, librarians, and Primary Contact Officers have been offered and more are being organized with an international and national resource person.

Every year a Steering Committee Meeting is held with the Country Coordinators and the INASP officials. Last year the SC Meeting was held in Oxford, UK. The Bangladesh Academy of Sciences is hosting this year SC Meeting to be held on 11-14 May 2009. The Meeting will be held at the BRAC Centre Inn, Mohakhali. Thirty three representatives from 23 Member countries will participate in the SC Meeting and discuss issues like country specific needs, sustainability, understanding user need, effective proposal writing, monitoring and evaluation etc (<http://www.bas.org.bd/bangladesh-inasp-peri-consortium.html>).

The following public and private university libraries are the member of BIPC consortium:

- Ahsanullah University of Science & Technology
 - American International University Bangladesh
 - Asian University for Women
 - BRAC University
 - Bangabandhu Sheikh Mujib Medical University
 - Bangabandhu Sheikh Mujibur Rahman Agricultural University
 - Bangladesh Agricultural University
 - Bangladesh University of Engineering and Technology
 - Chittagong University of Engineering & Technology
 - Chittagong Veterinary and Animal Sciences University
 - Daffodil International University
 - Dhaka University of Engineering & Technology
 - East West University
 - Independent University Bangladesh (IUB)
 - International Islamic University Chittagong
 - Islamic University of Technology
 - Jahangirnagar University
 - Khulna University of Engineering & Technology
 - North South University
 - Rajshahi University
 - Rajshahi University of Engineering & Technology
 - Southeast University
 - State University of Bangladesh
 - United International University
 - University of Chittagong
 - University of Dhaka
 - University of Science & Technology Chittagongh
- (http://peri.inasp.info/peri/peri.pl?do=insert_institution&cid=4&iid=).

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR NETWORKING AND RESOURCE SHARING

Information and Communication Technology (ICT) is a comprehensive concept and parallel concept with Information Technology (IT), that denotes not only a single unit of technology but an assemble of technologies like telecommunication equipments, data processing equipments, semi conductors, consumer electronics, etc. The concept has brought a phenomenal change in the information collection, preservation and dissemination scene of the world. For the profession of librarianship, this turn of the events is a blessing in disguise (Pradhan, 2004: 100).

The emergence of Information Technology (IT) is one of the gifts of modern science and technology which has brought tremendous changes in Library and Information Science. Application of IT to library and information work has revolutionized the traditional concept of libraries from 'store house of books to an intellectual information center' connoting the concept of electronic library. It has opened up a new chapter in library communication and facilitated global access to information crossing the geographical limitations (Munshi and Roknuzzaman, 2002: 23-39).

Using ICT, libraries are also playing a very important role in facilitating access to global information and knowledge resources (Chisenga, 2004).

ICT: Concept and Meaning

ICT incorporates a range of technologies used to support communication and information. ICT includes both networks and applications. Networks include fixed, wireless and satellite telecommunications, broadcasting networks. Well-known applications are the internet, database management systems and multimedia tools. By implication, a holistic understanding of ICT necessarily includes consideration of telecommunications policies, information policies and human resource development policies (Islam and Islam, 2006: 809-817).

Information and Communication Technology (ICT) is a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information (Blurton, 1999: 46-61).

ICT is a term used to describe a range of equipment (hardware: personal computers, scanners and digital cameras) and computer programs (software: database programs and multimedia programs), and the telecommunications infrastructures (phones, faxes, modems, video conferencing equipment and web cameras) that allow us to access, retrieve, store, organize, manipulate, present, send material and communicate locally, nationally and globally through digital media (Dunmill and Arslanagic, 2006).

Marcelle (1998) argues that the ICT sector is heterogeneous collection of industry and service activities including information technology equipment and service, telecommunication equipments and services, media and broadcast,

internet service provision, libraries, commercial information providers, network based information services and related professional specialized services.

Hamelink (1997: 86 d. p.) provides a useful and clear definition of ICT indicating, ICTs are those technologies that enable the handling of information and facilitate different forms of communication. These include capturing technologies (e. g. camcorders), storage technologies (e. g. CD-ROMs), processing technologies (e. g. application software), communication technologies (e. g. Local Area Network) and display technologies (e. g. computer monitors).

So, we can define ICT as 'the use and application of computers, telecommunications and microcomputers in the acquisition, storage, retrieval, transfer and dissemination of information'.

Components of ICT in Libraries for networking and resource sharing

Chisenga (2004) quoted that ICT came about as a result of the digital convergence of computer technologies, telecommunication technologies and other media communication technologies.

Paul, Kumbarand and Krishnananda (1994: 3-32) categorized the components of Information Technology (IT), which frequently used in library and information center are as follows:

- Computer Technology
- Communication Technology
- Reprographic, micrographic and printing technology.

Rahman (2003: 1-22) stated that ICT is the fusion of two important technologies, electronics and communications. We can sum up the components of ICT on the basis of the concept of Chisenga, Patil, Kumbarand and Krishnananda and Rahman.

Now a brief account of these Information and Communication Technologies (ICT) is discussed below:

Computer technologies: The dramatic development in the information transmission process in every field of human endeavor has been made by the widespread use of computer technology that can further be divided into following categories:

Workstations: These are expensive and powerful computers used mainly by engineers and scientists for sophisticated purposes. These include following:

Mainframe computers: Mainframe computers are fast, large capacity computers, after the super computer, occupies a specially wired, air-conditioned room is capable of great processing speeds and data storage.

Super computers: Super computers, are high-capacity computers that are the fastest calculating device ever invented. It may have a vector processing design or massively parallel processing design.

Mini computers: Mini computers are refrigerator-size machine that are essentially scale-down mainframes. Minicomputers are becoming more important as servers in networks.

Personal Computers (PCs): These are desktop, floor-standing, or portable computers that can run easy-to-use programs such as word processing or spreadsheets.

Microchip technology: A microchip is a tiny piece of silicon that contains thousands of micro-miniature electronic circuit components, mainly transistors. The microprocessor of microcomputer, which process data, is made from microchips.

Artificial Intelligence (AI): AI is a group of related technologies that attempts to develop machines to emulate human like qualities, such as, learning, reasoning, communicating, seeing and hearing.

Software technology: Software consists of the step-by-step instructions that tell the computer what to do. Many software packages for various applications in the field of library and information services and management are commercially available. Some of the important library packages available are (Babu, 1999: 47-53):

Cds/Isis (computerized documentation system/integrated set of information system): This public domain package of library software developed by UNESCO is a menu driven generalized information storage and retrieval system designed specially for computerized management of structured database. The windows version of CDS/ISIS is called WINISIS.

In magic: In this study, the major functions include cataloguing, acquisitions, circulations, serials, on-line catalogue, retrieval, etc.

Book: This software system which supports all the major library functions including circulation control, acquisition, serial control, etc. This software is in COBOL language.

Minisis: This study is for use in creating, maintaining and searching library and information databases. Supports text and index searches, controlled indexing terms.

Libsys: It is the most comprehensive library software. It supports almost all activities relating to acquisition, cataloguing, circulation, serials and articles alert.

CD-ROM technology: CD-ROM is an acronym that stands for Compact Disc Read Only Memory. It is an optical disc of 120 mm diameter and a hole of 15 mm at the center with thickness 1.2 mm. Data is recorded in digital form using laser beam. CD-ROM is used to hold prerecorded text, graphics and sound.

Communication technologies: Communication or telecommunication technologies are used to transmit information in the form of signals between remote locations, using electrical or electromagnetic media as carriers of signals. Communication technologies comprise the following:

Audio technology: The outmoded AM (Amplitude Modulated) radio receivers are being replaced by the modern FM (Frequency Modulated) receivers. The recent development is the production of Compact Discs (CDs). Audio technology can be used in libraries and information centers for a wide variety of purposes such as story telling to children, imparting education, knowledge, recreation, etc.

Audio-visual technology: AV technologies are those by which things can be understood by listening as well as seeing. AV technologies include the following:

Motion picture: It can be used in library as one of the instruments of mass media communication. It is the dynamic source of information, education and recreation.

TV: Television is one of the traditional and old information and communication technologies which was dominated by major of station in its formative period.

CATV (Cable Television) system: It is a wired communication system of high capacity that flows from a central source through a major distribution cable to neighborhood lines and finally to the line into the house.

Videodisc: Videodiscs can be used to disseminate compute programs, digital databases, educational video programs and a range of electronic publications.

Videotext: Videotext is a newer technology, but as in the on-line information retrieval, the information is stored in computer files and accessed through a telecommunication link.

Teletext: Teletext is a one-way service to a large number of simultaneous users, where parts of information from a central database are broadcast as part of the regular television signal.

Telephone: The telephone is one of the longest established methods of electronic information transfer especially to transfer the voice which can be a strong means of disseminating information and keeping of what is being happened concerned organization and outside as well.

Cell phone or mobile phone: Mobile telephones are based on the cellular radio technology. Mobile phone provides the facility to dial connections anywhere in the world. As the user of mobile telephone moves from cell to cell the radiotelephone link switches from one central transmitter/receiver to a second while the call continues, uninterrupted

Fax (facsimile transmission): It is a method of converting an image into electronic signals that can be transmitted over a communication link and converted back into an image at the receiving end.

E-mail: E-mail is a system of exchanging message in electronic format. It is the most used tool on the Internet. It has brought a revolutionary changes in communication because any type of information such as personal notes, letter, documents, publication, computer program, even pictures and sound can be sent to or received from anywhere of the world within a fraction of a second at a very cheap rate through electronic signals called SMTP (Simple Mail Transfer Protocol).

Voice Mail: Voice mail acts like a telephone machine that digitizes the incomings voice message and store for retrieval later. It is an alternative system of e-mail.

Teleconference: Teleconference is a meeting among people remote from one to another who are linked by a communication device such as a telephone, television or computer. There are following five types of teleconference: Audio teleconference Video teleconference Computer teleconference or Computer conference Document conference Personal videoconference.

Satellite technology: Satellites are, in fact, formed of microwave transmission in that satellites, which are positioned in space approximately 22,300 miles above the earth, represent relay stations for earth round communication.

Internet: Technically the Internet is a junction of a number of hardware and software resources or equipments to construct the infrastructure and to perform multiple functions. It is treated as a virtual library where world's information resources are gathered for the use of the clientele. It has broken down the distance barrier in communication. It has greatly influenced the practice of librarianship. Access to information through Internet has changed the total scenario of librarianship.

Network technology: The important function of network is to interconnect computers and other communication devices so that data can be transferred from one location to another instantly. Generally computer network is of following two types:

WAN (Wide Area Network): WAN is a communication network that covers wide geographic area such as a country, or state.

LAN (Local Area Network): LAN is a communication network that covers limited geographic area such as campus, or building.

Reprographic technology: The term reprographic is used to identify that field of information processing which concerns with technologies and equipments for the reproduction of documents.

Micrographic technology: Micrographic is that field of information technology which concerns making use of microforms. Microform is a generic term for all information carriers which use microfilm or similar optical media (including study) for the high-density recording and storage of optically encoded information in the form of micro images of printed document, bit patterns or holograms.

Printing technology: A printer is a device that converts computer output in to printed images. There are a number of different kinds of printers used in library such as Dot Matrix Printers, Laser printer, Inkjet, Bubble-Jet, etc.

Functions and benefits of ICT for networking and resource sharing

Traditionally, computers in libraries have been used and in most cases are still being used to automate the following functions (Islam and Islam, 2006: 809-817):

- Acquisition and budget
- Cataloguing and short loans
- Circulation
- Serial control (Periodicals)
- Provision of access to online catalogue.

Since the 1950s, use of ICT in libraries has basically gone through four stages, corresponding to the major reasons for automating (Borgan, 1997: 215-249):

- Improving the efficiency of internal operations
- Improving access to local library resources
- Providing access to resources outside the library
- Interoperability of information systems.

Use of ICT for automated library activities for networking and resource sharing

ICT is used in various fields of library activities. Some of the areas where new technologies can perfectly be used are as follow (Islam and Islam, 2006: 814):

Acquisition:

- Acquisition/Accession list
- Order file/report

Serials management:

- Serials check-in/out and claiming
- Union/holding list

Cataloguing/Classification:

- Catalogue card/label production
- Retrospective conversion
- On-line catalogue

Circulation:

- Issuing
- Inter library loan
- Reservations
- Over dues

Audio-visual management:

- AV acquisition/cataloging
- Accounting/budgeting
- Word processing/mailing
- Scheduling/planning
- Statistics/report

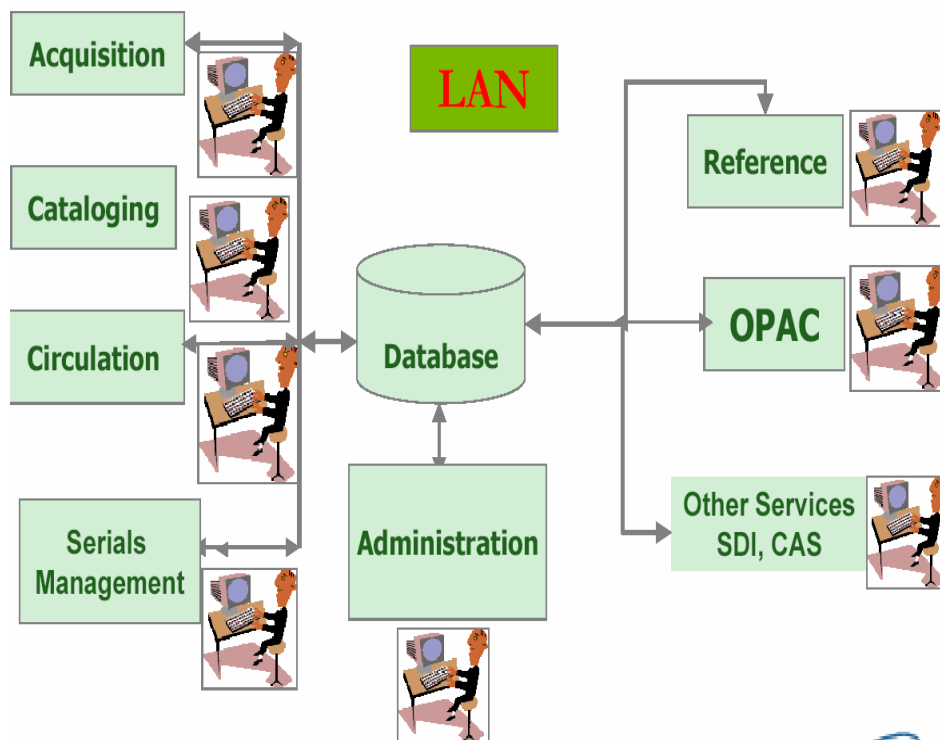
Information storage/retrieval:

- Database construction
- Online database searching
- Down loading/uploading
- Indexing and abstracting

Reference/Information services:

- Bibliographic listings
- Library instructions
- Public access/computer literacy.

Structure of Automated Library



ICT based user services for networking and resource sharing

Some library users are adopting electronic habits, making increasing use of the new ICT including computers, the Internet, the Web, Intranet, Extranet and other technologies. As a result, library users are placing new demands on their libraries. They require access to the latest information, updated information resources and access to ICT facilities that they could use in their work (Islam and Islam, 2006: 814).

Use of ICT in libraries enhances users' satisfaction. It provides numerous benefits to library users. Some of the benefits are (Henderson, 1992: 98-106):

- provide speedy and easy access to information
- provides remote access to users
- provides round the clock access to users
- provides access to unlimited information from different sources
- provides information flexibility to be used by any individual according to his/her requirements
- provides increased flexibility
- facilitates the reformatting and combining of data from different sources.

Libraries are also providing various ICT-based services to their users, including the following (Islam and Islam, 2006: 814-815):

- Provision of Web access to OPACs
- Electronic document delivery
- Networked information resources
- Delivery of information to users' desktops
- Online instructions
- Online readers advisory services

Web access to OPACs: Libraries are providing access to Web-based Online Public Access Catalogue (OPAC) interfaces. This is making it easier for OPAC users to learn and use these resources since they only have to learn how to use one universal access client, the Web browser.

Electronic document delivery: Libraries are implementing ICT-based interlibrary lending system using electronic networks to deliver copies of journal articles and other documents in digital format [mainly in Portable Document Format (PDF)] to library users' desktops.

Networked information resources: Libraries are providing their users with access to networked information resources, i.e. databases, electronic scholarly journals, encyclopedias, public government information, etc, provided by various publishers or suppliers.

Information delivery to users: Library and information users are now getting access to electronic information resources from the computer desktops in the

computer laboratories, Internet cafes, offices and even at home. This is resulting in librarians and other information specialists investigating and implementing systems that can deliver customized information to users' desktop computer environment, irrespective of their geographical location.

Online instructions: Libraries are also implementing online based bibliographic or library use programs. These include online tutorials on searching online resources and virtual tours of library collections.

Online readers' advisory services: Libraries are implementing Web-based versions of readers' advisory services and reference services. These include services such as informing users via the Web about new acquisitions, providing reviews and recommendations, providing facilities for readers to interact with the reference staff (Virtual Reference Desks), etc.

Observation on Library Automation in the Public and Private University Libraries in Bangladesh

In the real sense of term, there is no single automated library and information center in Bangladesh. The libraries working with computers and some related technologies are at the initial stage of 'Automation Process'. In this connection, private university libraries are in better position than the public university libraries.

We can categorize the automation trends under the following main headings:

Preparation of bibliographic database

Maximum libraries and information centers that are currently using computers maintain bibliographic database or trying building up databases.

Acquisition and serial control

Libraries use computers to a limited extent in acquisition work such as searching publishers' catalogue, preparation of order list, official correspondence, etc. In this regard, some private university libraries perform their acquisition and serial control by using computers. In Bangladesh, no public university libraries provide circulation facilities by using computers but most of the private university libraries provide this facility by using computers.

Information searching and browsing

Most of the observed public and private university libraries in Bangladesh provide online information searching and browsing for their users.

To my observation, most of the public and private university libraries provide automated library services but public university libraries are not providing satisfactorily.

CHAPTER 4

EXISTING PUBLIC AND PRIVATE UNIVERSITY LIBRARIES IN BANGLADESH

Chapter-4

EXISTING PUBLIC AND PRIVATE UNIVERSITY LIBRARIES IN BANGLADESH

Country Profile: Bangladesh

Bangladesh is officially known as the People's Republic of Bangladesh, the official name of the country is People's Republic of Bangladesh. The country is located in South Asia. Dhaka is the capital of Bangladesh. Bangladesh was declared independent on 26 March 1971. Its geographical location is in between 20° 34' and 26° 38' north latitude and between 88° 01' and 92° 41' east longitude and consists of flat fertile alluvial land. The area of the country is 56977 sq. miles or 1, 47,570 sq. k.m. Bangladesh is one of the world's most densely populated country with its people crammed into a delta of rivers that empties in into the Bay of Bengal. The growth rate of population was 1.48 per annum estimated on the basis of 2001 census. The density of population was approximately 755 per sq. km in 1991. The percentage of Muslim population was 88.3 while that of Hindu, Buddhist and Christian was 10.5, 0.6, and 0.3 respectively. As per population census of 2001, the adjusted population of the country stood at 130.0 million and the literacy rate was 45.3 percent for population 7 years and above. There are six divisions, 64 districts, 507 thana and upazila, 4484 unions (rural), 87319 villages, 59990 mauzas (rural and other urban), six city corporation and 223 municipalities. Our per capital national income is Tk. 31669 (US\$ 482). Our national language is Bengali. But English is also widely spoken and understood. International time is considered GMT +6.00 hours. Bangladesh has enormous deposit of natural gas. So far, 20 gas fields have been discovered from which natural gas is available for power generation, industrial and other uses (Pocket Book on Educational Statistics, 2007: 1).

History of Education in Bangladesh

Education in Bangladesh has evolved in terms of language of instruction, governance of schools and pedagogical methods. Early education in Bengal was once intertwined with India and Islamic Madrasha education. Major changes coincided with the onset of British rule, the creation of Pakistan and the establishment of an independent Bangladesh (Zamir, 2009: 15).

Under the British east India Company from 1758 and the British Raj from 1858, education was mainly reserved for the wealthy class. The language of pedagogy was English, as nuns and other British administration ran the schools. The few natives who were fortunate to receive an education were either from wealthy families (Nawabs) or families with ties to the British governing body. To receive higher education, such as a university degree, one had to attend schools in England. For example, Mahatma Gandhi traveled to London to study law. As native people were treated as second

class citizens, education was largely withheld from the general population (Zamir, 2009: 15).

In 1947, the British left the Indian subcontinent and the territory currently known as Bangladesh came under Pakistani rule as the state of East Pakistan. Education during this period was still very scarce but those who had the means of acquiring it were no longer considered second class citizens. Although the state language of Pakistan was Urdu and the native Language of East Pakistan was Bengali, schools largely continued to function in English. Some schools and colleges such as the Catholic Holy Cross were still taught by Christian's missionaries (Zamir, 2009: 15).

After the liberation war of Bangladesh in 1971, the People's Republic of Bangladesh became an independent nation free to choose its own educational destiny. After independence, many different forms of education were permitted to co-exist in Bangladesh as it was, still it is, a secular state. The remarkable British system was, and still is, largely practiced. In fact, presently, the education system of Bangladesh is divided into three different branches. Students of Bangladesh are free to choose anyone of them provided that they have the means. These branches are: a) The English Medium, b) Bengali Medium, c) The Religious Branch (Zamir, 2009: 15).

Students in Bangladesh have the right to attend schools in the English Medium where courses are all taught in English language. In those schools, English books are using with the exception of the Bengali courses and the Religious courses are offered in Bengali and Arabic. However, English Medium schools are mainly managed by the private sector. Hence, these schools are reserved for the wealthy class. After completion of three years of pre-school, students must pass through ten grades to be eligible for appearing the Ordinary Level (O-Level) examinations, then after one more year of studies, students may appear the Advanced Level (A-Level) examinations. After the A-Level, students are free to choose their studies in the Universities but it has been observed that most of them have a tendency to leave the country to study abroad (Zamir, 2009: 16).

Bengali medium is the most popular for the common people of Bangladesh. Alternative to the English Medium is the Bengali Medium, which is offered by the Government. In the Bengali Medium, all the courses are offered and taught in Bengali with the exception of English courses and the Religious courses. The tuition fee is nominal compared to English Medium schools. But they vary from school to school. Everyone has the right to attend these schools provided that one meets the minimum criteria. After three years of pre-school, Bengali Medium students study five years in primary school. Then they move to high school for completion of grade five to grade ten. At the end of the 10th grade, one must appear for the Secondary School Certificate (SSC) examinations which are common to everyone graduating in the same year in Bangladesh. These examinations are conducted by the regional boards and students write the examinations in different schools as indicated by their respective boards. Once finished, these examination scripts are

evaluated and checked by teachers from all over the country and results are published in the newspapers and also in the website (Zamir, 2009: 16).

There are a number of religious institutions called “Madrashah” where children are sheltered, fed and taught the ways of Islam by priests. These children learn the scripts from the holy Koran and the regular prayers. Subsidies for these types of institutions are very low. Higher studies for students of these establishments are close to non-existent. Since 1983, in all the branches, it is required by the Government to teach Islamic Studies. Therefore, children learn to read Arabic from a very early age. However, Non-Muslim students are never forced to learn the Koran and can be executed from Islamic courses regularly (Zamir, 2009: 16).

The above are the main branches of the education system of Bangladesh. Besides these, there are other discipline such as cadet colleges and boarding schools (Zamir, 2009: 16).

Present Status of Public and Private Universities in Bangladesh

According to Handbook: Universities of Bangladesh (2009: 3-145), Bangladesh has 31 public universities and they are:

1. University of Dhaka,
2. University of Rajshahi,
3. Bangladesh Agricultural University,
4. Bangladesh University of Engineering and Technology,
5. University of Chittagong,
6. Jahangirnagar University,
7. Islamic University,
8. Shahjalal University of Science and Technology,
9. Khulna University,
10. National University,
11. Bangladesh Open University,
12. Bangabandhu Sheikh Mujib Medical University,
13. Bangabandhu Sheikh Mujibur Rahman Agricultural University,
14. Hajee Mohammad Danesh Science and Technology University,
15. Mawlana Bhashani Science and Technology University,
16. Patuakhali Science and Technology University,
17. Sher-e-Bangla Agricultural University,
18. Chittagong University of Engineering and Technology,
19. Rajshahi University of Engineering and Technology,
20. Khulna University of Engineering and Technology,
21. Dhaka University of Engineering and Technology,
22. Noakhali Science and Technology University,
23. Jagannath University,
24. Comilla University,
25. Jatiy Kabi Kazi Nazrul Islam University,
26. Chittagong Veterinary and Animal Sciences University,
27. Sylhet Agricultural University,
28. Jessore Science and Technology University,
29. Bangladesh University of Professionals,
30. Begum Rokeya University,
31. Pabna Science and Technology University.

According to Handbook: Universities of Bangladesh (2009: 147-369), Bangladesh has also 51 private universities and they are listed below:

1. North South University of Bangladesh,
2. University of Science and Technology Chittagong,
3. Independent University, Bangladesh,
4. Darul Ihsan University,
5. International University of Business Agricultural and Technology,
6. International Islamic University Chittagong,
7. Ahsanullah University of Science and Technology,
8. American International University

Bangladesh, 9. Asian University of Bangladesh, 10. East West University, 11. The University of Asia Pacific, 12. Gonobishwabidyalay, 13. The People's University of Bangladesh, 14. Dhaka International University, 15. BRAC University, 16. Manarat International University, 17. Bangladesh University, 18. Leading University, 19. BGC Trust University Bangladesh, 20. Sylhet International University, 21. University of Development Alternative, 22. Premier University, 23. Southeast University, 24. Stamford University, Bangladesh, 25. Daffodil International University, 26. State University of Bangladesh, 27. IBAIS University, 28. City University, 29. Prime University, 30. Northern University Bangladesh, 31. Southern University Bangladesh, 32. Green University of Bangladesh, 33. World University of Bangladesh, 34. Shanto-Mariam University of Creative Technology, 35. The Millennium University, 36. Eastern University, 37. Bangladesh University of Business and Technology, 38. Metropolitan University, 39. Uttara University, 40. United International University, 41. Victoria University of Bangladesh, 42. University of South Asia, 43. Presidecy University, 44. University of Information Technology and Science, 45. Primeasia University, 46. Royal University of Bangladesh, 47. University of Liberal Arts Bangladesh, 48. Atish Dipankar University of Science and Technology, 49. Bangladesh Islami University, 50. ASA University Bangladesh, 50. East Delta University.

PUBLIC AND PRIVATE UNIVERSITY LIBRARIES IN BANGLADESH

Introduction

The integral part of any higher educational institute is library. A resourceful library is prerequisite for all higher educational institutes, which provides internet facilities to the teachers, scholars and students along with other facilities of traditional libraries from where users can access latest information of the present world. A good, modern, up to date and IT based well-equipped library with books, periodicals, online journals, and other reading materials in all subjects is essential for advanced study and research purpose. Researchers, faculty members, and students need to know about the information tools and resources available in the library for better use may lead to faulty results which will ultimately hamper national development. In this regard libraries and information centers can play very crucial and dynamic role in dissemination information.

The history of University Libraries in Bangladesh goes back to the establishment of Dhaka University in 1921. As compared with public and private university libraries the condition of University libraries in Bangladesh is satisfactory regarding their collections, manpower and services (Mannan, 1997: 104). But this does not mean that they are meeting the required standards or participating in the universities' educational and research programs satisfactory. Among the available resources, the deficiency of high caliber and skilled staff, modernization of the facilities and lack of union catalogue, the university libraries in Bangladesh failed to attract the potential library user into a habitual one (Mannan, 1997:104-105).

PUBLIC UNIVERSITY LIBRARIES

DHAKA UNIVERSITY LIBRARY (ESTD: 1921)

History

Dhaka University Library is the largest university library of the country. This library started as a part of the Dhaka University on the 1st of July, 1921. Dhaka University Library began with 18,000 books inherited from the libraries of the former Dhaka College and Dhaka Law College. Mr. F.C. Turner, the former principal of Dhaka College, was appointed in addition to his official duties as the first Librarian of the Dhaka University Library. In 1947-48, the collection of the Library stood at 93,355 printed volumes and 2,344 manuscripts. Significant growth was made for the Library in the following years. In 1950-51, the number of collection rose to 1, 03,315 printed materials and over 2,500 manuscripts. The collection increased to about 1, 50,000 books and 20,000 manuscripts and the Library was housed in spacious three storied building (Rahim, 1981:130).

In the post-liberation period there had been an important growth in the field of library development. In 1973-74, the University made a sanction of Tk. 2, 70,000.00 for the development of the Library. In 1974-75 this amount was increased to Tk. 4, 00,000.00. The number of collection stood at 3,43,372 printed books and more than 20,000 manuscripts in Persian, Arabic, Urdu, Sanskrit, Bengali, and Assamese languages. At that time the Library had a subscription of 291 scientific journals. The University gradually increased its annual grant to add more books, journals, and others reading materials for the Library. By 1980 the number of books rose to 4, 50,000 and manuscripts to 30,000. Besides, the Library developed a collection of 4000 microfilmed copies of rare manuscripts. For study and research purpose, the Library was provided with a great of Tk. 10, 00,000.00 for procuring a number of reading materials and other purposes. The University also approved an amount of taka 5, 00,000.00 for setting up additional reading room facilities in the Library (Rahim, 1981:130-1).

A very important feature in the development of the Dhaka University Library was the Scheme for the collection of research materials for M.Phil. and PhD courses. That scheme commenced in 1976 and placed to the management committee. Precious acquisitions were made under that scheme. Rare documents and records were collected from local as well as foreign sources. It also included collection of District Collect orate records and Secretariat records (Rahim, 1981:131).

The India Office Library in London helped a lot in collecting a good number of reading materials. A large collection was procured from this source in different forms. Microfilmed copies of some rare newspapers, such as the Englishman, the Bengalee, and the Amita Bazar the Dacca News, the Eastern Bengal and Assam Era, plus the Native Vernacular Press Reports from 1868 to 1900 in 45 volumes were procured for the University library (Rahim, 1981:131-2).

Existing facilities and services

The Dhaka University Library consists of three buildings: the administrative building, the main library building, and the science library building. The three building has a total area of 1,52,000 sq. ft. of which stack area is 67, 600 sq. ft. The two buildings are three storied and one is two storied. There is a seat arrangement of reading rooms for 870 students, 50 teachers, and research scholars to study at a time. There are 218 officers and staff engaged with one Librarian (Development and Planning), one Librarian In-charge (Administration) four Deputy Librarians, 12 Assistant Librarians, and one junior Librarian in the Library under the supervision of a Library Advisor (Mostafa, 2004: 55).

The administrative office: a book acquisition section, a book processing section, a reprographic division, a book binding section, a manuscripts division and a seminar section are located in the administrative building. The circulation desk, the reference room, the bound periodicals room, the unbound newspaper reading room, rare books reading room the Muktijuddho (war of liberation) Cell, the UN collections, and the American Studies Corner are housed on the ground floor of the main building. The computing division along with the browsing facilities of the internet and an online catalogue for faculty members and students are also located on the ground floor of the main building. Current journals are displayed on the Magazines floor of the Library. Books on 12 branches of learning, such as Sociology, Geography, Journalism, Anthropology, Social Welfare, and Public Administration, are shelved on the first floor, which includes a large size of study room. Books on 11 branches of learning, such as Library and Information Science, Philosophy, Religion, Psychology, Linguistics, Anthropology, Business Administration, English, Bengali, Arabic, Urdu, and Persian are shelved on the second floor, which also includes a spacious study room. Some section has been separated from the main library. The Science Library building consists of a circulation desk, reading rooms, a reprographic section, a reference division, a reading room for current journals and a seminar section. It also brings together books for the Faculty of Biological Sciences, the Faculty of Pharmacy, and the Faculty of Pure Sciences. In fact, Dhaka University Library is the largest library in Bangladesh. There are separate reading room for teachers, male students, and female students. Research students are given seats in the stock room. It is a treasure house of rare books, manuscripts, and periodicals. At the same time this library also attempts to collect latest books and periodicals published in Bangla and in the English Language (DU Library, 2006).

The Library remains open from Saturday to Wednesday from 8.00 am to 9.00 pm. On Thursday, it is open from 8.00 am to 5.00 pm and is closed on Fridays and other holidays. Scholars from outside the University, with the permission of the University Librarian, can utilize library resources (DU Library, 2006).

A thirteen member Library Committee is formed for efficient and effective management of the Library. There are different sections for smooth operation of the Library. Such as, administrative section of the library is responsible for

general administration, correspondences, personnel management, and maintenance of accounts and files of the Library. Acquisition section is responsible for acquiring all books and non-books reading materials by purchase, gift and exchange. Resource sharing, bill checking and correspondences connected with the procurement of reading materials are done here. Processing section is engaged with making accession, checking, classifying, and cataloguing of books and other reading materials. Dewey Decimal Classification Scheme and AACR2 are used for classification and cataloguing respectively. Photocopy services are available for all users at the rate of 50 paisa exposure. Manuscript section is very important where 30,000 rare manuscripts are kept and necessary activities go on uninterrupted to ensure proper management of these valuable manuscripts. Binding section is responsible for binding and preservation of library collection. The seminar section has an issue counter from where a regular student can issue a book for 14 days. Member of teaching staff of the University and research fellows may borrow 10 books and 2 books respectively for a period of 30 days. Besides, the Library provides other services, including circulation, reading room, photocopy, reference, referral and readers' guidance. The current catalogue is maintained in card format and can be approached by author, title and subject. There is also a historical 'sheaf catalogue' for older materials. Internet services to faculty members and research students have already begun in December 1998. This has been specially organized to support the Research and Development activities. Bound and unbound newspapers are preserved in old newspaper section of the Library (Mustafa, 2004: 55-62).

At present, the Dhaka University Library has 6, 21,058 books, 260 journals and 05 AV materials. In total Tk. One core has been spent for procurement of books, journals, and other reading materials for Dhaka University Library during 2008 (UGC, 2008:92).

Status of networking and resource sharing

Recently, there is a development of forming a consortium in Bangladesh. Bangladesh Academy of Sciences has taken the initiative to form a consortium via INASP-PERI to getting maximum benefits at minimum cost. Higher educational institutes, research centers and other institutes are the members of that consortium. Dhaka University maintains the subscription to Bangladesh INASP-PERI Consortium (BIPC). The patrons of Dhaka University Library have access to many electronic journals through BIPC (BAS, 2007).

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY LIBRARY (ESTD: 1962)

History

The Bangladesh University of Engineering and Technology Library, Dhaka, was established as a school Library attached to the Dhaka Survey established in the year 1896, within the Curzon Hall Campus. From a simple survey school, the BUET moved towards to its present site in 1906 through crossing a long laborious journey when the survey school was renamed as Ahsanullah School of Engineering. In November, 1949, the Ahsanullah Engineering School was upgraded to the status of an affiliated Engineering College under the University of Dhaka. Ultimately, the college Library again rose to the stalls of a University Library when the college was upgraded to the University in June, 1962. The East Pakistan University of Engineering and Technology, thus, has unique development in the stages of growth and development viz. a school library, a college library and ultimately a University Library (Rahman, 1987:84-5).

Existing facilities and services

For providing services the BUET Library has the following departments: viz.

- Administrative Unit;
- Acquisition and Processing Section;
- Stack areas and Circulation Section;
- Reading room and Reference Section;
- Periodicals, Bibliography and Non-Book materials;
- Microfilm readers and Photocopying Unit; and
- Rental library

BUET Library is housed in a 4-storied building of its own having approximately 20,000 sq. ft. floor space. The library has a collection of 1, 52,808 items of which 17,839 are bound periodicals and 218 titles are in the current subscription list. It is growing at the rate of 1500 volumes per year. The main collection consisting of books and monograph is housed on the 3rd floor arranged to the Dewey decimal classification number, so that documents on the same or related subjects may remain together. Abstracts and indexes are shelved alphabetically by title on the shelves of the first floor. The library is open on all days except during declared public and weekly holidays and during the annual break (Islam, 2007).

In 2008, total taka 96.93 lac was spent for purchases of books, journals, and other reading materials for BUET Library (UGC, 2008: 95).

As described on the web of BUET, the services of the library include inter document delivery, current awareness service, preparation of directories, indexes and abstracts, and bibliographies of various types, user orientation,

literature searches, guide and preparation of reports for researchers advice and problem solving individual inquiries, providing photocopies, inter-library loan, and document delivery services (<http://www.buet.ac.bd/library/index.html>).

According to Islam (2007) in 2000, libraries and information centers are operating in such a setting which has more complex than ever before. New technologies have become available as a means to improve library and information services and operations. BUET has already undertaken a program of computerization of its library activities and services. The library has developed an oracle based integrated library software named BUETLIB along with website provision (www.buet.ac.bd/library/) with the cooperation of the Department of Computer Science and Engineering (CSE) in order to timely processing of its information materials, and to provide right information to the right person at the right time which is the main objective of the library and information work. After installation of this software the library has greatly improved in providing library services. There are five modules namely: acquisition, processing, reference, circulation, and administration and management integrated into one system. The library currently has two servers and 14 terminal computers for the use of the staff and 42 terminals for the use of the students. These are used for different work in the Library (Islam, 2007).

Status of networking and resource sharing

From the year of 2007, BUET Library is also maintained the subscription to Bangladesh INASP-PERI Consortium (BIPC). The patrons of Bangladesh University of Engineering and Technology (BUET) Library have access to many electronic journals through BIPC to meet the demand of the users.

Recently, there is a development of forming a consortium in Bangladesh. Bangladesh Academy of Sciences has taken the initiative to form a consortium via INASP-PERI to getting maximum benefits at minimum cost. Higher educational institutes, research centers and other institutes are the members of that consortium. Dhaka University maintains the subscription to Bangladesh INASP-PERI Consortium (BIPC). The patrons of Dhaka University Library have access to many electronic journals through BIPC (BAS, 2007).

BANGABABDHU SHEIKH MUJIB MEDICAL UNIVERSITY LIBRARY (1965)

History

Bangabandhu Sheikh Mujib Medical University (BSMMU) is the premier Postgraduate Medical Institution of the country. It bears the heritage to Institute of Postgraduate Medical Research (IPGMR) which was established in December 1965. In the year 1998 the Government converted IPGMR into a Medical University for expanding the facilities for higher medical education and research in the country. It has an enviable reputation for providing high quality postgraduate education in different specialties. The university has strong link with other professional bodies at home and abroad. The university is expanding rapidly and at present, the university has many departments equipped with modern technology for service, teaching and research. Besides education, the university plays the vital role of promoting research activities in various discipline of medicine. Since its inception, the university has also been delivering general and specialized clinical service as a tertiary level health care center (<http://www.bsmmu.org/lib>).

Bangabandhu Sheikh Mujib Medical University (BSMMU) has a well equipped modern academic library known as BSMMU central library. The library can accommodate over 750 users at a time in its well furnished reading area. On an average 1200 doctors/members/teachers use the library every day (BSMMU Library Brochure).

BSMMU Central Library is located at the 4th and 5th floor of 'Block –A' having approximately 22,800 sft floor space. It is a compact library with built in facilities to provide various services to students, teachers, doctors and researchers (BSMMU Library Brochure).

At present 7 (seven) officers, 18 (eighteenth) staffs are working in the library along with 2 (two) security personnel at the entrance (BSMMU Library Brochure).

BSMMU Central Library is open on all working days except during declared public and weekly holidays. Library opening hours for readers are as follows:

Section	Time	Opening Day
a. Reading Area	9.00am-10.00pm	Saturday – Thursday (Friday & holidays may be closed)
b. Reference and Journal Section	9.00am – 6.00pm	

Existing facilities and services

Faculty Members, Medical Officers, Honorary Doctors of BSMMU, and Doctors of the other Medical Institutes (depends on seat capacity) can be a member of this library. Members of the library should obey the following rules while using the library:

- Members should show his/her Library Member ID Card at the entrance. Members should identify themselves to the library personnel as and when requested to do so.
- Library ID card can not transferable. Members can not borrow books, CDs/DVDs or other library materials. These resources are for reference use only.
- Cell phones, pagers and other electronic or automatic alarm devices should be switched off while using the library.
- A reading place may not be reserved during the reader's absence inside the library premises.
- Personal possessions should not be allowed in the reference, journal and book stack areas.
- Taking foods and drinks are also not allowed inside the library.
- Users should avoid resting their feet on tables, chairs, shelves, windows, etc.
- Smoking in the library premises is strictly prohibited.
- No broadsheets, handbills, newspapers, advertisements, or other materials (other than approved, official notices of the library or university) be distributed or displayed within the library.
- Members should not be allowed to move books, theses, journals and other materials from their specific area to another area.
- For any emergency contact with reference and circulation staffs.
- Silence is required throughout the library. Readers should not dissociate the concentration of their fellows by discussion or gossiping. There is a separate area on 5th floor south side in the library for discussion.
- Serious offences will be pursued immediately under the university's codes of discipline and will result in suspension from library facilities pending enquiry.
- Willful misuse of library facilities may result in membership of the library being terminated.
- Users who disturb normal library environment and behave in an offensive manner, will be required to modify their behavior or to leave the library.
- Library safekeeping/pigeon hole at the counter is for keeping personal possessions (of course do not keep money or other valuables); otherwise, the university authority does not accept responsibility for any loss or damage to the belongings.
- Books and bound volumes should handle with great care. Avoid keeping the volumes open on the table face down, or inserting note books or pencils in between the pages and closing them. Pages must not be folded to serve as book marks.
- Defects found in the books and other materials taken for use should be brought immediately to the notice of the library staff on duty.
- Marking or disfigure with ink or pencil on a book, periodical, CDs/DVDs, or any other library materials in any way is forbidden. Any sort of mutilation will cause of replacement.
- Books, periodicals or other reading materials should not be removed from the library premises.

- Without members no one allowed inside the library but with special permission for research purpose can be allowed to use the library for a limited period only (BSMMU Library Brochure).

The holdings of this library are as mentioned on the following tabular form:

Materials	Total
Books	23,860 Copies
Bound Journals	5,201 Vols.
Theses	2012 Copies
CDs/DVDs	236 Pcs
WHO Publications	887 Copies
News Clippings	690 Copies
Other Reports	652 Copies

Source: (BSMMU Library Brochure)

The main task of the library is to satisfy its readers by rendering need oriented services. The library provides various types of services such as: reading, lending, reference, news clipping, Selection Dissemination of Information (SDI) Service, reader's guidance, referral services, audio-visual and Internet facilities to all users. Some other supports are as follows:

- Bibliographic and Abstracting Service
- Current Awareness Service
- Document Delivery Service
- ISBN and ISSN Service
- Photocopying Service
- CD-ROM Search Service
- Internet Search Service

Reference:

- I. The reference staff can assist in locating information and provide instruction in the use of the reference materials and sources such as journals, abstracts, indexes, dictionaries, encyclopedia, handbooks, reports, manuals, etc.
- II. Useful publications / list which are kept at the reference desk are as follows:
 - a. List of New Arrivals.
 - b. List of WHO publications.
 - c. List of Theses and Manuals.
 - d. List of Current Journals.
 - e. List of Bound Journals.
 - f. List of CD/DVD.
 - g. Content Pages of Current Journals.

Status of networking and resource sharing

BSMMU central library is maintaining Bangladesh INASP-PERI Consortium (BIPC) from 2007 for subscribing electronic journals to meet the demand of the users as well as the researchers (BAS, 2007). Sometimes the library authority provides inter-library loan facilities on the basis of some informal

agreements among the health libraries and information centers of Bangladesh.

INDEPENDENT UNIVERSITY, BANGLADESH LIBRARY (EAST. 1993).

History

Independent University, Bangladesh (IUB) Library (IUB Library) is committed to providing access to knowledge, creativity and intellect. The Library maintains a learning environment that fosters a culture of open academic inquiry and respect. IUB Library was established in 1993 in a room of IUB Campus-1 with a collection of 160 copies of learning materials donated by a founder trustee. In 1998 the library moved from Campus-1 to Campus-5 and got familiar as Central Library. Three libraries on Dhaka Campus and two of Chittagong are woven into IUB Library system. Dhaka Campus libraries include The Central Library, Population Library and Environment Management Library. Whereas Chittagong Campus Library and American Centre form the Chittagong Chapter of IUB Library system. As of December 2008, The Central Library's collections stand at over 31,000 printed materials which include books, periodicals, and reprints. In addition, the Library has access to over 8000 titles of subscribed electronic journals.

The Chittagong Campus Library, established in 1999, owns separately over seven thousand books. A wide and increasing range of online and electronic resources have been subscribed to cope with the modern and recent trend of the use of information and communication technology in addition to audiovisual resources and CD items. IUB library materials are for the use of academic and research purposes. It is essentially a students' library filled with books and other materials to benefit them directly. But, it also has a good collection of books on general grading for those who are interested. This Library is a member of the International Federation of Library Associations and Institutions (IFLA) (Brochure of IUB Library).

Existing facilities and services

The Independent University, Bangladesh Library (IUB Library) exposes its members to the world of recorded knowledge that promotes them to learn and to exchange ideas. The materials, resources and other facilities of the library, furthermore, support the undergraduate and graduate programs of the University, faculty research and general information required by the community.

- To provide a library environment suitable for higher education and research.
- To encourage the optimum use of library resources.
- To serve as a first gateway to information query by all people of IUB.
- To be an important part of the academic process of the university to achieve excellence in teaching, research and scholarship by providing recorded as well as virtual knowledge.

- To be recognized nationally as a leading and innovative library as well as information service center (Brochure of IUB Library).

The Central Library of The Independent University, Bangladesh contains 19,200 copies of books at its four storied building at Baridhara. Its contents are fairly eclectic and broadly divided into the following fifteen categories:

- Art, Culture and History
- Business
- Chemistry and Physics
- Computer Science
- Economics
- Engineering
- Environment Management
- Health and Population
- Language and Literature
- Mathematics and Statistics
- Media and Communication
- Political Science and Public Administration
- Science-General
- Social Science General
- General (not covered anywhere)

IUB Library subscribes about one hundred print journals and periodicals which include fifty five international and sixty national titles. In addition to journals and magazines, the library also regularly subscribes twelve national leading dailies as well as International Herald Tribune, a famous International daily newspaper (Brochure of IUB Library).

Reprints, pamphlets, annual reports of different organizations, internship reports, and senior project reports of the IUB students are also preserved in the IUB Central Library for future reference and research (Brochure of IUB Library).

More than one thousand CD-ROMs are now available at the IUB Central Library. More than five hundred audio cassettes and about a hundred video cassettes testify the diversity of IUB Library's collection (Brochure of IUB Library).

The gallery contains some materials which are parts of the culture and heritage of Bangladesh.

The IUB Library is exploring the prospect of linking its users as much as possible with the electronic resources. Many print journals subscribed by IUB have already been linked to activate their online access if available. Any title identified as full text journals are freely available on the web. IUB Library's webpage also tries to keep the links up-to-date with the concerned websites. The Library also subscribes several full text databases such as Emerald, JSTOR, ABI Global of ProQuest (Brochure of IUB Library).

The followings services and facilities are provided by the IUB Library:

- Reading rooms
- Reproduction service
- Searching materials
- Computer facilities
- Information services
- Borrowing facilities
- Library attachment program (Brochure of IUB Library).

The IUB Library has a dream of achieving excellence, to be a good library and information service provider as a vital component of the university. It aspires to be:

- a) Recognized nationally as a leading, innovative library and information centre;
- b) Acclaimed as an integral part of the university's academic process" and
- c) The preferred provider of information to the users, particularly the IUB community (Brochure of IUB Library).

Status of networking and resource sharing

Independent University, Bangladesh (IUB) Library is a member of the INASP-PERI Consortium (BIPC) for getting access to full-text articles, abstracts, and bibliographical information of online journals of different publishers on different disciplines through the Bangladesh Academy of Sciences (BAS, 2007). The library also exchanges information among American Information Centre, North South University Library, and ICDDR, B Library for its users on informal agreement.

EAST WEST UNIVERSITY LIBRARY (ESTD: 1996)

History

East West University (EWU) Library, established in 1996, is the heart of the university. Possessing a secure, controlled environment for the protection of its rapidly increasing collections, the university library offers its users a full range of information and enquiry services with the help of state-of-the-art techniques and technologies. The Library's mission is to enable and enrich the teaching, learning and research endeavors of the University by delivering flexible access to relevant information resources and by providing quality services and facilities. To meet these needs the library provides access to an extensive range of information resources both electronically and in print (EWU library. Fall 2007: 8).

The vision of EWU library is to offer a strong partnership with the University's teaching and teaching community to enable a more direct contribution to the educational mission of the EWU Library. In the last decade, East West University library has become one of the best private university libraries in the country in terms of its collections, facilities, and services. From the very beginning, East West's founding father, took the policy of investing heavily in building the library, as they knew that a well-stocked library would become the basis of university education (EWU library. Fall 2007: 8).

The EWU Library plays a key role in the whole educational process of East West University. About 2000 users visit the EWU Library everyday. Out of them, 300 to 500 users make use of circulation facilities, 100 to 200 utilize the photocopy services and 200 to 300 avail the journal and newspapers facilities, while other readers access text books, reference books & reference service facilities. Moreover, a good number of users search online journals through our in-house workstations (EWU library. Fall 2007: 8).

The EWU library is fully automated. A very flexible software, developed by the Software Development Centre (SDC), has been instrumental in automating the Library system. To control and support a large number of users, the EWU Library has several sections, namely; Circulation, Procurement, Journal and Reference, Processing, Online Resources, Photocopy Services, Reserve Books Services, Pigeon-holes, new arrivals Dissemination Services, and Library Administration. All the sections of the Library work together as a team to support the whole university community. Different sections of the Library have been created for providing fruitful library services to the users' community (EWU library. Fall 2007: 8).

Books are arranged on shelves subject-wise and are classified according to the Dewey Decimal Classification (DDC) scheme. Sears list of subject headings and Library of Congress subject headings are used to determine subjects. Books are catalogued according to Anglo-American Cataloguing Rules (AACR-2) and entered directly into the Library MIS. The Library staff is

ready to assist any member in his/her search for desired library materials (EWU library. Fall 2007: 8).

No manual catalogue is available in the EWU Library. To find out bibliographical information of the resources available in the Library, all users are requested to use the computerized database of EWU Library through Internet using the address <http://lib.ewubd.edu>. Users of the Library are encouraged to take help from library personnel if and when required (EWU library. Fall 2007: 8).

The Library collection has grown steadily. At present, the total number of library books and CDs are 23,379 and 1,340 respectively. The Collection of EWU Library comprises of books and periodicals related to the field of business studies, economics, liberal arts, social sciences, electrical and electronic engineering, physics, pharmacy, computer science, mathematics, English language and literature and Bangladesh studies. The Library also stocks reference publications such as atlases, dictionaries, encyclopedias, The Banglapeadia, annual reports and publications, survey reports, census reports, country reports, statistical yearbooks and other publications. Very important and rare maps are also available for students in the reference section of the Library (EWU library. Fall 2007: 8).

Books are placed in open stacks for convenience of use. Library personnel are ready to assist in locating information, answer on-the-spot queries, guide and provide instruction in the use of the catalogue, databases, resources, indexes, and abstracts whenever needed. Users can read books, journals, periodicals, newsletters, newspapers, etc. inside the library and are allowed to pull books from shelves for reading and borrowing purposes (EWU library. Fall 2007: 8).

For addition to accommodating traditional books and journals, the EWU Library has one of the best online resource centers among private universities in Bangladesh. It subscribes to leading online Journals such as JSTOR (Journal Storage), and ACM (Association for Computing Machinery, facilities available only for individual faculty member). Besides, the Library can access to HINARI (Health Inter Network Access to Research Initiative), AGORA (Access to Global Online Research in Agriculture), OUP (Oxford University Press), and High wire Press (Stanford University's free online journals site) journals. All users can find many electronic journals and access full-text articles of the above-mentioned databases. To get the URL of the above-mentioned databases, please contact the Library (EWU library. Fall 2007: 8).

Existing services and facilities

East West University Library holds a unique place among private university libraries of the country. It provides an array of facilities to library users with the help of state-of-the-art techniques and technologies. EWU Library provides the following facilities for library users:

- Three spacious floors house separate circulation and reserve and reference sections

- Fully air-conditioned floors can accommodate more than 250 students at a time
- Automated borrowing system
- Open shelf access system, i.e. students and teachers have direct access to bookshelves
- Faculty members can borrow books for the whole semester
- Students can borrow CD-ROMs, audiocassettes, texts and reference books
- Provide Current Awareness Service (CAS) and Selective Dissemination of Information (SDI) services
- Ready reference and referral services
- Photocopy services
- News-clipping services on important subjects on a regular basis
- Modern facilities such as computers, printers, electric typewriters, etc.
- Newspaper corner and special collection corner
- Library users can get back issues of newspapers up to the last one month

The EWU library's reading rooms are spread out on all the three floors of the library. Around 300 students can sit comfortably in its well-furnished air conditioned reading rooms at a time (Alam, 2009: 13).

Undergraduate students are entitled to borrow two textbooks and one DD/DVD-ROM at a time for 4 days (according to the revised EWU library rules) (Alam, 2009: 13).

Graduate students are entitled to borrow two textbooks and one DD/DVD-ROM at a time for 7 days (according to the revised EWU library rules) (Alam, 2009: 13).

Users may search/browse library online journals and the EWU online catalogue through six PCs (two PCs at each floor) in the library (Alam, 2009: 13).

The library subscribes to 16 national leading dailies (9 Bengali and 7 English). Users may also access back issues of newspapers up to last two months (Alam, 2009: 13).

Existing networking and resource sharing

East West University Library is a member of the INASP-PERI Consortium (BIPC) for getting access to full-text articles, abstracts, and bibliographical information of online journals of different publishers on different disciplines through the Bangladesh Academy of Sciences (Alam, 2009: 13).

EWU Library has corporate membership with British Council Library, Dhaka, and American Information Centre. With these memberships EWU library users may avail browsing, searching Online Public Access Catalogue, photocopy services, and access to online journal of those institutions (Alam, 2009: 13).

DWU library became a member of International Federation of Library Associations and Institutions (IFLA) on 11 November 2008. EWU Library will benefit from this arrangement by getting or sharing specialized expertise on various types of libraries and library workshops, receiving selective newsletters and facilities to exchange electronic information of IFLA documents, including IFLA journal, IFLA Directory, IFLA Annual Report, etc. (Alam, 2009: 13).

BRAC UNIVERSITY LIBRARY (ESTD: 2001)

History

According to the file of BRAC University (2007), Ayesha Abed Library (AAL) of BRAC University provides a variety of services designed to support the students, faculty members, and researchers, staff members of BRAC and BRAC University and outside users. Initially this library was housed in BRAC Centre before 2001. The Library was shifted to the Aarong House, while the University was established in 2001. At the outset, the Ayesha Abed Library was built up the previous collection of BRAC Centre Library. The Ayesha Abed Library started functioning since 2001 with full academic atmosphere. At present the Library occupies 9000 sq. ft. on two floor of the main BRAC University building located at Aarong House.

This library is committed to the mission of BRAC University: to foster the national development process through the creation of centre of excellence in higher education that is responsive to society's need is able to develop creative leaders, and actively contributions to learning and creation of knowledge (BRAC University, 2007).

Existing facilities and services

All categories of members of the library may examine, consult, borrow, and browse books, journals, and other printed and non-printed resources/materials. There are six types of library members are maintained in AAL. All may receive other services of the library. Flexible library rules are set for all users. A 3rd floor reading room shelves all catalogued books, journals, research papers, and multimedia. A searchable Online Public Access Catalogue (OPAC) is available on the Library website. The 2nd floor Cyber library contains 50 computers with e-mail and internet facilities for study and printing general study areas, silent study rooms, and a discussion area. The library provides services with the e-resources, like J-STOR, DOAJ, HIANRI, Agora, EOLSS, OUP, Intranet e-Granary Digital Library (2.5 million e-documents), etc. User services include book circulation, reserve, and reference assistance, photocopy, and inter-library loans. A team of professional staff members including IT personnel serve the reference/circulation desk, perform searches, order resources, catalogue items, give referral and bibliographic services, digital library services and provide training on use of e-resources. All personal books, coats, jackets, bags, briefcases, umbrellas, and other personal belongings are to be kept in the pigeonhole near the security desk (BRAC University, 2007).

Ayesha Abed Library remains open from 9.00 am to 9.00 pm from Sunday to Thursday and from 10.00 am to 6.00 pm on Saturdays. The library is closed on Fridays and other holidays as declared by the University (BRAC University, 2007).

At present the library has 18,000 books, 10,020 journals, and 290 audiovisual materials. The University spent Tk. 37.02 lac for research purpose in 2008 (UGC, 2008:131).

The library is run under the guidance of library Committee with the representatives from different Departments of the University and from BRAC Head Office. The Committee is to advise the Librarian of BRAC University Library (AAL) in formulation of library policies, procurement of library resources materials, improvement of library and information services and operational matters. The Librarian is the chief executive of the library and is responsible for implementing the policies, rules and day-to-day administration.

The library also subscribes to a number databases such as JSTOR, eGranary, AGORA, HINARI, EOLSS and OARE.

In 2008, The Library successfully implemented a Digital Institutional Repository Project (dspace.bracu.ac.bd) funded by INASP (International Network for the Availability of Scientific Publications), UK using Dspace open source software (<http://www.bracuniversity.ac.bd/library>).

Status of networking and resource sharing

In 2008 BRAC University Ayesha Abed Library continued to make progress towards the realization of the key strategies designed to improved support for the University's learning, teaching and research activities. The Library was able to extend the range and depth of the collection through the subscribing following e-resources via PERI under the Bangladesh INASP PERI consortium program:

- American Astronomical Society
- American Chemical Society
- American Institute of Physics
- American Physical Society
- American Society of Civil Engineers
- Annual Reviews
- Beech Tree Publishing
- Bentham Science Publishing
- Cambridge University Press (CUP)
- Cochrane Library (web)
- EBSCO Host including CMMC (CMMC new in 2009)
- Geological Society
- Institute of EEE
- Institute of Physics Journals
- International Forestry Review
- Mary Ann Liebert
- Mineralogical Society
- Nature
- NRC Research Press (Canada)
- Optical Society of America (OSA)
- Oxford Journals
- Palgrave-Macmillan Journals
- Policy Press
- Project MUSE
- Royal Society

- Springer Enhanced Package 1610 titles
- Symposium Journals
- University of California Journals
- University of Chicago Press
- Walter de Gruyter Online Journals
- Wiley-Blackwell
- World Bank e-library

Real picture of library networking and resource sharing in the selected public and private university libraries in Bangladesh

In real sense, there is no formal networking and resource sharing in the selected public and private university libraries in Bangladesh. In the past, some initiatives were taken by Dhaka University Library but it did not formalize. UGC had taken many initiatives for sharing information resources of different universities for the benefits of the universities. Sometimes the selected university libraries share their resources on request basis by the respective librarians or information professionals. The selected public and private university libraries are the members of INASP-PERI Consortium (BIPC) for getting access to full-text articles, abstracts, and bibliographical information of online journals of different publishers on different disciplines through the Bangladesh Academy of Sciences.

CHAPTER 5

FINDINGS OF THE SURVEY

Chapter-5

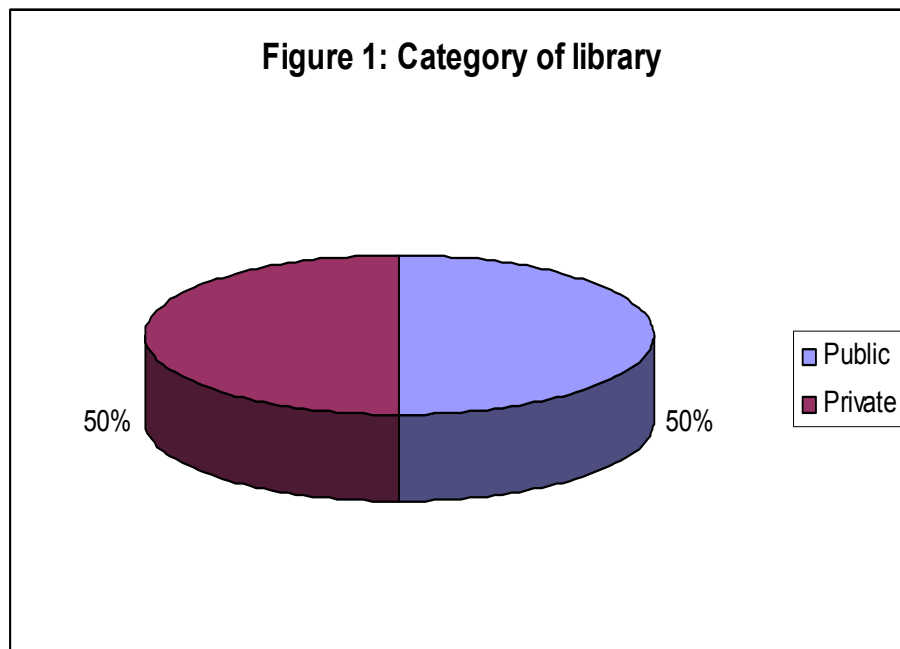
FINDINGS OF THE SURVEY

In this chapter, an attempt has been made to evaluate the existing situations in the libraries, performance of the library professionals and needs and expectations of the users regarding information and library services in the public and private university libraries in Bangladesh. A total of six university libraries (3 public and 3 private) and a hundred users from these libraries were surveyed.

The overall findings of the survey are discussed below:

1. Nature of Libraries

Today public universities as well as private universities are greatly contributing to make changes in the society through their library and information services. Two types of libraries (public and private university library) have been taken as the sample libraries for conducting the survey. The ratio of the sample libraries are 50 per cent public and 50 per cent private university libraries as can be seen in Figure 1 and Table 1. It is noted that these percentages of libraries will not be representative for the country as a whole.



The Table 1 presents all the university libraries by types according to the above discussion.

Table 1: Distribution of libraries by type

SL. No.	Name of the library	Type of the library	
		Public	Private
01.	Dhaka University Library (DUL)	√	—
02.	Bangladesh University of Engineering and Technology Library(BUETL)	√	—
03.	Bangabandhu Sheik Mujib Medical University Library (BSMMUL)	√	—
04.	Independent University of Bangladesh Library (IUBL)	—	√
05.	East West University Library(EWUL)	—	√
06.	BRAC University Library (BRACUL)	—	√

2. Functional status of the libraries

A. Collections of books, periodicals and other items

It is observed that all libraries collect books, journals according to the nature of library and the requirements of the users. Among the libraries 100 percent have collected thesis and 83.33 percent libraries have collected reports. DUL possesses the highest number of books followed by the BUETL, IUBL, BSMMUL, EWUL and BRACUL. The highest numbers of current journals are owned by Dhaka University Library and also followed by IUBL, EWUL, BRACUL, BSMMUL and BUETL. The same libraries (DUL, IUBL, EWUL, BRACUL, BSMMUL, and BUETL) also contains huge amount of bound journals while others keep fewer numbers of such items. Almost all the libraries have audio cassettes with Dhaka University Libraries. All libraries have CD-ROM collections without BSMMUL. 66.67 percent of the university libraries have DVD collections and 50 percent of the libraries have video cassettes. Only DUL has special collection like manuscripts but such kinds of collections are not available in any university libraries in Bangladesh.

Table 2: Distribution of libraries by status of resources

Name of the items	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
Total number of books	6,21,058	1,28,581	23,946	26,020	23,405	20,500
Total number of manuscripts	30,000	N/A	N/A	N/A	N/A	N/A
Total number of thesis	1,102	2,249	2,280	1321	300	300
Total number reports	15,000	—	1,100	1606	72	350
Total number current of journal/periodicals	260	44	94	161	130	111
Total number of magazine	—	—	—	—	12	—
Total number of bound journal/magazine	76,000	18,613	5,400	11,000	20	20,000
Total number of audio cassette	—	25	266	499	100	50
Total number of CD-ROM	5	355	—	1878	1,300	200
Total number of DVD	5	300	—	58	—	10
Total number of video cassette	—	15	—	119	—	50

B. Status of libraries by specialization in collection development

The table 3 reveals that 100 percent of the surveyed public and private university libraries have specialization in collection development.

Table 3: Distribution of libraries by specialization in collection development

Name of the library	Yes	No
DUL	√	X
BUETL	√	X
BSMMUL	√	X
IUBL	√	X
EWUL	√	X
BRACUL	√	X

C. Status of subscription for collecting e-journals

All the public and private university libraries subscribe inland and foreign journals. The public and private university libraries are very poor subscription of national journals in comparison with international journal subscriptions. IUBL subscribes almost all the popular international journals followed by the BRACUL (See Table 4).

Table4: Distribution of libraries on the basis of subscribed e-journals

Name of subscribed e-journals	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
JSTOR	X	X	X	√	√	√
Emerald	X	X	X	√	√	
PERI	√	√	√	√	√	√
Oxford University Press	√	√	√	√	√	√
Blackwell	√	√	√	√	√	√
Springer Link	√	√	X	√	X	√
AOM	X	X	X	√	√	√
ACM	X	X	X	√	X	√
ACS	√	√	X	√	X	
CUP	√	√	X	√	X	√
E-Journals.com	X	X	X	√	X	√
IEEE	X	√	X	√	√	√
Science Direct	X	√	√	√	√	√
ProQuest	X	X	X	√	√	
EBSCOhost	√	√	√	√	√	√
AGORA	√	√	√	√	√	√
HINARI	√	X	√	X	X	X

D. Status of collection

A question was asked to the librarians regarding the status of collection in regard to the demand of books, periodicals, journals, etc. of the users and the nature of the libraries. In response, 83.3 percent of the respondents reported that the status of collection is almost adequate. This situation indicates that only 16.67 percent libraries are not able to satisfy the needs of the users as shown in figure 2.

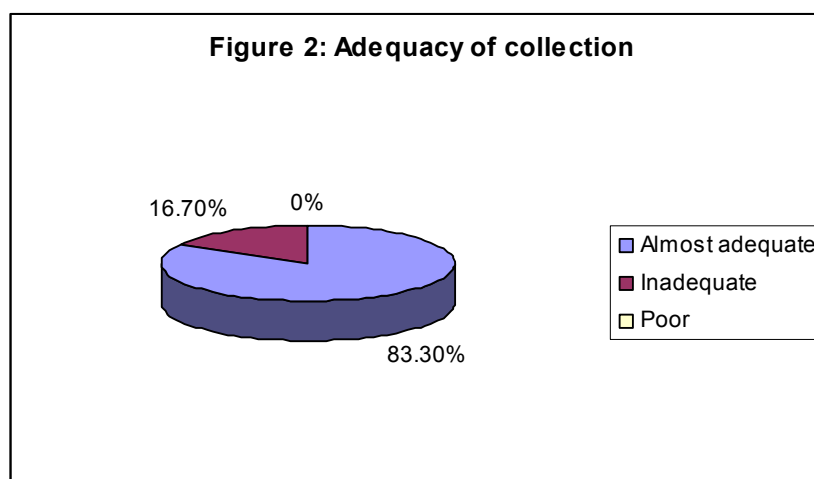


Table 5: Distribution of libraries by status of collection

Name of the library	Status of collection		
	Almost Adequate	Inadequate	Poor
DUL	√	X	X
BUETL	√	X	X
BSMMUL	X	√	X
IUBL	√	X	X
EWUL	√	X	X
BRACUL	√	X	X
Total	5	1	0

It can be summarized from the remarks that the status of the public and private university libraries regarding collection of the libraries is almost adequate and they are also looking for some effective strategies for further development as shown in table 5.

E. Status of cataloguing and classification scheme followed by the library

Every library has arranged its library resources through classifying and cataloguing. Table 6 shows that DUL, BUETL, BSMMUL, IUBL, EWUL and BRACUL use Anglo American Cataloguing Code II edition for cataloguing their resources.

Table 6: Distribution of libraries by using the cataloguing code

Name of the library	AACR-II	AACR-I	ALA
DUL	√	X	X
BUETL	√	X	X
BSMMUL	√	X	X
IUBL	√	X	X
EWUL	√	X	X
BRACUL	√	X	X

It is evident from the figure 3 that 100 percent of the public and private university libraries use Anglo American Cataloguing Code II edition.

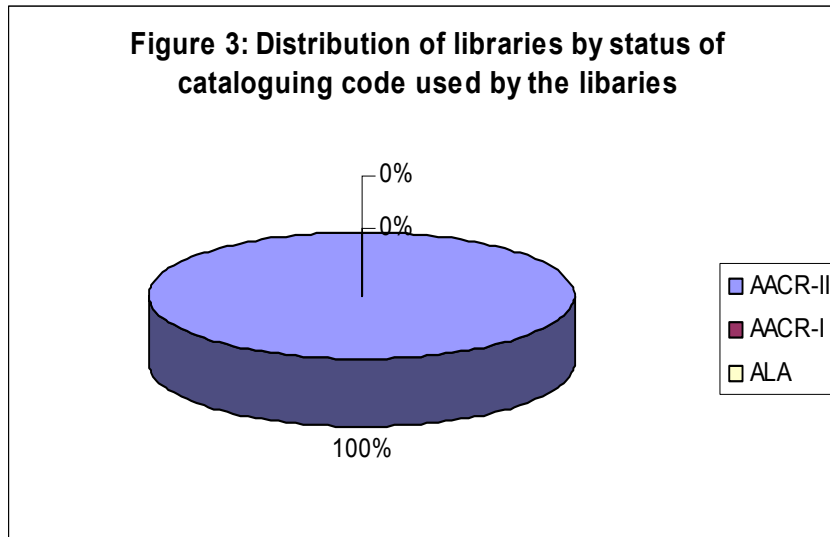
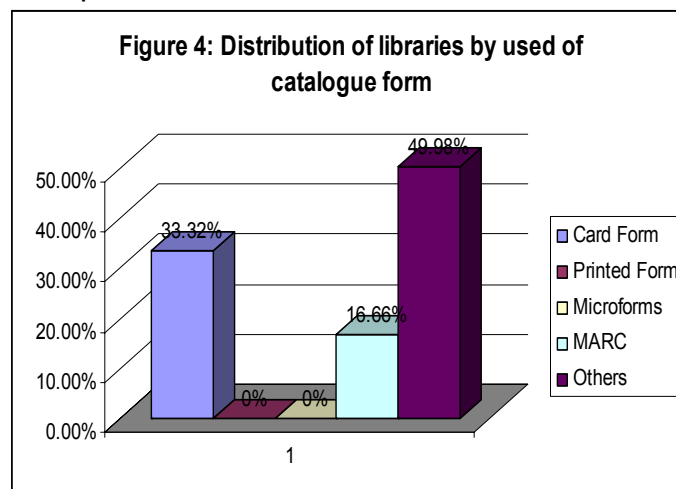


Table 7 explains which form of catalogue is being used by the surveyed public and private university libraries. DUL and BUETL use card form. BSMMUL, IUBL and EWUL use other forms of catalogue such as computerized forms. Only BRACUL use Machine Readable Cataloguing form.

Table 7: Distribution of libraries by form of catalogue used

Name of the library	Card form	Printed book form	Microforms	MARC	Others
DUL	√	X	X	X	X
BUETL	√	X	X	X	X
BSMMUL	X	X	X	X	√
IUBL	X	X	X	X	√
EWUL	X	X	X	X	√
BRACUL	X	X	X	√	X

Figure 4 reveals that 32.32 percent of the surveyed university libraries use card form, 49.98 percent of the libraries use other forms of catalogue like computerized forms, and only 16.66 percent of the libraries use MARC form. But no libraries use printed book forms or microforms.

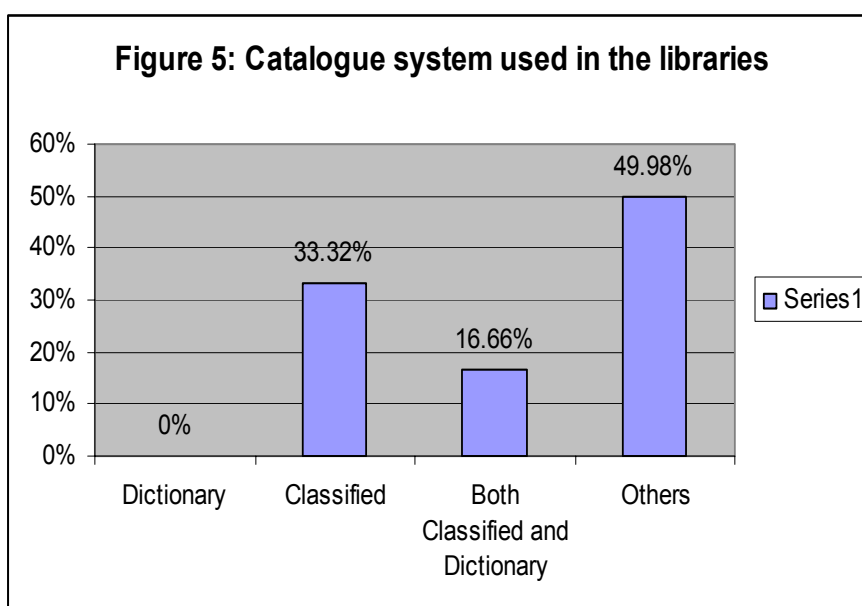


The table 8 indicates that DUL and BSMMUL use classified catalogue system. Only BUETL uses both classified and dictionary catalogue. IUBL, EWUL and BRACUL use other system like computerized system. But no surveyed public and private university libraries use dictionary catalogue system.

Table 8: Distribution of libraries by used catalogue systems

Name of the library	Dictionary	Classified	Both Classified and Dictionary	Others
DUL	X	√	X	X
BUETL	X	X	√	X
BSMMUL	X	√	X	X
IUBL	X	X	X	√
EWUL	X	X	X	√
BRACUL	X	X	X	√

Figure 5 reveals that 49.98 percent of the surveyed libraries use others form of catalogue systems like computerized form. 33.32 percent of the libraries use classified catalogue system and only 16.66 percent libraries use both dictionary and classified catalogue system. But no surveyed public and private university libraries use dictionary catalogue system.



The surveyed public and private university libraries use the same classification scheme. Table 9 explains that all the surveyed libraries use DDC 22nd edition classification scheme while BRAC University Library is using both DDC 22nd and LC classification scheme.

Table 9: Distribution of libraries by status of classification scheme followed in the libraries

Name of the library	DDC-Edition		UDC-Edition		LC-Edition		Others
	DDC	22 nd	X	X	X	X	
DUL	DDC	22 nd	X	X	X	X	X
BUETL	DDC	22 nd	X	X	X	X	X
BSMMUL	DDC	22 nd	X	X	X	X	X
IUBL	DDC	22 nd	X	X	X	X	X
EWUL	DDC	22 nd	X	X		X	X
BRACUL	DDC	22 nd	X	X	LC	X	X

Table 10 denotes that out of all the surveyed public and private university libraries, Dhaka University Library and East West University Library use Sears list of subject heading while Bangladesh University of Engineering and Technology Library and BRAC University Library use LC subject heading. But Bangababdhhu Sheik Mujib Medical University Library uses both LC subject heading and Mesh. Only Independent University of Bangladesh Library uses other subject heading SPINES Thesaurus.

Table 10: Distribution of libraries by status of subject heading followed in the libraries

Name of the library	Sears List	Library of Congress	Mesh	Others
DUL	√	X	X	X
BUETL	X	√	X	X
BSMMUL	X	√	√	X
IUBL	X	X	X	√
EWUL	√	X	X	X
BRACUL	X	√	X	X

F. Status of library divisions

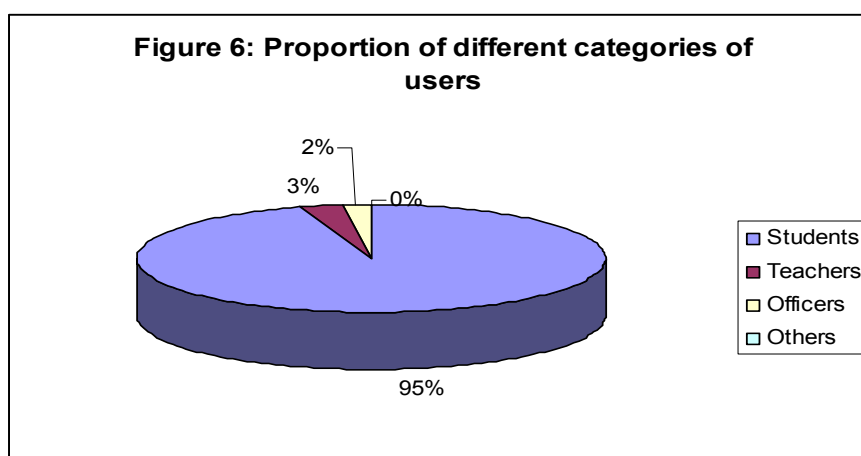
Table 11 reveals that all the selected libraries commonly have acquisition, processing, circulation, reference and reprographic divisions. All the surveyed libraries have documentation services and audiovisual divisions except Dhaka University Libraries and Bangladesh University of Engineering and Technology Library. All the selected libraries also have periodical division except Bangladesh University of Engineering and Technology Library. Only Independent University of Bangladesh (IUB) Library and East West University Library have galleries divisions. Bangababdhhu Sheik Mujib Medical University Library, Independent University of Bangladesh Library and BRAC University Library have archives division. But only Bangladesh University of Engineering and Technology Library has other division like rental division.

Table 11: Distribution of libraries by various divisions

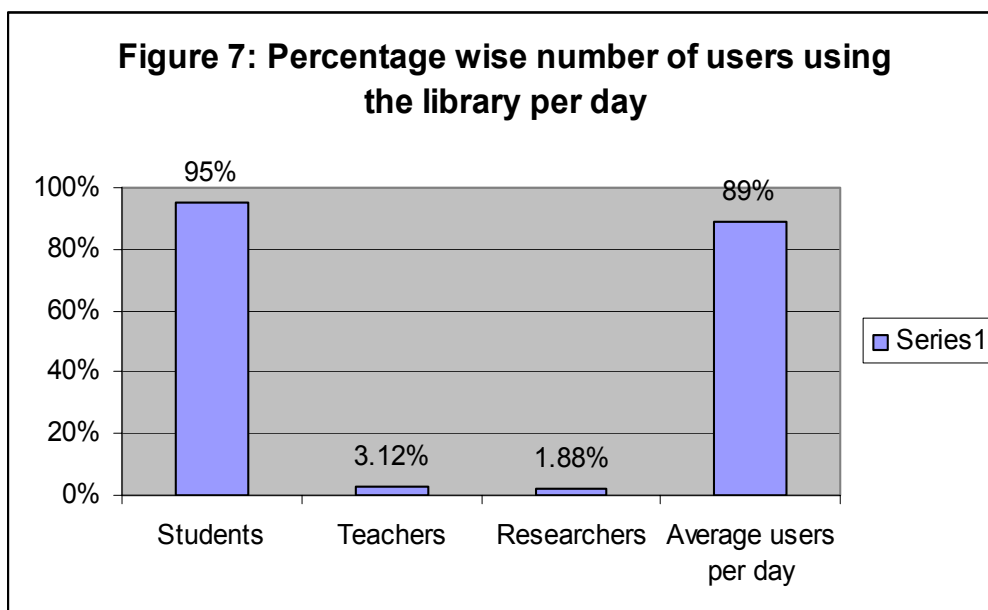
Name of the Divisions	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
Acquisition	√	√	√	√	√	√
Processing	√	√	√	√	√	√
Circulation	√	√	√	√	√	√
Reference	√	√	√	√	√	√
Documentation Service	X	X	√	√	√	√
Reprographic	√	√	√	√	√	√
Audio Visual	X	X	√	√		√
Periodical	√	X	√	√	√	√
Galleries	X	X	X	√	√	X
Achieves	X	X	√	√	X	√
Others	X	√	X	X	X	X

G. Collection by user effectiveness

Figure 6 shows the proportion of different categories of users who use the libraries' collection. The maximum proportion of users is students of the universities. This student criterion focuses on different categories but mostly undergraduates, post graduates. The selected universities have fewer amounts of Ph. D. scholars. Other categories of users are teachers and officers of the libraries. It is understood that the selected public and private university libraries mainly focuses on the curriculum and text books for their students. On average 3 to 5 books are allocated for the students by the libraries. The number of average books varies on the basis of collection of the respective university.



As it can be seen in figure 7, 95 percent of the total users are students while the rest of them are teachers (3.12%) and researchers (1.88%). It is interesting to note here from the figure 7 that 89 percent of the users visit the libraries per day.



3. Manpower

For the smooth operations of the libraries, there must have skilled manpower or human resources. DUL and BUETL have the highest numbers of skilled professionals. As shown in table 12, the numbers of non-professional are the highest (192), followed by professional (78), Semi-professional (60) and others supporting staff (36).

Table 12: distribution of libraries by number of personnel

Name of the library	Professional	Semi professional	Non-professional	Others
DUL	19	50	154	15
BUETL	17	00	22	02
BSMMUL	08	08	04	10
IUBL	13	00	10	00
EWUL	11	02	01	07
BRACUL	10	00	01	02
Total	78	60	192	36

Figure 8 shows the percentages of the available staff of the surveyed libraries. Out of the total 366 staffs, 21.31 percent are professionals, 16.39 percent are semi professionals, 52.46 percent are non professionals and 9.87 percent are other categories of staffs.

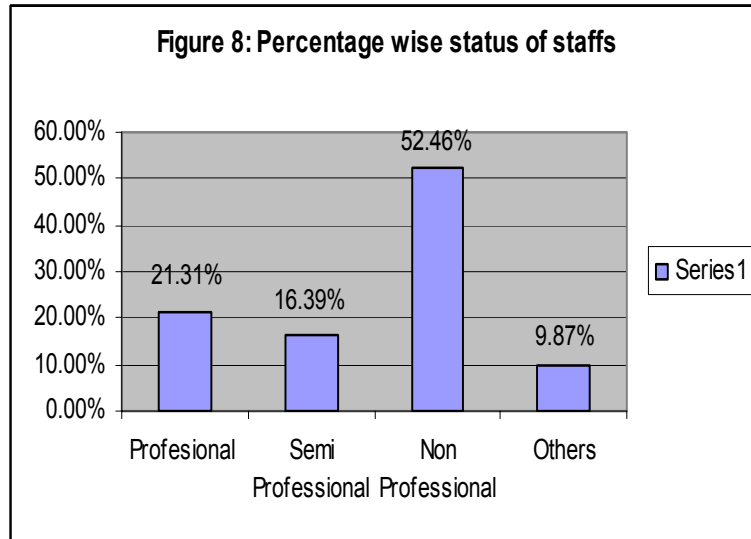
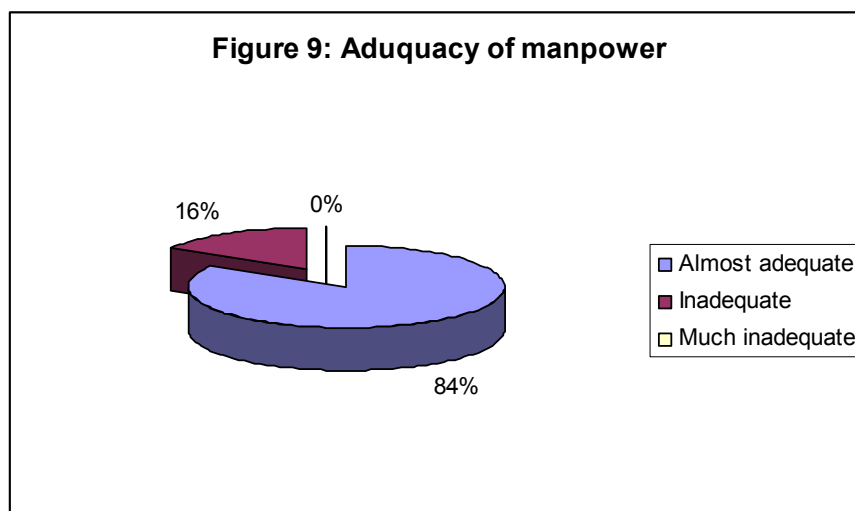


Table 13 reveals that almost all the surveyed libraries have adequate number of manpower except Bangababdhhu Sheik Mujib Medical University Library.

Table 13: Distribution of libraries by their adequacy of manpower

Name of the library	Adequacy of manpower		
	Almost adequate	Inadequate	Much inadequate
DUL	√	X	X
BUETL	√	X	X
BSMMUL	X	√	X
IUBL	√	X	X
EWUL	√	X	X
BRACUL	√	X	X

Figure 9 indicates that 84 percent of the surveyed public and private university libraries have adequate number of manpower while 16 percent of libraries have inadequate number of manpower.



4. Availability of facilities

This section describes about the available facilities in the library such as the equipments, tele and electronic communication facilities, technologies, computer hardware, automation software, reprographic facilities, databases, etc. used in the selected public and private university libraries.

Table 14 indicates that 100% of the sample libraries provide telephone and e-mail facilities and all of them have their library web sites whereas 66.64% of them have fax machine.

Table 14: Communication facilities available among the libraries

Name of the library	Telephone	Fax	E-mail	Web site
DUL	√	√	√	√
BUETL	√	√	√	√
BSMMUL	√	√	√	√
IUBL	√	√	√	√
EWUL	√	X	√	√
BRACUL	√	X	√	√
Total	6	4	6	6
% of total	100%	66.64%	100%	100%

The figure 10 shows that 100 percent of the selected university libraries provide telephone, e-mail, and web site facilities. But 66.64 percent of the surveyed libraries have fax facilities.

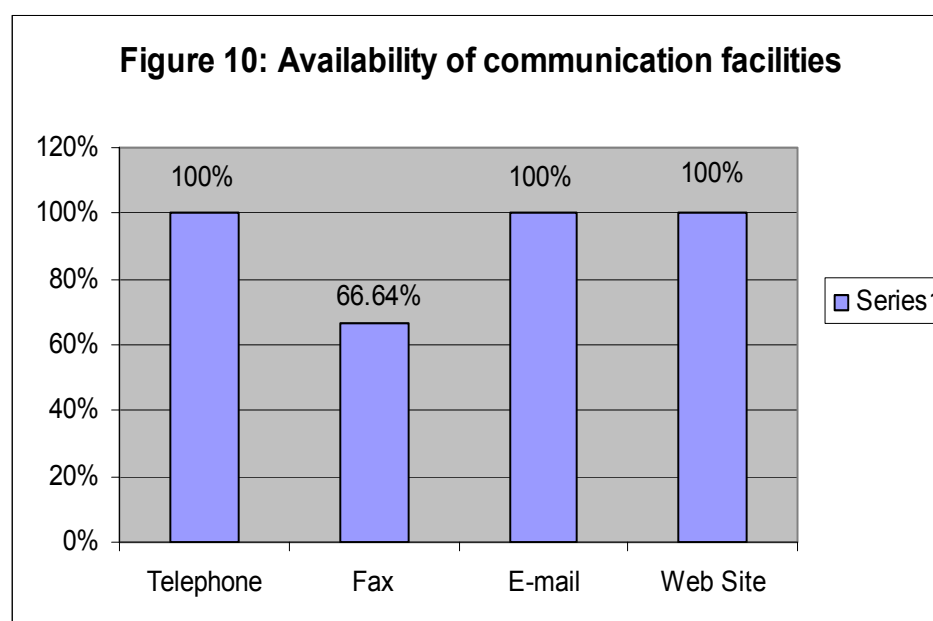


Table 15 denotes that all the libraries use the same type of equipments and technologies for the library operations. All these libraries are ICT enabled and already have introduced computerization. Most of the computers have internet connections and each of the selected public and private university libraries have a home page. In this regard, private university libraries are in better position than public university libraries. Except Dhaka University Library no library has any microfilm or microfiche readers. Only Independent University of Bangladesh Library has television and spiral machine. All the surveyed libraries have air-conditioning system but Dhaka University Library is not centrally air-conditioned.

Table 15: Distribution of libraries according to the equipments and technologies used for providing library services

Equipments and technologies	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
Total Number of Computer	77	61	15	32	16	50
Total Number of Printers	6	05	3	2	03	2
Fax Machine	√	√	√	√	X	√
Internet Connection	55	61	15	32	16	50
Home Pages/Web Pages	√	√	√	√	√	√
Total Number of Photocopy Machine	4	4	1	1	1	1
Microfilm/Microfiche Reader	√	X	X	X	X	X
Television	X	X	X	√	X	X
Air-Conditioning System	X	√	√	√	√	√
LAN	√	√	√	√	√	√
Audio Player	X	√	X	√	X	√
CD/DVD Writer	21	0	4	7	7	0
Video Player	X	√	X	√	X	X
Spiral Machine	X	X	X	√	X	X
Laminating Machine	0	0	1	1	1	0
Telephone	√	√	√	√	√	√

Computers are prerequisite element for the modern library operations. A well managed and balanced performance is possible through computers. The libraries installed the ICT long time ago. Table 16 indicates that among the public and private university libraries in Bangladesh, Bangladesh University of Engineering and Technology Library started to use ICT in the year of 1988 and then IUBL, EWUL, DUL, BRACUL, and BSMMUL. Dhaka University Library has the highest number of computer and Bangababdh Sheik Mujib Medical University Library has the lowest number of computers among the selected public and private university libraries. All the libraries use various versions of Windows operating system. All of them are server based and all the selected public and private university libraries have system administrators (Table 16).

Table 16: Distribution of libraries according to the computer hardware and software used for library and information services

Computer hardware and software used	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRAC UL
Year of ICT installation	1998	1988	2004	1993	1996	2001
Total number of computer	77	61	15	32	16	50
Operating system used	Windows 2000 Server, XP, Linux	Windows 2000 Server, XP	Windows 2000 NT, XP	Windows 2000 Server, 2000 NT, XP	Windows XP	Windows XP
Server based system	Yes	Yes	Yes	Yes	Yes	Yes
Availability of system administrator	Yes	Yes	Yes	Yes	Yes	Yes

Table 17 denotes that all the surveyed libraries have the photocopy facilities for their users. It is very noticeable factor in table 17, despite being big public universities of Bangladesh, DUL and BUETL are not facilitating printing and scanning services while the rest of sample libraries are providing printing and scanning facilities.

Table 17: Reprographic facilities available in the surveyed libraries

Name of the library	Photocopy	Printing	Scanning	Others
DUL	√	X	X	X
BUETL	√	X	X	X
BSMMUL	√	√	√	X
IUBL	√	√	√	X
EWUL	√	√	√	X
BRACUL	√	√	√	x

Table 18 shows that all the selected public and private university libraries have initiated automation and in this regard Independent University of Bangladesh Library has initiated automation in 1993, then Dhaka University Library in 1998, Bangladesh University of Engineering and Technology Library in 2000, BRAC University Library in 2001, East West University Library in 2002 and Bangababdhhu Sheik Mujib Medical University Library in 2006.

Table 18: Distribution of libraries by their initiation of automation

Name of the library	Initiated automation/computerization		Year of introduction of automation
	Yes	No	
DUL	Yes	X	1998
BUETL	Yes	X	2000
BSMMUL	Yes	X	2006
IUBL	Yes	X	1993
EWUL	Yes	X	2002
BRACUL	Yes	X	2001

Table 19 denotes that Dhaka University Library and Bangababdhmu Sheik Mujib Medical University Library are partially computerized. But Bangladesh University of Engineering and Technology Library, Independent University of Bangladesh (IUB) Library, East West University Library and BRAC University Library are fully computerized.

Table 19: Distribution of libraries by status of operation

Name of the library	Library operation			
	Manual	Partially Computerized	Fully computerized	Others
DUL	X	√	X	X
BUETL	X	X	√	X
BSMMUL	X	√	X	X
IUBL	X	X	√	X
EWUL	X	X	√	X
BRACUL	X	X	√	X

Figure 11 denotes that 33.32 percent of the surveyed public libraries are partly computerized and 66.64% of the libraries are fully computerized.

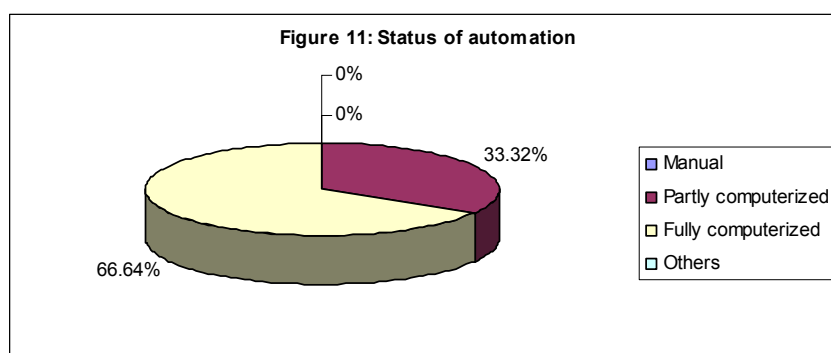


Table 20 reveals that Dhaka University Library provides only automated searching facilities. But Bangladesh University of Engineering and Technology Library, Independent University of Bangladesh Library, East West University Library, and BRAC University Library provide all the automated facilities. Bangababdhmu Sheik Mujib Medical University Library provides all the automated facilities except ordering and circulation facilities.

Table 20: Distribution of libraries by automated services

Automated services	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
Ordering	X	√	X	√	√	√
Cataloguing	X	√	√	√	√	√
Classification	X	√	√	√	√	√
Circulation	X	√	X	√	√	√
Searching	√	√	√	√	√	√
Others	X	X	X	√	X	X

Dhaka University Library uses GLAS, but now this library is building new indigenous software named DULIB and Engineering and Technology Library also uses indigenous software named BUETLIB. Bangababdhru Sheik Mujib Medical University Library is using CDS/ISIS and LMS software and similarly Independent University of Bangladesh Library is using CDS/ISIS and Librarian software. East University Library is using customized software and developed by the IT department of the university but BRAC University Library uses the open-source software KOHA (Table 21).

Table 21: Distribution of libraries by the software used for automation

Name of the library	Name of the used library software
DUL	GLAS, Interim solution of new software DULIB
BUETL	BUETLIB
BSMMUL	CDS/ISIS, LMS
IUBL	CDS/ISIS, Librarian
EWUL	EWU Library MIS
BRACUL	KOHA

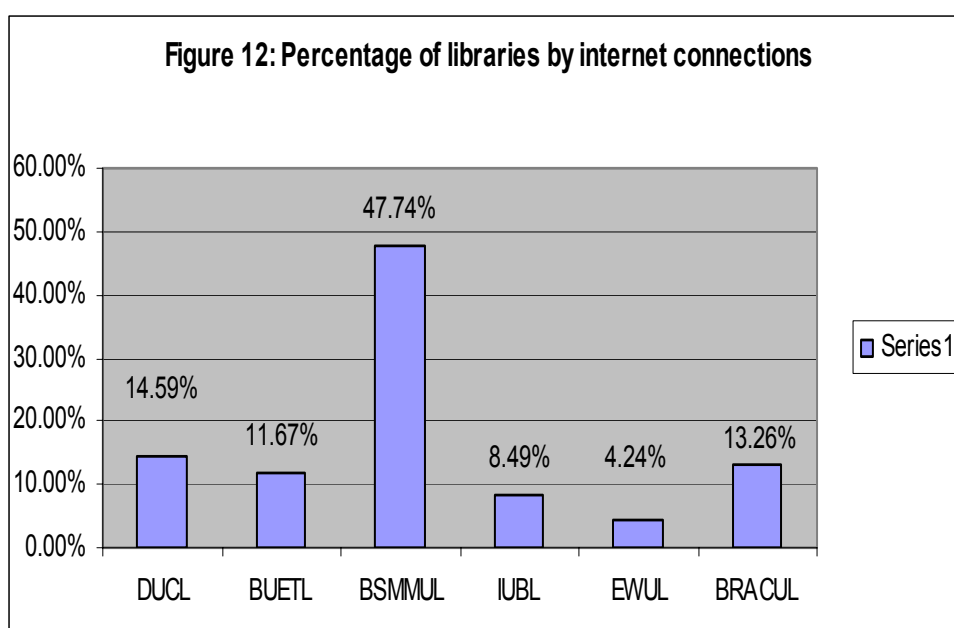
5. Status of internet services

It is observed that Bangladesh University of Engineering and Technology Library and Independent University of Bangladesh Library have started internet connection in the same year 1996. Dhaka University Library uses internet facilities in 1999 and BRAC University Library in 2001 and subsequently East West University Library in 2002. Bangababdhhu Sheik Mujib Medical University Library uses internet facilities in 2004 (See Table22).

Table 22: Distribution of libraries by their internet facilities

Name of the library	Year of inception of internet	No. of internet connected computers
DUL	1999	55
BUETL	1996	44
BSMMUL	2004	180
IUBL	1996	32
EWUL	2002	16
BRACUL	2001	50

Figure 12 delineates that BSMMUL has the highest number of internet connected computers (47.74%) followed by BRACUL (13.28%), DUL (11.67%), BUETL (11.67%), IUBL (8.49%) and EWUL (4.24%).



All the surveyed public and private university libraries have broadband internet connections except Bangladesh University of Engineering and Technology Library (See Table 23).

Table 23: Distribution of libraries by status of internet connection

Name of the library	Broadband	Narrow band	Dial up	Others
DUL	√	X	X	X
BUETL	X	X	X	√
BSMMUL	√	X	X	X
IUBL	√	X	X	X
EWUL	√	X	X	X
BRACUL	√	X	X	x

Figure 13 shows that 83.32 percent of the surveyed university libraries use broadband internet connections while 16.67 percent libraries use other internet connections. But no selected libraries use narrow band and dial up internet connection.

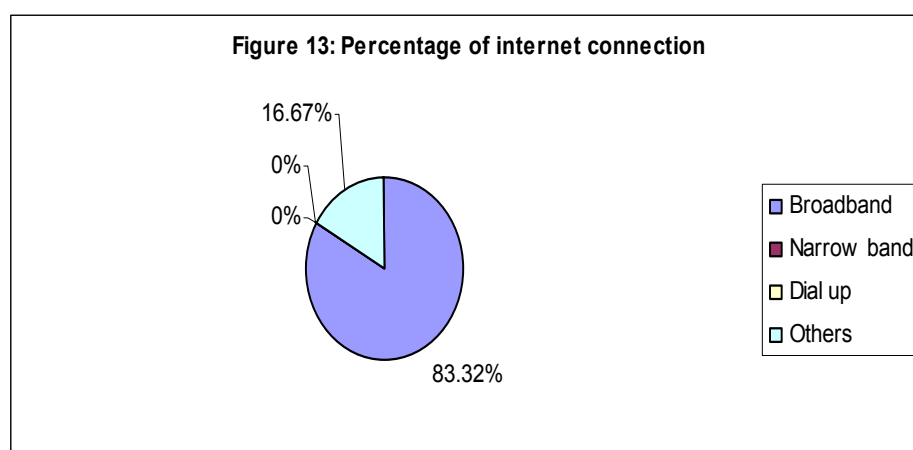


Table 24 shows that Dhaka University Library uses Netscape navigator, MS Internet Explorer, Mozilla Firefox and Opera browser software while Bangladesh University of Engineering and Technology Library uses the same browsers but they do not use opera browser. Bangababdhru Sheik Mujib Medical University Library uses Netscape Navigator, MS Internet Explorer and Mozilla Firefox. Independent University of Bangladesh Library, East West University Library and BRAC University Library use the same browser software.

Table 24: Distribution of libraries by using browser software

Name of the library	Netscape Navigator	Netscape Gold	MS Internet Explorer	Mozilla Firefox	Opera	Others
DUL	√	X	√	√	√	X
BUETL	√	X	√	√	X	√
BSMMUL	√	X	√	√	X	X
IUBL	X	X	√	√	√	√
EWUL	X	X	√	√	√	X
BRACUL	X	X	√	√	√	x

Table 25 reveals that Dhaka University Library and Bangladesh University of Engineering and Technology Library use Google and Yahoo search engine and rest of the surveyed university libraries use the same search engines.

Table 25: Distribution of libraries by using search engines

Name of the library	Google	Yahoo	Others
DUL	√	√	X
BUETL	√	√	X
BSMMUL	√	√	√
IUBL	√	√	√
EWUL	√	√	√
BRACUL	√	√	√

7. Library Database

This section elaborates about the total number of publications included in the library database and some related things like automated serial control system, barcode identification, and system administrator.

As all of the libraries have started computerization long ago, they all have most of their publications in the library database. Dhaka University Library has the most number of publications in their database followed by Bangladesh University of Engineering and Technology Library, Independent University of Bangladesh Library, East West University Library, BRAC University Library, and Bangababdh Sheik Mujib Medical University Library (Table 26).

Table 26: Distribution of libraries according to the library databases

Name of the library	Number of publications included in the database
DUL	3,00,000
BUETL	45,000
BSMMUL	20,000
IUBL	25,000
EWUL	23,400
BRACUL	22,400

Table 27 reveals that all the surveyed public and private university libraries have bar code identification system and all the libraries have automated serial control system except Dhaka University Library. Except Independent University of Bangladesh Library and East West University Library, all the libraries have system administrator.

Table 27: Distribution of libraries by automated serial control, bar code identification, and system administrator

Name of the library	Automated serial control system		Bar code identification		System administrator	
	Yes	No	Yes	No	Yes	No
DUL	X	X	√	X	√	X
BUETL	√	X	√	X	√	X
BSMMUL	√	X	√	X	√	X
IUBL	√	X	√	X	X	X
EWUL	√	X	√	X	X	X
BRACUL	√	X	√	X	√	X

8. Networking and Resource Sharing

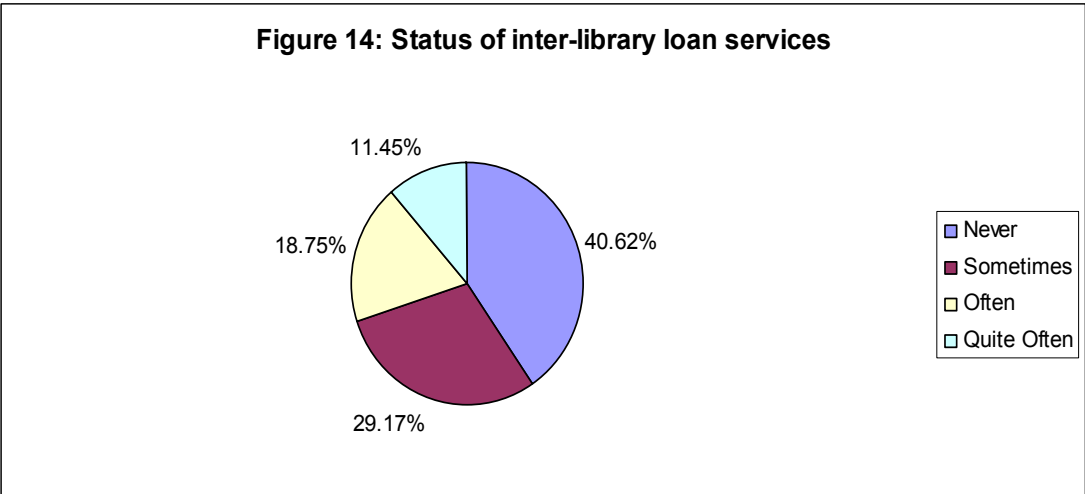
Inter-library services which are received and offered among libraries are of different categories. The types and effectiveness of inter-library services are discussed in this section. Inter-library services cover direct involvement among the libraries through their networking and resource sharing.

Table 28 shows the various services being received and offered among the selected public and private university libraries of Bangladesh.

Table 28: Distribution of libraries by status of inter-library services in different scale

Name of services	Scale given by number of libraries							
	Never		Sometimes		Often		Quite often	
	Number	% of Library	Number	% of Library	Number	% of Library	Number	% of Library
Inter-library loan received	3	50%	2	33.33%	1	16.67%	0	0%
Inter-library loan offered	1	16.67%	4	66.66%	1	16.67%	0	0%
Photocopy services received	0	0%	3	50%	1	16.67%	2	33.33%
Photocopy services offered	0	0%	3	50%	1	16.67%	2	33.33%
Answer of reference queries received	1	16.67%	2	33.33%	2	33.33%	1	16.67%
Answer of reference queries offered	1	16.67%	2	33.33%	2	33.33%	1	16.67%
Online/offline search received	0	0%	1	16.67%	2	33.33%	3	50%
Online/offline search offered	1	16.67%	1	16.67%	2	33.33%	2	33.33%
Translation received	6	100%	0	0%	0	0%	0	0%
Translation offered	6	100%	0	0%	0	0%	0	0%
Manpower received	2	33.33%	3	50%	1	16.67%	0	0%
Manpower offered	2	33.33%	3	50%	1	16.67%	0	0%
Equipment received	4	66.66%	1	16.67%	1	16.67%	0	0%
Equipment offered	4	66.66%	1	16.67%	1	16.67%	0	0%
Any other received	4	66.66%	1	16.67%	1	16.67%	0	0%
Any other offered	4	66.66%	1	16.67%	1	16.67%	0	0%
Total	39	40.62%	28	29.17%	18	18.75%	11	11.45%

Figure 14 shows that 40.62 percent selected public and private university libraries never provide inter-library loan service, 29.17 percent of the libraries sometimes provide inter-loan services, 18.75 percent of the libraries often provide inter-library loan services, and 11.14 percent of the surveyed libraries provide inter-library loan services.



Here, the present status of inter-library loan services are shown individually by the following figures (Figure 15 to Figure 30).

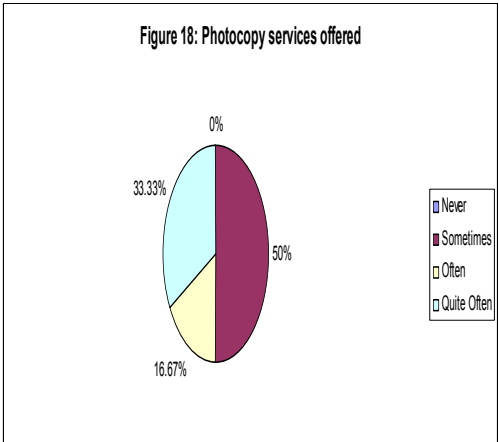
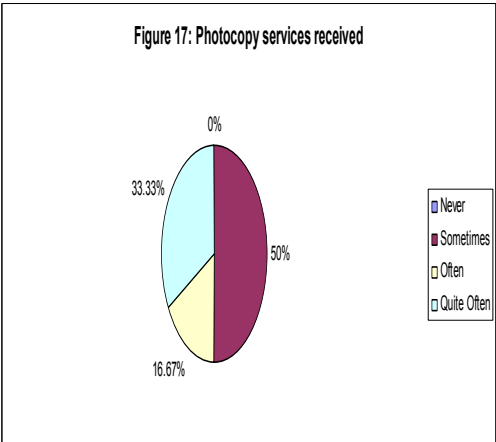
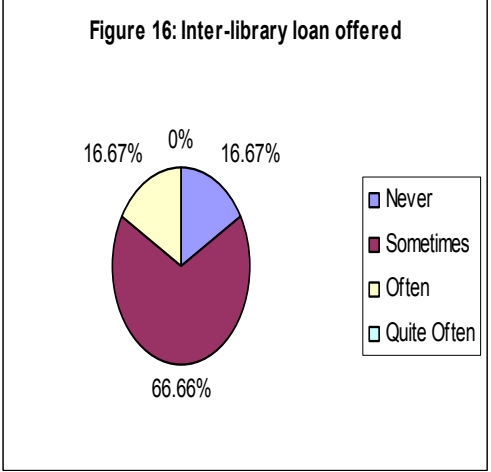
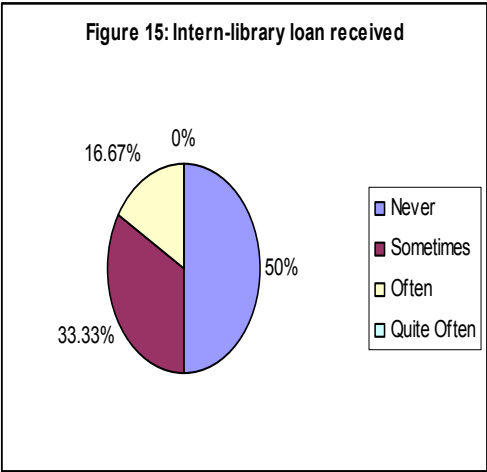


Figure 19: Answer of reference queries received

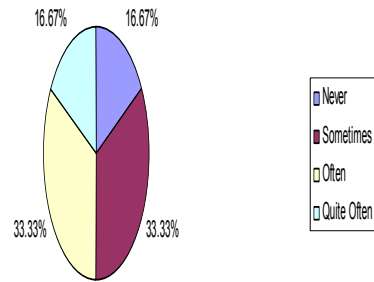


Figure 20: Answer of reference queries offered

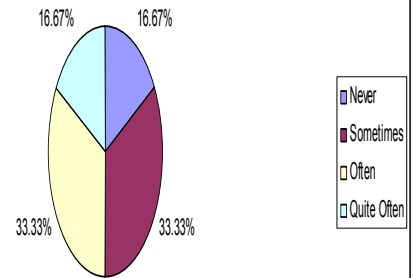


Figure 21: Online/offline search received

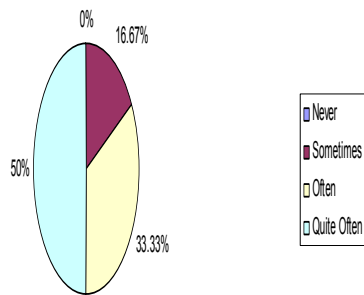


Figure 22: Online/offline search offered

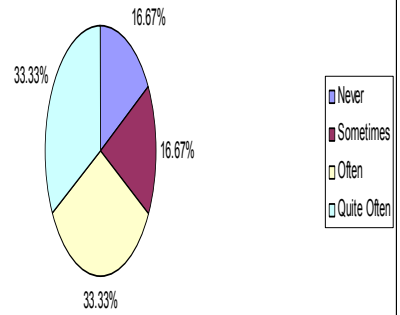


Figure 23: Translation received

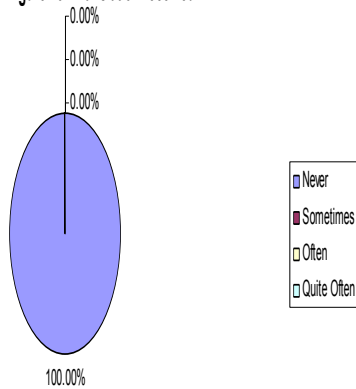


Figure 24: Translation offered

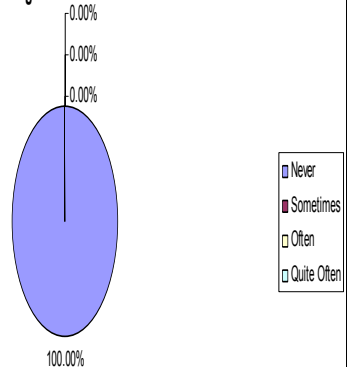


Figure 25: Manpower received

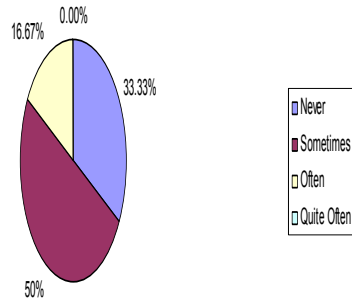


Figure 26: Manpower offered

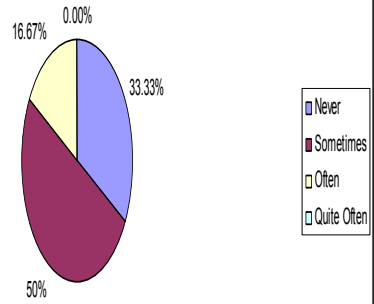


Figure 27: Equipment received

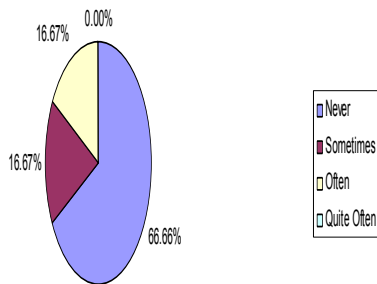


Figure 28: Equipment offered

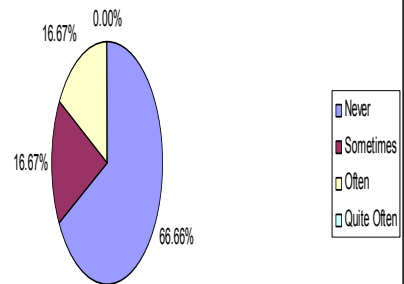


Figure 29: Any other received

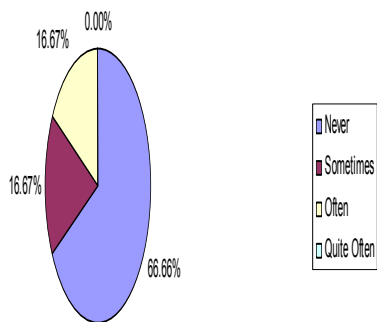


Figure 30: Any other offered

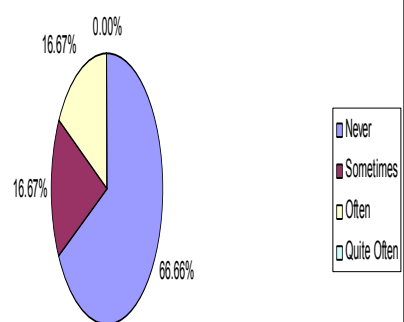


Table 29 reveals that Bangababdh Sheik Mujib Medical University Library and East West University Library provide satisfactory inter-library loan services while the rest of the libraries provide poor inter-library loan services. But no libraries provide very good and good inter-library loan services.

Table 29: Distribution of libraries by inter-library loan

Name of the library	Rating of Services			
	Very Good	Good	Satisfactory	Poor
DUL	X	X	X	√
BUETL	X	X	X	√
BSMMUL	X	X	√	X
IUBL	X	X	X	√
EWUL	X	X	√	X
BRACUL	X	X	X	√
Total	0	0	2	4

Figure 31 indicates that 66.66 percent of the surveyed public and private university libraries provide poor inter-library loan services while 33.33 percent of the selected libraries provide satisfactory inter-library loan services.

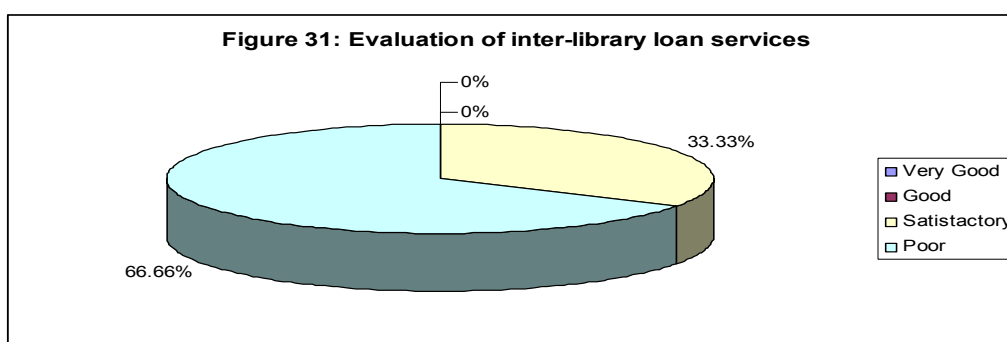
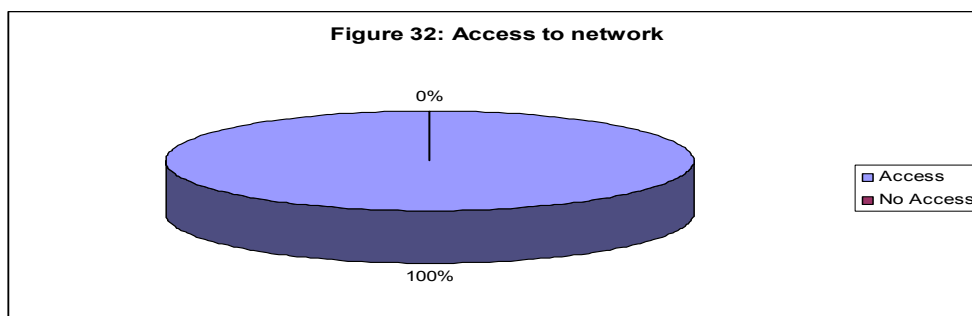


Table 30 indicates that all the surveyed public and private university libraries have access to INASP/PERI network for online journal subscription.

Table 30: Distribution of libraries according to their access of networking and intention to join

Name of the library	Have access with national and international network		Name of the network	
	Yes	No	Have Joined	Intend to join
DUL	√	X	INASP/PERI	BRAC University
BUETL	√	X	INASP/PERI	-
BSMMUL	√	X	UGC Network	-
IUBL	√	X	INASP/PERI	-
EWUL	√	X	INASP/PERI	-
BRACUL	√	X	INASP/PERI	-

Figure 32 shows that 100 percent of the selected public and private university libraries of Bangladesh have access to network.

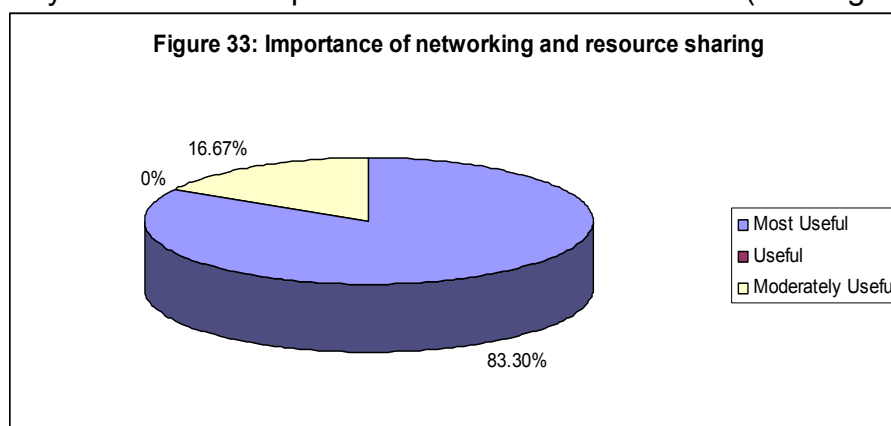


Networking and resource sharing are most useful to almost all the selected public and private university libraries in Bangladesh. But networking and resource sharing are moderately useful to Bangababdhhu Sheik Mujib Medical University Library (Table 31).

Table 31: Distribution of libraries according to their opinion about the importance of networking and resource sharing

Name of the library	Importance of networking and resource sharing		
	Most useful	Useful	Moderately useful
DUL	√	X	X
BUETL	√	X	X
BSMMUL	X	X	√
IUBL	√	X	X
EWUL	√	X	X
BRACUL	√	X	X

Networking and resource sharing are most useful to 83.30 percent of the surveyed public and private university libraries of Bangladesh and it is also moderately useful to 16.67 percent of the selected libraries (See Figure 33).



The librarians were asked that if the library is to be designated as “National Focal Point” of networking, what would be the preferred subjects to cover. The answers reflect the usual notion about the libraries that each of them is interested in their own specialization (See Table 32).

Table 32: Distribution of libraries according to their specific subject for networking and resource sharing

Name of the library	Specific subject of national focal point					
	Academic	Technology and Engineering	Medicine	Business and Environment	BBA, CSE, Social Science	Business and Engineering
DUL	√	X	X	X	X	X
BUETL	X	√	X	X	X	X
BSMMUL	X	X	√	X	X	X
IUBL	X	X	X	√	X	X
EWUL	X	X	X	X	√	X
BRACUL	X	X	X	X	X	√

Table 33 denotes that Dhaka University Library and Bangladesh University of Engineering and Technology Library take one month, Bangababdhhu Sheik Mujib Medical University Library takes more than two weeks, Independent University of Bangladesh Library takes two weeks, and East West University Library and BRAC University Library take one week for giving response.

Table 33: Distribution of libraries according to the response time taken by the participating libraries

Name of the library	Response time				
	One week	Two weeks	More than two weeks	One month	More than one month
DUL	X	X	X	√	X
BUETL	X	X	X	√	X
BSMMUL	X	X	√	X	X
IUBL	X	√	X	X	X
EWUL	√	X	X	X	X
BRACUL	√	X	X	X	X

Figure 34 show that 33.32 percent of the surveyed libraries take one week and one month among the participating libraries. 16.67 percent libraries take two week and more than two weeks. But no libraries take more than one month.

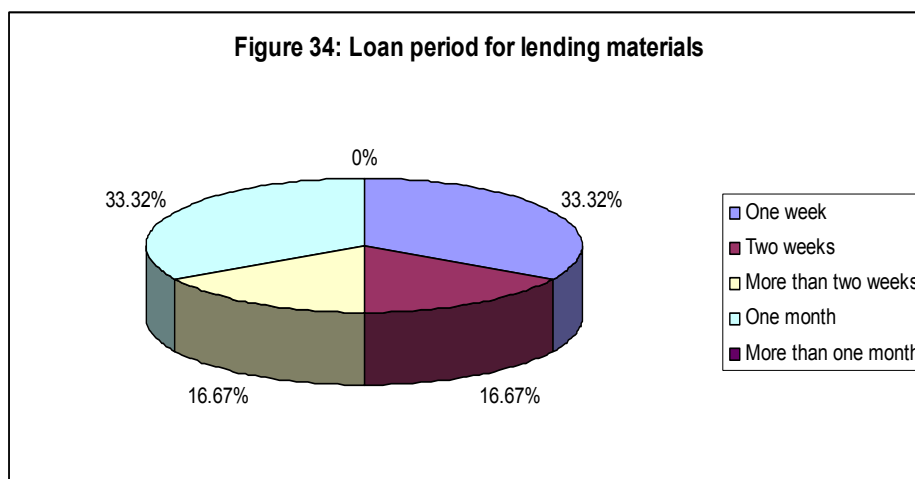


Table 34 reveals that readers of all the surveyed public and private university libraries feel happy and satisfied after obtaining materials from other libraries.

Table 34: Feelings of readers after obtaining materials from other libraries

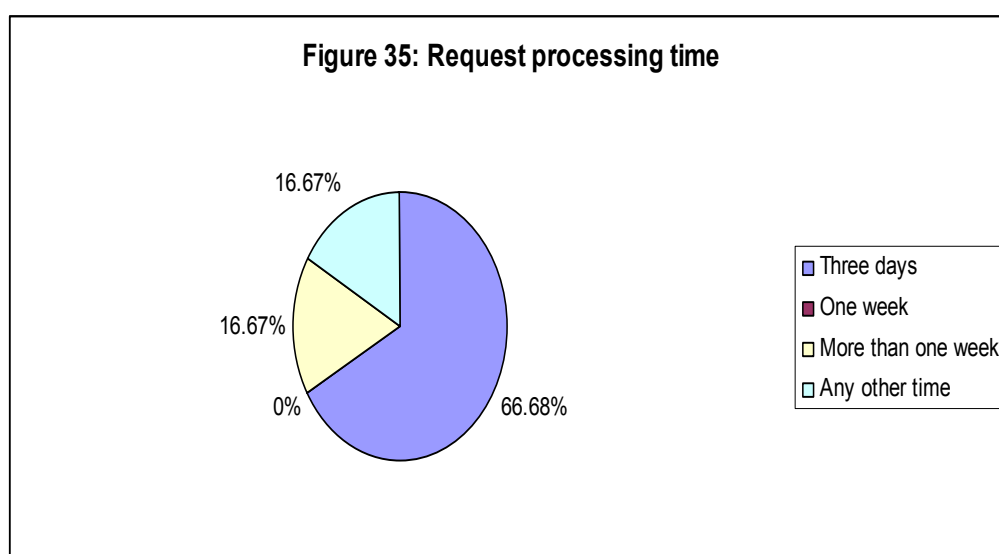
Name of the library	Feelings of readers after obtaining the materials		
	Happy and satisfied	Almost satisfied	No reaction
DUL	√	X	X
BUETL	√	X	X
BSMMUL	√	X	X
IUBL	√	X	X
EWUL	√	X	X
BRACUL	√	X	X

Dhaka University Library, Bangladesh University of Engineering and Technology Library, Bangababdhru Sheik Mujib Medical University Library, and BRAC University Library take three days to process the request from other libraries. Independent University of Bangladesh Library takes more than one week and East West University Library takes any other time like one month or more than one month (See Table 35).

Table 35: Distribution of libraries according to the time taken to process the request

Name of the library	Time for processing request			
	Three days	One week	More than one week	Any other time
DUL	√	X	X	X
BUETL	√	X	X	X
BSMMUL	√	X	X	X
IUBL	X	X	√	
EWUL	X	X	X	√
BRACUL	√	X	X	

Figure 35 show that 66.68 percent of the surveyed public and private university libraries take three days for processing an inter-library loan request. 16.67 percent libraries take more than one week and any other time for processing a inter-library loan request.

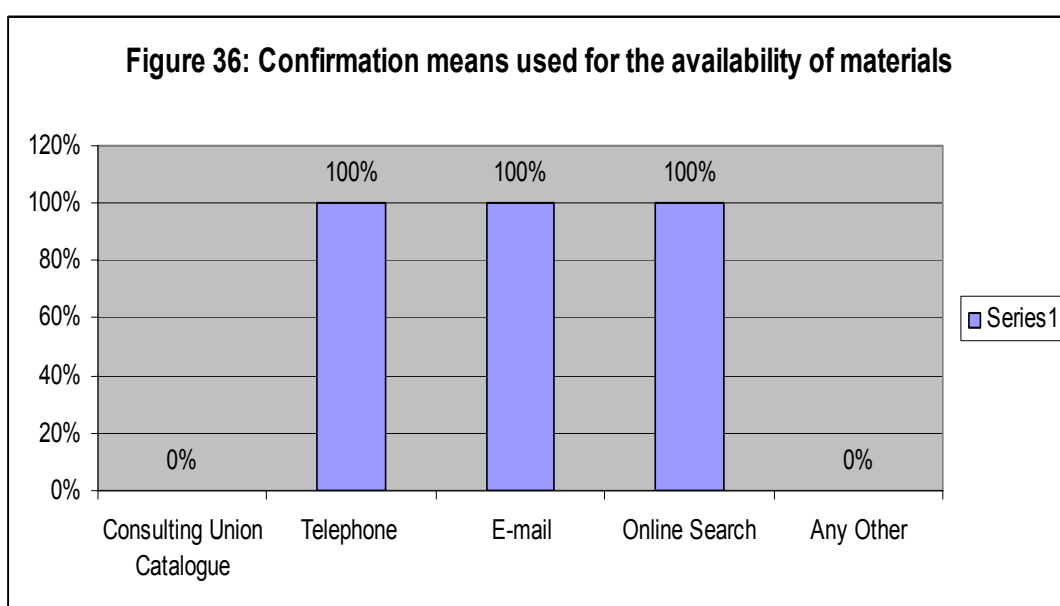


The libraries mostly equipped with internet facilities. As a result it is possible to conform the availability of materials through e-mails by all the of the selected public and private university libraries. Simultaneously all the surveyed libraries use telephone and online search for conforming the availability of materials. But no selected libraries use union catalogue and other form of conformation of materials (Table 36).

Table 36: Distribution of libraries according to the means used for conforming availability of material in the concerned libraries

Means used	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
Consulting union catalogue	X	X	X	X	X	X
Telephone	√	√	√	√	√	√
Fax	X	X	X	X	X	X
E-mail	√	√	√	√	√	√
Online search	√	√	√	√	√	√
Any other	X	X	X	X	X	X

Figure 36 describes that 100 percent of the surveyed public and private university libraries use telephone, e-mail and online search for conformation of availability of materials. But no libraries use union catalogue and other means for conformation of availability of materials.



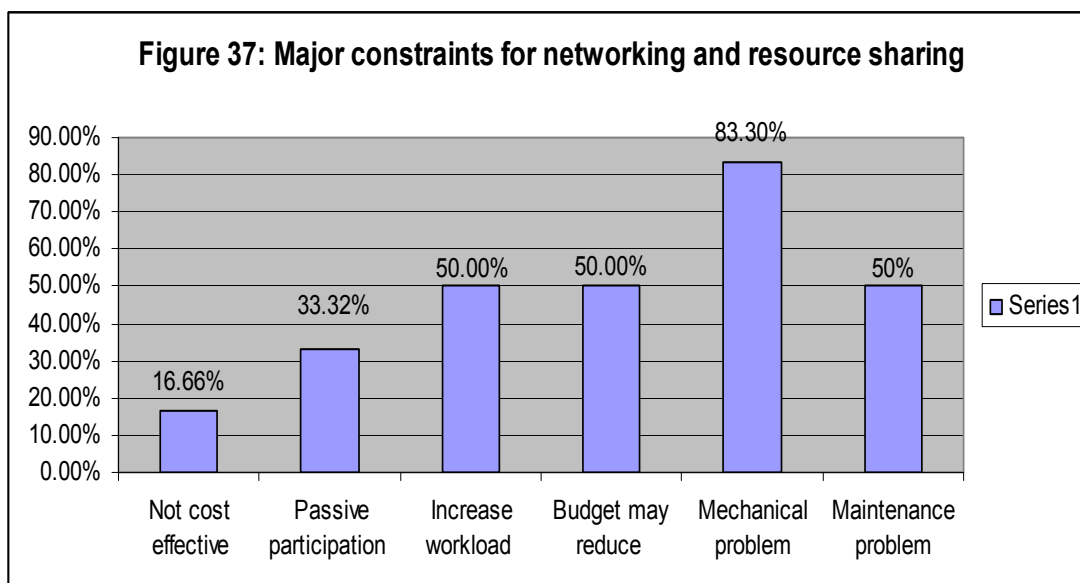
9. Barriers of networking and resource sharing

Constraints of networking and resource sharing mentioned by all of the surveyed public and private university libraries of Bangladesh. All of the surveyed libraries suggest that mechanical problem is the main problem for networking and resource sharing. Some libraries reported that networking and resource sharing may reduce budget, some indicate that it increase workload, only two libraries mention that some participation may be passive, and only one library describes that networking and resource sharing may not be cost effective (See Table 37).

Table 37: Distribution of libraries according to their opinion for the main constrain of networking and resource sharing

Constraints of networking and resource sharing	Name of the library					
	DUL	BUETL	BSMMUL	IUBL	EWUL	BRACUL
Not cost effective	X	X	X	X	√	X
Passive participation	X	X	X	√	X	√
Increase workload	X	X	X	√	√	√
Budget may reduce	X	√	X	√	X	√
Mechanical problem	√	√	√	√	√	X
Maintenance problem	√	√	X	√	X	X

Figure 37 shows that 83.30 percent of the surveyed public and private university libraries mentioned that mechanical problem is the main problem for networking and resource sharing in Bangladesh. 50 percent of the libraries report that it increases workload reduces budget, and it occurs maintenance problem. 33.32 percent of them express that some participation may be passive and only 16.66 percent mentions that it may not be cost effective (See Figure 37).



10. Status of the Budget

Libraries run through several important factors and budget is one of these main factors. Year wise annual budget is presented in Table 38. The source of the budget UGC report and different university libraries. The library budget of Dhaka University Library is the biggest budget in the surveyed public university libraries where as the budget of BRAC University Library is the biggest budget among the selected private university libraries in Bangladesh.

Table 38: Distribution of libraries by the status of Taka

Name of the library	Year		
	2006-07	2007-08	2008-09
DUL	99,58,000	1,02,79,000	1,40,00,000
BUETL	100,00,000	90,00,000	1,15,00,000
BSMMUL	10,00,000	6,00,000	6,00,000
IUBL	77,00,000	83,00,000	93,87,000
EWUL	80,00,000	92,00,000	95,00,000
BRACUL	90,00,000	1,00,00,000	1,32,00,000

11. Networking and resource sharing: User's Perspective

The user level survey has been conducted to examine the present condition and future prospects in the light of the resource sharing and networking among the libraries. The user level information also provided the extent and effectiveness of the libraries in regards to user perspectives. A total of hundred users were interviewed from the following six universities:

01. DUL.

02. BUETL.

03. BSMMUL.

04. IUBL.

05. EWUL.

06. BRACUL.

All the users were asked how frequently they visited the library, availability of services they received, whether they get help from the library personnel in order to collect materials and availability of national and international databases in respect of the degree of usefulness. For further improvement library services, suggestions were also sought from the users.

A. Selection categories of the users

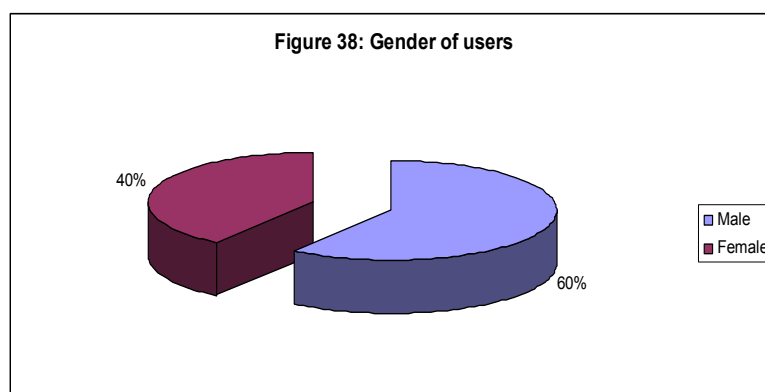
Information on users characteristics were collected by gender and category they belong to and their area of profession.

Table 39 shows that the survey was made among 100 users, of which 60 users were male and 40 were female.

Table 39: Status of the gender of users

Gender	Number of the users	Percentage of the users
Male	60	60.0%
Female	40	40.0%

Figure 38 reveals that 60 percent of the users are male and 40 percent of the users are female.



The below Table 40 indicates the number of respondents. Among the respondents interviewed; 40 percent were undergraduate students, 25 percent were postgraduate students, 7 percent were M. Phil students, 3 percent were PhD. Students, 10 percent faculty members, 5 percent were researchers, and 10 percent were administrators.

Table 40: Characteristics of the users by status

Category of the users	Number of the users	Percentage of the uses
Undergraduate	40	40.0%
Postgraduate	25	25.0%
M. Phil	7	7.0%
PhD	3	3.0%
Faculty members	10	10.0%
Researchers	5	5.0%
Administrators	10	10.0%
Total	100	100.0%

B. Status of user's visit to library

The frequency of visit by the users to their institutional libraries is presented in the Figure 39. It denotes that 35 percent of the users visit their libraries every day, 15 percent frequently, 40 percent if need and 10 percent of the users visit their libraries most of the days.

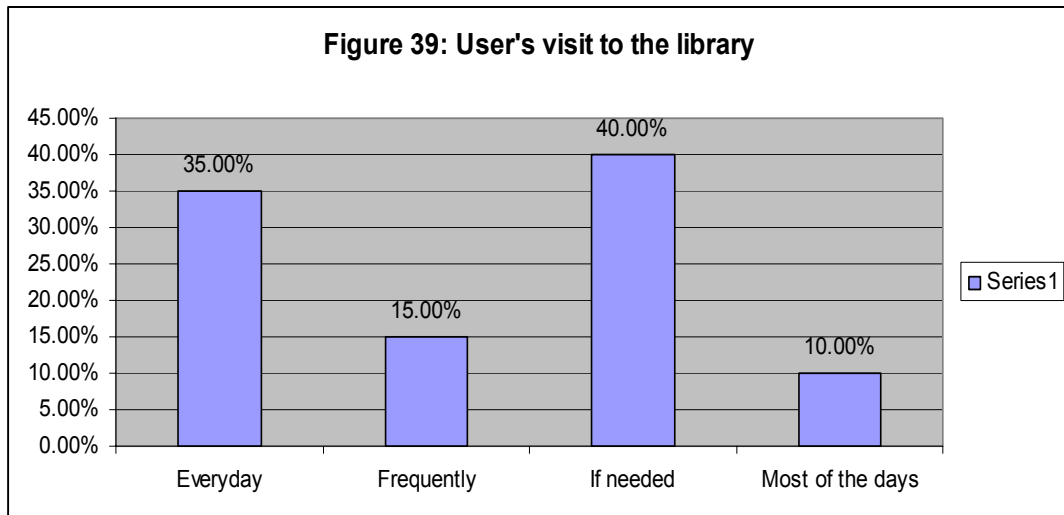
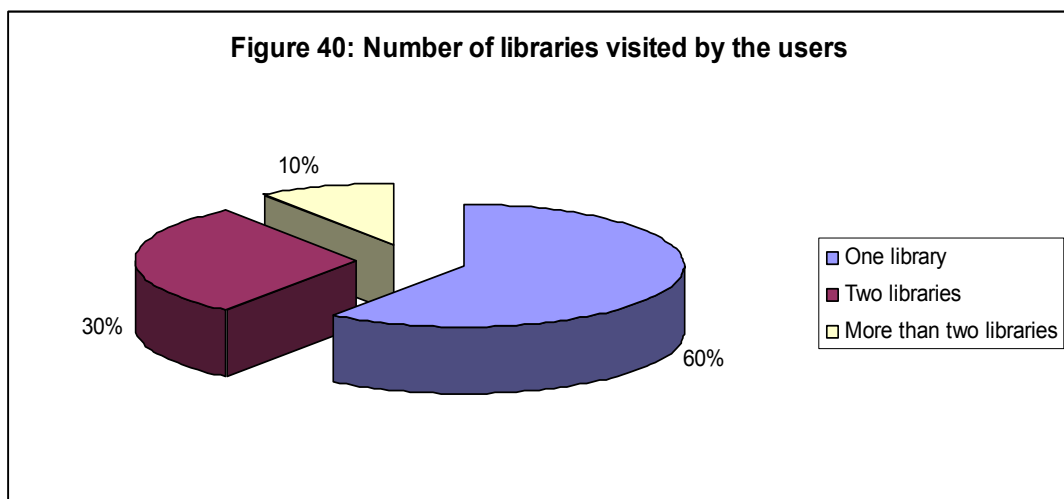


Figure 40 explains that out of all the users surveyed 60 percent of the users use only their institutional library, 30 percent visit two libraries to search for their desired materials while only 10 percent of the users visit more than two libraries to meet their need.



C. User satisfaction

Figure 41 reveals that users have mixed reaction towards the level of satisfaction. Although there is no scientific method to measure the level of users' satisfaction, most of the libraries still manage to satisfy their users' needs. 15 percent users which are mostly library officers and researchers believe that their libraries satisfy them fully. However 38 percent of the users,

most of them are students, think that their institutional libraries satisfy them and 47 percent of the users think that their institutional libraries need to improve.

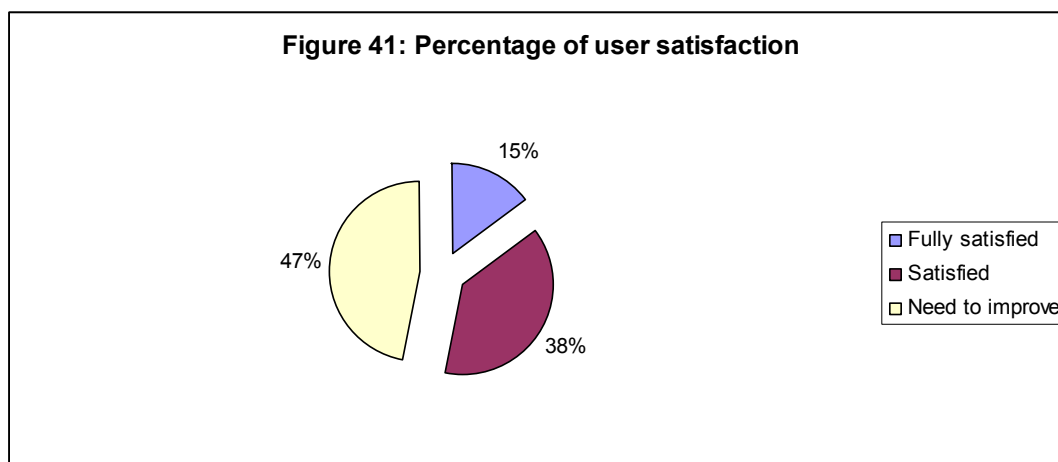
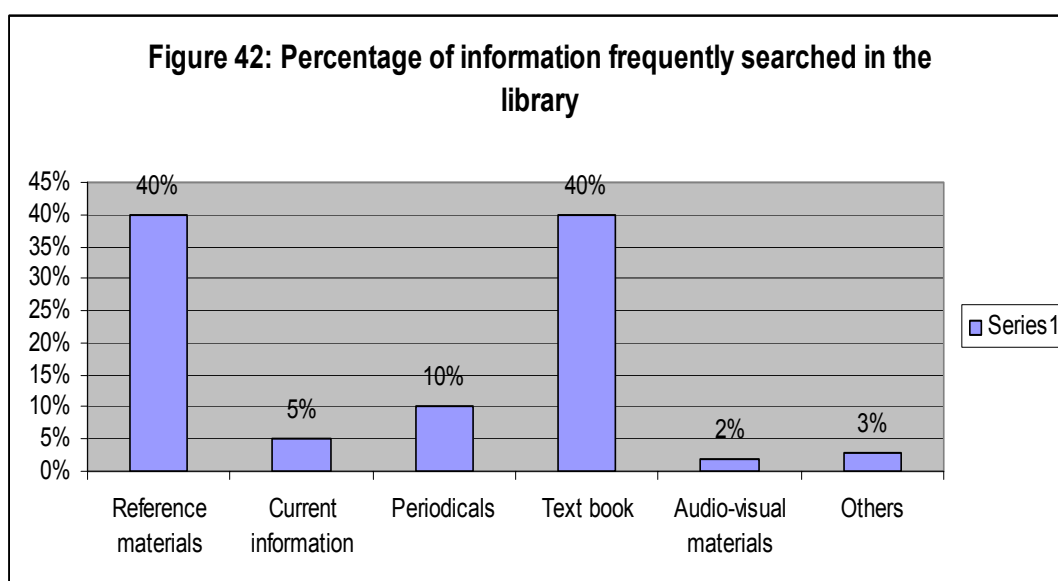
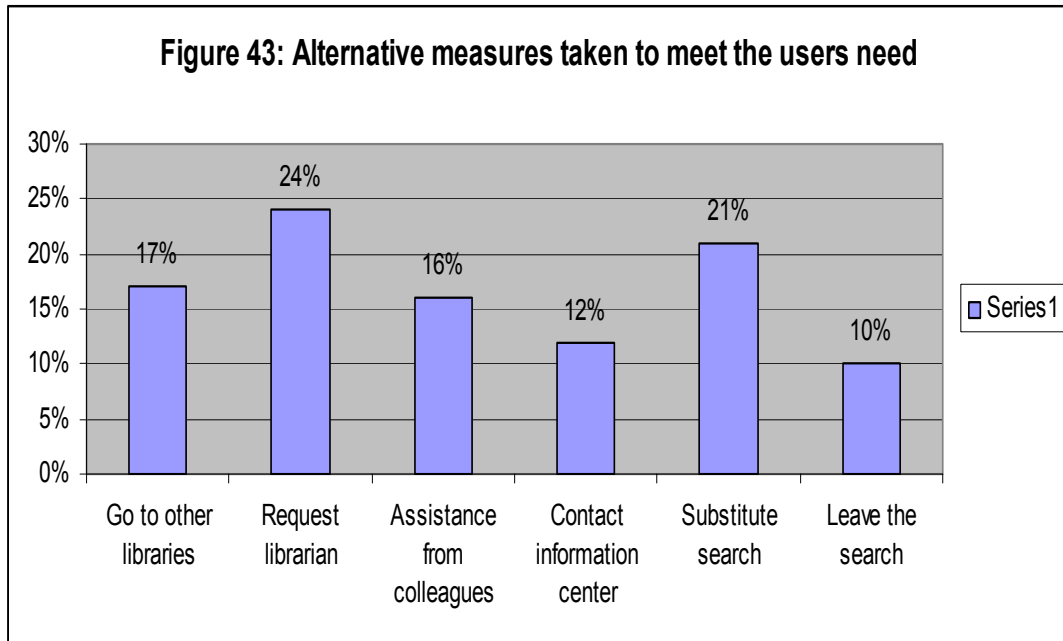


Figure 42 explains that users have different taste regarding the information needs. Although it is quite impossible to calculate the percentage of the types of users' needs. But 40 percent of the users require reference and textbooks materials, 5 percent require current information, 10 percent requires periodicals information, and two percent users need audio-visual information.

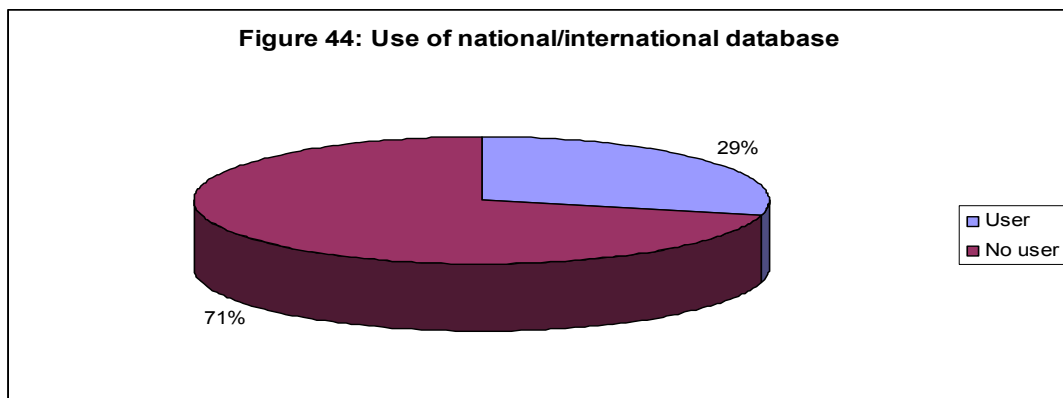


The users' responses indicated that they took six alternatives when they did not get the information that they were looking for in their institutional libraries. Most of the times the users search substitute information. 24 percent of the users request the librarian to get their desired information. 17 percent of the users go to other libraries, while 16 percent users take assistance from their senior colleagues. 12 percent of the users contact other international information centers, 21 percent of users search substitute information, and 10 percent of the users leave their search (See Figure 43).



D. Use of database

Among the users of the library database, most of the users are unaware of their library database. Only 29 percent of the users are fully aware of these databases and use these databases frequently. However, the rest 71 percent of the users are unaware of these facilities of the libraries. The users who are familiar with these databases are quite happy with the databases and think that they are very helpful for their research work (See Figure 44).



E. Need of information services

The frequency of availing library services from the institutional and outside libraries was determined by four qualities, such as, frequently, sometimes, rarely, and never used by a scale ranging in between nine services. The mean result of scale by individual service availed by the respondents is presented in Table 41. According to the mean value in the Table 41, the users frequently borrowed books from the library followed by photocopying of book materials, inter-library loan and searching in-house database.

Table 41: Response of the frequency of availing services from institutional library

Nature of services	Institutional library				
	Frequently	Sometimes	Rarely	Never	Total
Borrowing of books	45	20	20	15	100
Inter-library loan	10	20	10	60	100
Photocopying book materials	40	25	25	10	100
Photocopying articles from the journal	25	35	25	15	100
Computerized data search	55	30	15	10	100
Any other services	30	20	40	10	100

On the other hand, the mean result of scale by individual service availed by the respondents is presented in Table 42. According to the mean value, the users frequently borrowed books from the outside libraries by inter-library loan and photocopying of articles from journals, and photocopy from books.

Table 42: Response of the frequency of availing services from outside library

Nature of services	Outside library				
	Frequently	Sometimes	Rarely	Never	Total
Borrowing of books	10	20	30	40	100
Inter-library loan	5	10	35	50	100
Photocopying book materials	25	45	15	15	100
Photocopying articles from the journal	15	20	45	20	100
Computerized data search	20	30	35	15	100
Any other services	25	35	25	15	100

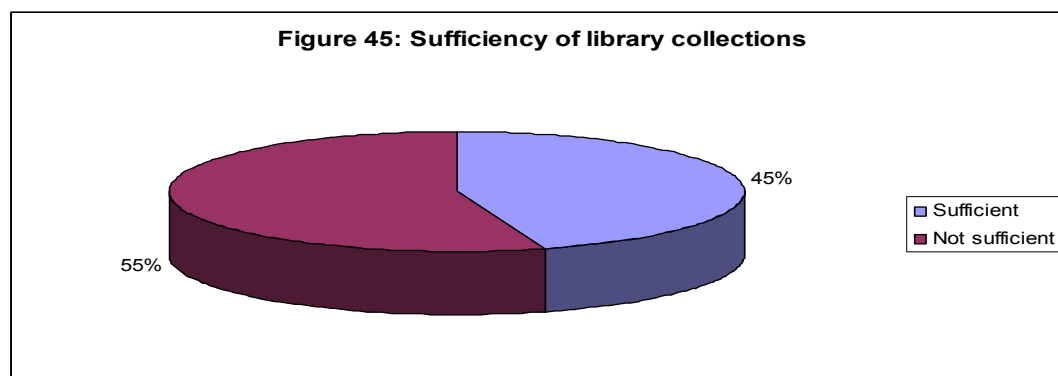
Table 43 reveals that CAS and SDI services are very need to 40 percent users, bibliographic services are very need to 35 percent users, reprographic services are very need to 60 percent users, reverence services are very need to 40 percent users, indexing and abstracting services are very need to 50 percent users, using periodicals are very need to 35 percent users, audio-visual services are very need to 55 percent users, translation services are very need to 40 percent users, and finally internet services are very need to 70 percent users of the public and private university libraries in Bangladesh.

Table 43: Mean result for the need of information services

Name of information services	Need level			
	Very need	Need	Not need	Total
CAS & SDI	40%	40%	20%	100%
Bibliographic services	35%	35%	30%	100%
Reprographic services	60%	30%	10%	100%
Reference & referral services	40%	30%	30%	100%
Indexing & abstracting	50%	35%	15%	100%
Using periodicals	35%	35%	30%	100%
Audio-visual services	55%	40%	5%	100%
Translation services	40%	35%	25%	100%
Internet services	70%	25%	5%	100%

F. Library collection and staff: users' perspective

The users were asked about the collection of the libraries. Many were happy about the collection while others were questioning about the sufficiency of the collections to meet the information needs. Figure 45 show that 45 percent users believed that the collections of their libraries had sufficient and 55 percent believed that the collections of their libraries were not sufficient.



G. User's suggestions to improve library services

All the respondents, as users of library and information center, were asked to deliver their suggestions for the future development of the library services and operations. All the respondents have provided comments although this question was open-ended. It was a unique experience that most of the respondents were unaware about library networking and resource sharing. Whenever they were explained about the merits of networking and resource sharing they were totally amazed and expected the library to take necessary initiatives regarding networking and resource sharing.

Table 44: Suggestions of the users for improving library services

Suggestion of the users	User percentage
Library collections should be increased	30
All modern IT facilities should be installed in the library	25
Professional and qualified library staff should be appointed	15
Library networking and resource sharing should be established	20
Readers friendly environment should be maintained in the library	10
Total	100

Among the users, 20 percent have given emphasis on establishing library networking and resource sharing system (Table 44). 25 percent users responded to install all the modern technological equipments in the library. 30 percent of the users also demanded to enrich the library collections and 15 percent demanded to appoint skilled and professionals in the library along with a better reading environment.

The findings of the study lead to a conclusion that the present scenarios of library and information services of the public and private university libraries are at the marginal level regarding users' satisfaction in spite of quite a good number of affluent academic public and private university libraries in the country. It is very hard to maintain the users' satisfaction level yet, it is the duty of the library to fulfill all its users' demands. To refine the existing situation, efforts should be undertaken promptly to facilitate efficient resource sharing systems among the libraries through better management and installing the state of the art of technologies and advancement.

CHAPTER 6

MODEL PLAN

Chapter 6

MODEL PLAN

Introduction

First there is resource, then the resource sharing. Resource sharing, according to Allen Kent, denotes “a mode of operation whereby library functions are shared in common by a number of libraries. The goals are to provide a positive net effect: (a) on the library user in terms of access to more materials or services, and/or (b) on the library budget in terms of cost, or much more services and at less cost than if undertaken individually.” As an important means to improve the services to information users, electronic resource sharing has increasingly become the focus of library information professionals in the 1990s. On one hand, the explosion of data and the ever enough library materials to meet the growing information demands of their users; on the other hand, the advancement of computer and telecommunication technologies also provides library information service professionals genuine opportunities to bring virtual libraries into reality.

The most crucial problem in accomplishing the objective of meeting the demand of readers in the public and private university libraries in Bangladesh is the lack of awareness and unwillingness of the governing body of the universities. Library collections are often inadequate in most libraries and even those whose collection is adequate remain underused. Lack of sufficient and qualified staff prevents proper development, either of document collections or of user education programs and even where there are no problems, librarians often have to struggle with deficient finance, cumbersome organizational structures and lack of basic legislative support. Lack of resources, far from encouraging sharing, often produces the opposite effect.

However, as it is clear from the findings of this study that the condition of resource sharing activities among the public and private university libraries of the country is very miserable, so an attempt has been made to propose an essential model plan of library networking and resource sharing among the selected public and private university libraries of the country.

Requirements for resource sharing

The process of an exchange or sharing involves two major elements. One is resource and the other is player. First there has to be resources to share and then there should be needy players/ collaborators for exchange. The Library Consortia, Professional Associations and University Libraries play a major role in creating and sharing electronic resources. The following are the some of the basic requirements for effective sharing:

- There is need for electronic catalogues and indexes for print resources available in the library.

- The technology or equipment to link libraries and to make users aware of collection of own library and other libraries.
- Standardized software, hardware and databases.
- Operating policies on the type of information and archives, which users can access (book, journals, reports, catalogues, indexes, publications etc.).
- Operating manuals or documentation for consistency in operations.
- Training of own staff members and end users for effective use of electronic media.

Above all, a commitment from the management to provide such facilities and appropriate budget allocation for installation and operating expenses.

Resources available among the selected University Libraries

- A. Information Resources:** It is already mentioned that information is considered a major resource for any development activity. The essential pre-requisite of a successful research and study is the availability of appropriate information resources. The survey has covered six prominent public and private university libraries. Results of the survey shows that the total number of books available among these libraries is more than 8,43,510. The number of title online journals is more than 32,100. Reference collection is very important for inter-library lending and resource sharing on national and international level. Other special collections such as thesis, reports, audio-visuals materials etc. are also available in these libraries. The budget allocated for purchasing the library resources is satisfactory.
- B. Advanced communication facilities:** Among the new technologies computers, CD-ROMs and e-mail have immense contributions in the field of communications. The status computerization in the libraries is satisfactory. All of the libraries have broadband internet facilities and users can browse the internet for free in the libraries. E-mail is used frequently for communication and photocopy machines are also existed in the libraries. Overall picture of communication facilities of the selected libraries is competent.
- C. Status of library Automation:** Automation is a use of computer-assisted system to undertake repetitive jobs leaving staff free to attain other duties. All the selected libraries surveyed have automated a good number of work and services of the respective university. Library software's are developed for the library automation by the computer science department of the respective university. However BRAC University library uses KOHA, open source software. The locally made software's perform the library activities well, although these are not internationally recognized and only few are web-based. On the other hand online public Access Catalogue (OPAC) is available in all the chosen libraries except. Bangladesh Library. All the libraries also have databases to input the bibliographical records. Moreover, BRAC University Library has under taken the Integrated Library System (ILS) through standardization of library materials in MARC 21 format to enrich the academic activities of the university.

D. Availability of essential tools required for networking and resource sharing: Networking and resource sharing at national or international scale needs the availability of tools like directories, bibliographies, union catalogues, indexes and abstracts, databases etc. But scarcity of authentic information is found in this regard. Various information centers of the country have compiled tools required for networking and resource sharing, although in the point of view of the private university libraries the authentic information is not found. Considering consortia at present the selected libraries except American International University, Bangladesh library are connected to the Bangladesh INASP-PERI Consortium. The University grants commission of Bangladesh, in collaboration with the Asia foundation, took an initiative to compile a Union catalogue of the collection of different universities of Bangladesh many years back, but the project did not materialize.

A proposal for Bangladesh Public and Private University library Network

(BPPUNILIBNET)

An attempt has been made to propose a suitable plan of networking for resource sharing among the selected public and private university libraries in Bangladesh, in view of the existing background of the private university libraries. It should be mentioned here that the current conditions of the public and national libraries of the country are not much hopeful. Any sort of step in this direction under public library system is missing; consequently, these are excluded from the proposed library network.

Why Bangladesh Public and Private University Library Network (BPPUNILIBNET)

The need for library networking and resource sharing among the public and private university libraries of Bangladesh stems from the following underlying trends of the modern society:

- The growth of all forms of literature, information explosion, and ever changing needs of users.
- Inflation in the cost of materials coupled with increasing availability of technology.
- Increasing amount required for subscription to same number of materials.
- Shrinking library budget and devaluation of taka and its impact on the library acquisitions.
- Increasing reliance on information to enrich academic and research activities enable society to function effectively.

Objectives of BPPUNILIBNET

The primary objectives of any national network should be to provide access to all types of information resources for all persons in all locations within the country. In the initial phase of the network, efforts should be made to provide access to information which will be extensively used by a maximum number of users. Since it is not possible to bring all information resources under one network, a beginning has to be made to coordinate and disseminate need-based information by establishing public and private university libraries and information networks.

Considering the above facts, objectives of the proposed network may be as follows:

- To develop a resource sharing strategy for public and private university libraries of Bangladesh at both national and international level.
- To avoid unnecessary duplication both in acquisition and processing of library materials.
- To build a maximum collection and to increase resources of the network members.
- To achieve effective bibliographic control of library materials for promotion of the flow, exchange and use of relevant information.
- Proper use of Information and Communication Technology (ICT) in providing information services in all disciplines.
- To achieve economy in the use of resources- money, man and materials.
- To promote and support adaptation of standards in library networks and operations.
- To provide access to composite databases.
- To also provide access to national and international databases.
- To stimulate, promote and upgrade the skills and competence of library staff and network members in information handling by arranging research and training programs.
- To foster discussion in the libraries on all aspects of resource sharing, including :
 - ✓ Cooperative cataloguing,
 - ✓ Coordinated collection development,
 - ✓ Interlibrary loan and document delivery and
 - ✓ Resource sharing databases.

Major Core Areas for Resource sharing

Keeping in view the need and emerging thrust areas for public and private universities, the following core areas for resource sharing are identified:

- Union catalogue.
- Collection Building Strategy.
- Exchange of Publications.
- Training of Staff.

- Exchange of Experience and Expertise.
- Document Delivery service.
- Consortium Approach.
- Compilation of Staff Directory.
- Digital Reference Services.
- Data base Creation etc.

The expected benefits of the network will be as follows

- All around costs of network participants may be reduced;
- Possibility of avoiding unnecessary duplication of information materials and efforts;
- Maximum use of library holdings;
- Possibility of developing specialized collection for network participants;
- Maximum accessibility to information;
- Improvement of the quality of databases developed by the network members;
- Improved user service without much cost.

Major functions and activities of the proposed network

Considering the existing library and information system of the country the following functions and activities have been selected for the proposed network. In discussing the library and information network UNESCO (1985:69-79); Chandel and Saraf (1986:177-83); and Atherton (1977:112-14) have also stressed on similar functions in their papers.

General functions

- Cooperative acquisition of books, current periodicals, theses, translations and photocopies and other audio-visual and non-book materials.
- Assignment of specialization in information resources acquisition.
- Coordinated subscription.
- Exchange of duplicate holdings.
- Identification of core subjects in disciplines.

Technical functions

- Cooperative processing (cataloguing & classification).
- Distribution of catalogue cards on demand.
- Preparation of a Union Catalogue of the resources/List of Periodicals.
- Inter-library loans.
- Reciprocal borrowing privileges/ memberships.
- Reference and/or referral service.
- Abstracting and Indexing services.
- Subject bibliographical services (bibliography development).

Publication Program, Information Re-packing Functions

- Preparation of list of new arrivals on accessions and their exchange.
- Preparation of newsletters.
- Preparation of directories / manuals and other reference sources as joint ventures.
- Identification of translation centers, panel of translators for translation service.
- Photocopying/Reprographic Service.

Coordination services

- Storage and retrieval.
- Delivery or Mailing services.

Research, Training and other Special Function

- User interest surveys.
- Joint research projects.
- In-service personnel training.
- Workshops and Meetings.
- Marketing of network service.

Other Functions

- Undertake surveys for resources, infrastructural facilities and services of the network.
- Creation of data bank/data bases.
- Creation of facilities for the use of tools and techniques of information handling.
- User orientation.
- Keep liaison with other national, regional and international networks for cooperation and exchange of information.

Expected barriers for BPPUNILIBNET

It is a fact that the concept of resource sharing undoubtedly is very useful in recent environment in the area of science, commerce, electronic etc. and can also be extended to other courses offered by the private universities of Bangladesh. The coverage of network can also be expanded to other public and private universities of Bangladesh. The implementation of this concept needs careful, constant and concerted efforts on the part of public and private universities of Bangladesh. As observed and experienced, the potential problems pertaining to the implementation of BPUNILIBNET are as below:

- Physical Isolation.
- Legal sanctions by the concerned authority.

- Ego of librarians and university governing bodies.
- Skilled, trained professional staff.
- Absence of appropriate library standards.
- Non-availability of union catalogues and absence of proper bibliographical information.
- Rigid procedures.
- Technological facilities.
- Appropriate leadership with proper knowledge.
- Disinterest.
- Low priority.
- Lack of Infrastructure.

Proposed configuration/Topology

Coordinated collection development at institutional level allows a group of participation libraries take the initiative to co-coordinate their acquisitions. Their objective is to eliminate duplication in acquisitions to the extent it is possible. Further, the member libraries undertake to give services such as information access and document delivery. This model leads to the concept of decentralized development of collection at the level of participating libraries and also to decentralized system of giving services. After considering the advantages and disadvantages of the different choice the decentralized model i.e. direct network configuration is proposed for the network of university libraries. The individual libraries, participating in the program, determine their level of support to the program for building the shared resources. The higher their budget, the higher is their support. User libraries are requiring to pay for the services they avail of. The geographical area of co-operation could confine to cost of leased telephone lines, initially a Public Switched Telephone Network (PSTN) and a Public Switched Data Network (PSDN) are proposed for the network of university libraries. A leased line is proposed only for the expected busy traffic among the selected nodes of the network. Broadband internet connection facility is already available among the libraries for wide area network.

All of the selected public and private universities have the facility of internet and have also developed their websites. So, the inter university network for online resource sharing of library facility will be based on internet topology, as to start with it will be convenient and economical. University libraries are equipped with computers and other related equipment for giving online document delivery services. According to the model there will be a central hub linking the websites of the selected universities. The websites of the individual universities will have detail information, publications by the faculty members etc. The faculty members of all the universities should have a home page of their own covering the courses they teach so that, faculty members of other universities can take help from if necessary arises. In this way they can provide equal level of coaching to the students, which in turn is the must for online resource sharing of library facilities as they are whole sole dependent on the teaching methodology of any university.

Choice of Focal Point

The following factors have been considered in determining the Focal Point (FP) for the network:

- Richness of collection/resources;
- Availability of infrastructural facilities and manpower;
- Areas of research and teaching;
- Number of users;
- Location, etc.

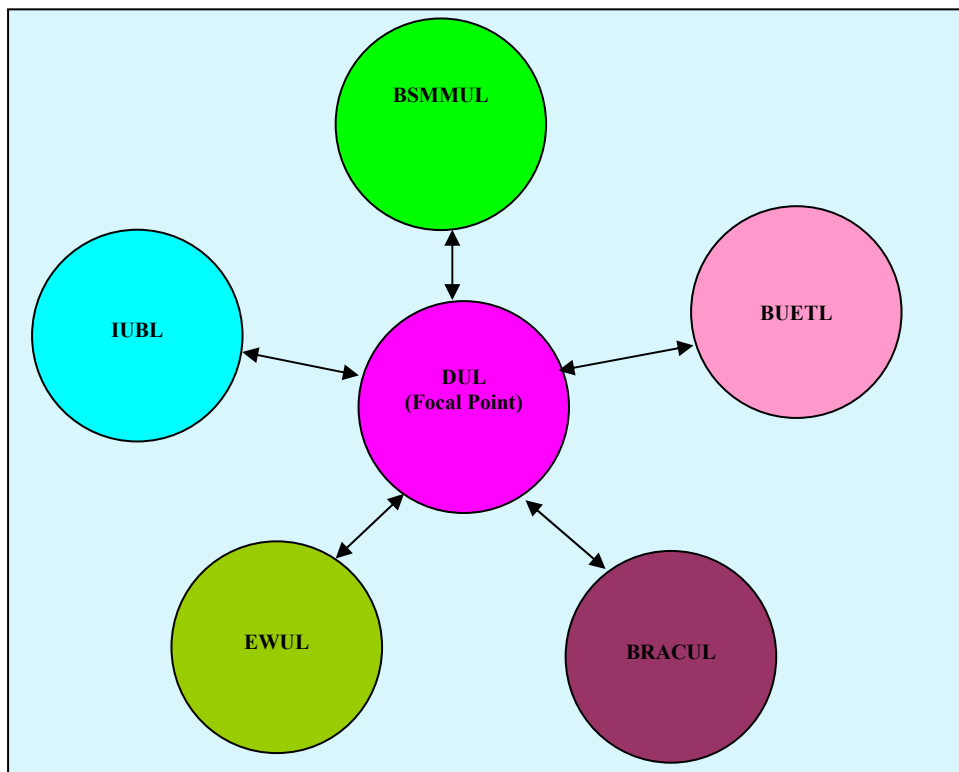
Network for Public and Private University Libraries

In the first phase the following university libraries may join the network:

- Dhaka University Library, Dhaka.
- Bangladesh University of Engineering and Technology (BUET) Library, Dhaka.
- Bangababdhhu Sheik Mujib Medical University (BSMMU) Library, Dhaka.
- Independent University, Bangladesh (IUB) Library, Dhaka.
- East West University (EWU) Library, Dhaka.
- BRAC University (BU) Library, Dhaka.

In the Second Phase other University Libraries may join the network:

Figure: Configuration for the network for public and private university libraries



Where DUL is the focal Point (FP) and others is Nodes (N).

Functioning of the Network

The universities have to register to have access to the central hub. Each university will be provided with an account that will be necessary to log into the central website. The University will in turn assign accounts to its users. Passwords are mandatory for these accounts. A user from a university can log in to it by using the account assigned to him/her by the university. The two-tier access provision is suggested due to following reasons:

- To minimize the chance of the college account being misused and
- To reduce the burden on the central website of providing and managing accounts to each student and faculty members of all the universities.

Administrative Aspects

It is suggested that a body comprising of representatives from the participating universities to look after the working of the inter university network. A periodic review of the web sites will be done on the basis of download count. If the deviation of the download count of any university is to the negative side from the average high, the central body will advise to improve the quality of the content of websites. Before the network is established, a set of protocols has to be formulated for the university libraries to adhere to. These are as follows:

Protocols for Resource Sharing

There is no concept membership fee. Participating universities will share the existing resources only. Each university is independent. To make this networking efficient, the staff will be given proper training. The attitude of such people is of critical importance. Use of electronic form of publication for sharing resources. At a later stage, duplication costly and highly used journal may be avoided. Some mutual agreement and the same can be shared through the network. This network is decentralized from of acquisition and storage in building the shared resources. This would be technically valuable and economical also. Each participating library will function as a provider library for each & every item e.g. books, CD- ROMs & a set of periodicals and thus be committed to maintain the subscription of these titles. Each library will prepare a union catalogue of books and periodicals holding available in their library and make it available to the participating libraries. All participating libraries will maintain the collection of photocopies of articles received under the resource sharing agreement to meet repeated/multiple requirements and to avoid the duplicate requests. All participating libraries will open an e-mail account to deliver online document delivery service on priority. It will provide web based library and information services also. It will translate the concept of resource sharing into reality for the library. Awareness should be created among users about resources and services. A integrated and comprehensive website for the libraries and formulation of working group are also needed.

Infrastructure required

The required infrastructure is as follows:

- Website.
- Adequate Computers to access the internet for readers.
- Photocopy machine.
- Scanner.
- Fax Machine.
- E-mail/POP 3.
- Adequate manpower to maintain the above facilities.

In order to modernize and network different types of libraries in Bangladesh suitable software should be selected for Library Management that conforms to international standards. It should be multi-user software and ideal for all types of small and bigger libraries. It should allow the libraries to create the bibliographic records in international standards, viz. MARC-21 and AACR11 and also provide retrieval module.

Although there is a range of library activities suitable in the network environment, university libraries should also be responsible for carrying out there traditional services. It is rightly forecasted that libraries of the next decades or longer will continue to utilize many information formats, especially print, CD-ROM and on line. Each format will be most appropriate for a certain type of information & a certain type of users.

For instance, Internet as an international supplement to traditional library reference works, which has the potential to provide up-to-date information when the more conventional publishing types might be lacking. However, while most of the traditional reference resources, for example, led to journal articles or books, the www-based resources led not only to journal articles but also to various information sources such as, un-published documents, project proposals, web-pages, etc.

CHAPTER 7

RECOMMENDATIONS AND CONCLUSIONS

Chapter 7

RECOMMENDATIONS AND CONCLUSIONS

The execution of any action requires careful planning. Successful sharing requires willingness to cooperate by all institutions involved. The collaborative spirit should take full advantage of electronic networking. The planning has to start at the library level. The proper functioning of the proposed network is quite understandable through the progress of network strategies. The prospective topology and structure of the network will not matter much as the topology can be replaced or converted any time according to the usefulness and workability of the system. Rather the formulation of the system is more important to function effectively to accomplish the objectives of networking and resource sharing. It is recommended that the following issues that have derived out of the findings of the present for smooth implementation and performance of BPPUNILBNET should be addressed or considered for effective resource sharing. The issues are presented with an assumption that management is interested and ready to provide the required finances for the venture.

- An intensive survey should be carried out to analyze existing resources, infrastructural facilities and users needs of the public and private university libraries of the country for the network.
- The necessary administrative and financial measures needed for the network should be taken by the government. Necessary financial support and sources should be well defined. For instance, University Grants Commission of Bangladesh should act as the concerning body in this regard.
- A national commission should be set-up represented mainly by the participating institutions, users, experts, in the field and national professional associations to ensure continued support to the network.
- A MOU should be signed or an agreement has to be reached in all aspects among the libraries of the networks for smooth operation of the network and sharing of resources.
- An agreement has to be reached in all aspects among the libraries of the networks for smooth operation of the network and sharing of resources.
- Seminars should be arranged of participating libraries to formalize the process.
- An inter-library loan code should be framed at the national level.

- The electronic online catalogues and indexes of print resources should be made accessible over intranet to the internal users to check the speed, performance integrity and data security.
- User education and orientation program should be arranged periodically to inform all network members of the availability of materials in the collections of the network, available tools, technological facilities and techniques of their use.
- Training programs should be arranged and manuals should be developed to upgrade the knowledge and skill of the staff of network members in basic library work, in the computerization of library activities, information processing, repackaging and for dissemination of information.
- An effective communication system should be developed among the participants of the network through union catalogues, bibliographies, current awareness services, indexing and abstracting services, news letters etc for efficient utilization information sources and services.
- Steps should be taken to identify more libraries those are willing to participate in the venture.
- Steps should be taken to determine the availability of core collection of full text periodicals to identify hardware and software requirements for electronic library.
- Steps should be taken to identify specific needs of internet access of member libraries and network configuration for bibliographic files to online catalogues.
- Steps should be taken to analyze commercial databases available in the field. This could reduce the effort of indexing.
- Each member library of the proposed network will be responsible for developing standards/guidelines for information handling and for information services and products for the benefit of all the components of the network.
- Steps should be taken to create positive awareness among administrators, policy makers, participating organizations and users, an effective motivational program should be arranged as and when required.
- Liaison should be established with other regional and international networks for cooperation and exchange of information and expertise in information handling.

- Meetings, seminars etc. of library and information professionals, administrators and users should be organized for evaluation and exchange of opinions concerning problems and development of network activities.
- An effective marketing strategy should be devised to offer the services of the network to users.
- To facilitate access to information (all major national and international databases), CD-ROMs should be made available on line among network participants through telecommunication facilities.
- Adequate infrastructural facilities should be developed and holdings of participating libraries should be computerized using common communication formats, to ensure successful implementation of the resource sharing program.
- For **BPPUNILIBNET**, a coordinating body should be formed to manage and coordinate the network. The coordination body will have full administrative authority for policy making and development of the network.
- A directory of organizations, including the other library and information centers and libraries participating in the network with their facilities, subject areas covered by the network and output of the network should be compiled.
- Formal approval to participate in the network should be obtained from the authorities of participating organizations.

The above-mentioned issues are challenging and calls for sincere efforts to pool the resources. To start with, the library consortia or associations can start the activity through following steps:

- Providing links to websites of participating libraries.
- Provide online links to integrated online catalogues and indexes.
- Provide links to useful reference sources.
- Develop an organized collection of full-text, multimedia documents from academic, governmental and commercial publishers that are of common interest to participating libraries.
- Initiate online and telephone reference services linked to document delivery services.
- Install a document delivery service that quickly brings needed digital and print materials to users of the network.

Conclusion

The journey towards networking and resource sharing is a long and widening road but Bangladesh is lagging far behind. The opportunities of networking and resource sharing are immense, professionals must work together to address the problems stemming from the fact that there are no set standards for resource sharing what still needs to be considered are the needs of the end-users. Librarians must know how to manage and interact with complex information systems consisting of computer networks. The information services professionals have to constantly interact with teaching faculty, students and technological environment, it is essential to review periodically its performance and status.

Digital resources will not replace analogue collections but can complement and augment analogue originals. It will add value to library collections for the benefit of the entire and student community.

The present study makes it clear that resource sharing philosophy is very much useful to all the public and private universities of Bangladesh. The implementation of resource sharing will eliminate the feeling among the users that the universities are not having the required sources. Resource sharing arrangement will help the librarians to provide the document and information, which is not available at the university library. We can visualize the impact of resource sharing on the universities as it is a great scheme for users satisfaction, coverage of collections, time saving, space saving, better library image and efficiency. So resource sharing and networking needs to be implemented progressively and professionally in all the universities of Bangladesh. This initiative will generate optimum satisfaction among users and also save considerable national resources. It is necessary that university libraries need to focus on the creation of professional services to meet the potential information needs.

Resource sharing is the mainstay of customer satisfaction. Libraries survive through the support of satisfied customers. Always and too often talked about cooperation does not lead to action. The fiscal concerns outline the rethinking priorities towards planning, cooperative collection development and evaluating the efficiency. The issues and strategies of Bangladesh public and private University library Network (BPPUNILIBNET) call attention from fellow librarians to convince management and get their fullest cooperation for collaborative venture.

The proposal undoubtedly is an ambitious endeavor; however, if administered with necessary infrastructural, physical, financial and technological facilities for the creation of BPPUNILIBNET, Bangladesh will hopefully witness the free flow of information across the participating universities.

APPENDICES

APPENDIX-1: QUESTIONNAIRE FOR LIBRARY SURVEY

APPENDIX-2: QUESTIONNAIRE FOR USER SERVEY

APPENDIX-1

Questionnaire On” Use of Information and Communication Technologies (ICT) for Automated Networking and Resource sharing in the Selected Public and Private University Libraries in Bangladesh: A Study” (For Library)

[Please give tick (√) mark on the relevant ones and use extra sheet wherever required]

01. Institutional Profile

- i. Name of the University:
- ii. Year of Establishment:
.....
- iii. Name of the Library:
.....
- iv. Year of Establishment:
.....
- v. Present Address:
.....
Telephone no: Email:
.....
Fax: Website:
.....
- vi. Type of the library:
 Public University Library
 Private University Library
- vii. Name and Designation of the Head:
.....
.....

02. Please mention about the no. of students, departments/schools and teachers of the university (approximately):

- 2.1 No of the Departments or Schools:
.....

2.2 No of Teachers:

.....

2.3 No of Students:

.....

2.4 No of Officers:

.....

2.5 No of Others:

.....

03. Staff Members and their Qualifications

3.1 Please mention your total number of staff with their designation, status and qualification

Designation	Qualification	Number
Librarian		
Joint Librarian		
Deputy/Associate Librarian		
Assistant Librarian		
Jr. Assistant librarian Library Officer		
Library Assistant		
Others Supporting Staff (if any)		

3.2 Please mention the number of your library staffs

3.2.1 Professional:

3.2.2 Semi/Para Professional:

3.2.3 Non-professional:

3.2.4 Others Guards/Housekeepers/Cleaners:

4. Users

4.1 Number of users using the library per day (approximately)

Students	Teachers	Researchers	Average users per day

4.2 Number of users using the library per month (approximately)

Students	Teachers	Researchers	Average users per day

5. Library Resources

5.1 Books

Item	Total Number
Books	

5.2 Journals, Magazines or Others

Item	National	International	Total
Thesis			
Reports			
E-resources			
Journal/Periodicals			
Magazine			
Bound Journal/Magazine			

5.3 Audio Visual Materials

Item	Total Number
Audio Cassette	
CD Rom	
DVD	
Video Cassette	

5.4 Do you have specialization in collection development?

Yes

No

If yes, please mention the nature of specialization.....

.....

5.5 Library E-Resource

5.5.1 Type of E-Resource Subscribed:

Types of Items	Total Number
a) Bibliographic Abstract	
b) Full Text	
c) Numeric	
d) Graphic	

5.5.2 Criteria for selecting E-Resources

Each criterion has definite rank. Please put tick (✓) the rank you think best

	Quietly	Most Often	Sometimes
a) Quality to meet user demand			
b) Subject Relevance			
c) Cost Effectiveness			
d) Authenticity of information			
e) After sale maintenance			
f) Authenticity of producer			
g) Currency of information			
h) Distributed Access			
i) Uniqueness			
j) Added value			
k) Ease of Accessibility			
l) Legal Issue			
m) Preservations			
n) Vendor Reliability			

5.5.3 Please mention which one of the E-journals and archives subscribed by your library. (Please tick ✓)

5.5.3.1 JSTOR	
5.5.3.2 Emerald	
5.5.3.3 PERI	
5.5.3.4 Oxford University Press	
5.5.3.5 Blackwell	
5.5.3.6 Springer Link	

5.5.3.7 AOM	
5.5.3.8 ACM	
5.5.3.9 ACS	
5.5.3.10 CUP	
5.5.3.11 E-Journals.com	
5.5.3.12 IEEE	
5.5.3.13 Science Direct	
5.5.3.14 ProQuest	
5.5.3.15 EBSCOhost	
5.5.3.16 AGORA	
5.5.3.17 HINARI	

5.6 Catalogue

5.6.1 Which cataloguing code is being followed in your library? (Please Tick ✓)

AACR-II AACR- I ALA

Others (Please specify):
.....

5.6.2 Which form of catalogue is used in the library? (Please Tick ✓)

Card form Printed book form
Microforms
MARC Others (Please specify):
.....

5.6.3 Which catalogue system is used? (Please Tick ✓)

Dictionary Classified

Others (Please specify):

5.7 Classification

5.7.1 Which classification scheme is followed in the library? (Please Tick ✓)

DDC Edition.....

UDC Edition.....

LC Edition.....

Others (Please specify):

5.7.2 Which subject heading lists/thesaurus is followed in the library?

(Please Tick ✓)

Sears list

Library of Congress

Mesh

Others (Please specify):

6. Library Budgeting and Finance

6.1 Total budget for Library and ILL allocation of the following years

Fiscal Year	Total Budget for the Library	Inter-Library loan allocation
2006-07		
2007-2-08		
2008-09		

6.2 Please mention the source of fund for the library (Please Tick ✓)

- a. Government
- b. Parent Body
- c. UGC
- d. Donors
- e. Others

7. Library Divisions

7.1 Please mention the various division/units of your library: (Please give Tick ✓ mark)

Acquisition	
Processing	
Circulation	
Reference	
Documentation Service	
Reprographic	
Audio Visual	
Periodical	
Galleries	
Achieves	
Others (Please Specify):	

8. Latest Information Technologies (IT) in your Library:

8.1 Equipments and technologies that are in use for library services:

8.1.1 Total Number of Computer	
8.1.2 Total Number of Printers	
8.1.3 Fax Machine	
8.1.4 Internet Connection	
8.1.5 Home Pages/Web Pages	
8.1.6 Total Number of Photocopy Machine	
8.1.7 Microfilm/Microfiche Reader	
8.1.8 Television	
8.1.9 Number of Card Cabinet with tray	
8.1.10 Air-Conditioning System	
8.1.11 LAN	
8.1.12 Audio Player	
8.1.13 CD/DVD Writer	
8.1.14 Video Player	
8.1.15 Spiral Machine	
8.1.16 Laminating Machine	
8.1.17 Telephone	

8.2 Can you please specify the computer hardware as well as software you use for library and information service?

Year of Installation of IT	Total No. of Computers	Operating System Used	Server Based System	Availability of System Administrator
		Windows 98	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
		Windows 2000		
		Windows 2000 NT	<input type="checkbox"/> No	<input type="checkbox"/> No
		Windows ME		
		Windows XP		
		Windows Vista		

9. Reprographic Facilities

9.1 What types of reprographic facilities are available in your library (Please Tick ✓)?

- 9.1.1 Photocopy
- 9.1.2 Printing
- 9.1.3 Scanning

9.1.3 Others.....

9.2 How do you charge for these services?

Services	Rate of the services
Photocopy	
Printing	
Scanning	
Others	

10. Library Automation

10.1 Have you initiated automation/computerization?

Yes No

10.2 Date of introduction of automation in your institution:

a. Date of installation: -----

b. Date of formal operation: -----

10.3 The library operation is:

a. Manual

b. Partly computerized

c. Fully computerized

d. Others Please specify:

.....
10.4 What services are automated?

a. Ordering

b. Cataloguing

c. Classification

d. Circulation

e. Searching

f. Others Please specify:

10.5 Name of the software used in the library automation system

a. CDS/ISIS b. LIBSYS

c. GLAS

d. DRA

e. KOHA

f. Other (please specify) -----

11. Internet Services

11.1 Usage of Internet in Library

11.1.1 Please mention the year when Internet has been introduced in your library?
.....

11.1.2 How many computer do you have internet connection in library?
.....

11.1.3 What is the basis of Internet usage in your library? Is it for.....

Library Members

Only for the Library Staff

11.1.4 Do you charge users to browse Internet? What is the rule?
.....

11.1.5 On an average how many user browse Internet within as working day?
.....

11.1.6 Status of your Internet connection.

Broadband

Narrow band

Dial up

Others:

11.1.7 What type of cable connection does your library use?

Fiber Optics

Coaxial

Wireless

Others:

...

11.1.8 Please indicate browser software use: (Please Tick ✓)

Netscape Navigator

Netscape Gold

MS Internet Explorer

Mozilla Firefox

Opera

Others (Please specify):

11.1.8 Please indicate which search engine you use frequently: (Please Tick ✓)

Yahoo

Google

Gmail

Others (Please specify):

11.1.9 Please indicate your internet service provider (ISP).....

12. Library Database

Number of publications included in the database till now

Do you have any database where you are inputting bibliographical record for electronic cataloguing?

Yes No

12.1 If yes, are you maintaining bibliographical information (catalogue and accession information in the same file)?

Yes No

12.2 Which format you are following for arranging bibliographic information of your automated catalogue?

Access WINISIS GENISIS MS

GLAS Others (Please specify):

.....

12.3 Do you have automated serial control system?

Yes No

12.4 Does every book have Bar Code identification?

Yes No

12.5 Is there any system administrator?

Yes No

12.6 Is the system based on server?

Yes No

Name of Services	Status	
	Being received	Being offered
a) Inter-library loan		
b) Photocopy services		
c) Answers of reference queries		
d) Online/offline search		
e) Translation		
f) Manpower		
g) Equipment		
h) Any other		

13. Networking and Resource Sharing

13.1 Below is the list of inter-library services. Please indicate the status of such services being RECEIVED AND OFFERED by using the following scales:

Quite often (4), Often (3), Sometimes (2), Never (1)

13.2 How do you rate inter-library services being received by your library?

Very Good Good Satisfactory Poor

13.3 Name some of the important organizations with whom you generally exchange information:

.....
.....
.....
.....
.....

13.4 Do you have access to any national and international network?

Yes No

If yes, which networks have you joined or intend to join in near future?

Please mention name:

Have joined.....

Intend to join.....

If no, do you want to link with network systems? If answer is yes, then please tick (✓) the following reasons:

a)	To answer research queries	Yes	No
b)	To provide reference services faster	Yes	No
c)	To make users aware with updated information through the systems	Yes	No
d)	To share with each other within the linked organizations	Yes	No
e)	To access more literature with minimum costs	Yes	No
t)	To meet the necessity with minimum investment	Yes	No
g)	To install global link with relevant organizations	Yes	No
h)	To acquire updated information as and when necessary	Yes	No
i)	To control duplication of information	Yes	No
j)	To save money	Yes	No
k)	To avoid unnecessary delayed of postal communication	Yes	No
l)	Others (specify):		

13.5 Please give your opinion about the importance of Networking of libraries in Bangladesh in the prevailing situation:

Most useful Useful Moderately useful

13.6 When your library would be connected with a network, what would be your main areas for resource sharing? Please rank the following in order of priority with 1, 2,3,4,5 scale:

a) Inter-Library Loan	
b) Document delivery service (Photocopy)	
c) Acquisition	
d) Circulation	
e) Any other	

14. Please write the main constraints of networking:

- I. It may not be cost effective
- II. Some participation may be passive
- III. It would increase workload without any additional manpower.
- IV. Present budget may be further reduced under network system
- V. Mechanical system failure may interrupt the functioning
- VI. Maintenance cost of equipment may be difficult to bear

15. If your library is given option to be designated as National Focal Point of Networking, which specific subject(s) would you prefer to cover:.....

.....

.....

.....

.....

.....

.....

16. Status of Inter-Library Loan Services during the year 2009-2010

- I. No. of items you borrowed for your own users :
- II. No. of items you lent out to other libraries:
- III. Photocopies you prepared from other libraries
(No. of pages):
- IV. Photocopies you provided to other libraries :

16.1 Do you also provide photocopies to you user by obtaining from international photocopy services?

Yes No

If yes, please mention the sources and quantum of services in terms of number of pages and expenditure incurred:

Source.....

No. of pages.....

Expenditure.....

16.2 If you are lending your library material to other libraries what is the loan period being allowed?

- One week Two weeks More than two weeks
 Any other time limits

I. Please mention the response time taken by the participating library excluding postal time:

- One week Two weeks More than two weeks
 One month More than one month

II. On obtaining the material from other libraries how do your readers feel?

- a) Happy and satisfied:
b) Almost satisfied:
c) Were no more in need due to delayed response:
d) No reaction :

III. Whenever you receive a request for inter-lending service, how much time does it take to process the request?

- e) Three days:
f) One week:
g) More than one week:
h) Any other time limit:

IV. Do you charge postage for material from the user or pay from your own budget?

.....
.....
.....
.....

II. What is your opinion about the postal charges?

- a) It should be exclusively borne by the user
b) Half cost should be borne by the library
c) Postal concession is required

III. Do you have some agreement or understanding with the participating libraries?

Yes

No

If yes, please provide the copy of such inter-lending rules.

IV. What problems do you face while transacting library material with other libraries?

a) Documents are generally not returned in time

b) Physical condition of documents generally get deteriorated

c) Document was required by other readers during loan period

V. By which means do you mostly confirm the availability of material in the concerned library?

a) Consulting union catalogue

b) Telephone

c) Fax

d) E-mail

e) Online search

f) Any other

17. Other Information

It is understood that this questionnaire may not cover all eventualities concerning your action towards information networking and resource sharing. Please use this space to maintain anything further that you consider to be of most interest:

.....
.....
.....
.....

Signature:

Date:

Designation:

Thank you very much for your kind cooperation. If you would like to provide further information concerning this study or would like to discuss any aspect of this questionnaire please contact with Md. Abul Kalam Siddike, Mobile: 01715843185.

APPENDIX 2

Questionnaire on “Use of Information and Communication Technology (ICT) for Automated Networking and Resource Sharing in the Selected Public and Private University Libraries in Bangladesh: A study.”

(For User Survey)

Please give tick (√) mark where necessary.

Confidential

1. User Information

1.1 Name:.....

1.2 Gender: Male: Female:

1.3 Name of the University:

2. Category of Users (Please Tick √)

2.1 Student: graduate post graduate M.phil Phd

2.2 Faculty Members:

2.3 Researcher: Junior Senior

2.4 Administrator: (Please specify your designation).....

2.5 Others: (Please specify)

3. Please write the Area of Specialization of your study.....

.....

4. Which information do you frequently look in this library? (Please Tick √)

4.1 Reference materials 4.4 Text books

4.2 Current information 4.5 Audio-visual materials

4.3 Periodicals 4.6 Others:.....

5. How many days you visit your library in week? (Please Tick √)

5.1 Every day

5.3 If needed

5.2 Frequently

5.4 Most of the days

6. How much time does your library remained open?

(Please Tick √)

6.1 12 Hours

6.3 8.5 Hours

6.2 10 Hours

6.4 Any other:.....

7. How do you search reading materials? (Please Tick √)

7.1 Using Manual Card Catalogue

7.2 Using Computer Database

7.3 Using Computerized Catalogue

7.4 Using Microfiche/Microfilm Catalogue

7.5 Some other means:.....

8. How do you borrow reading materials? (Please Tick √)

8.1 By manual Library Card

8.2 Using computer system with barcode reader

8.3 Using Computer Software

9. Do you have provision for updating due date of books or other library materials sitting at your home? (Please Tick √)

Yes

No

10. If yes, Please indicate which mode you frequently use? (Please Tick √)

Email

Telephone

11. Please indicate your need of information services according to Priority (1 very

need, 2 need, 3 not need,)

11.1 CAS & SDI

11.2 Bibliographic Services

11.3 Reprographic Services

11.4 Reference & referral services

11.5 Indexing and Abstracting Services

11.6 Using Periodicals

11.7 Audio-Visual Services

11.8 Translations services

11.9 Internet Services

12. Do you find important articles of serials indexed into the computer? (Please Tick ✓)

Yes

No

13. Do you have access to all information through website electronically? (Please Tick ✓)

Yes

No

14. Please rank your level of satisfaction/dissatisfaction of the following:
(Please Tick √)

No	Services	Marginally Satisfied	Satisfied	Fully Satisfied	No Comments
1.	Manuscripts				
2.	Books (Text)				
3.	Periodicals				
4.	Journals				
5.	Reference Books				
7.	Computer				
8.	Photocopy				
9.	Document Loan				
10.	Audio-Visual				
11.	Abstracting				
12.	Reference				
13.	Inter Library				
14.	Microfilm				
15.	Others				

15. Do you think that the library staffs are enough skill/trained to satisfy your information need and services? (Please Tick √)

Yes

No

16. How do you know about the new arrivals of the library?
(Please Tick √)

16.1 Through Catalogue

16.3 Through Professionals

16.2 Through Display

16.4 Others:

17. How your library is maintaining internal security?
(Please Tick √)

17.1 With close circuit camera

17.2 With guard who is checking at time of entry and departure

17.3 With some other means

18. Do you think that the internal environment of the library suitable for study? (Please Tick \surd)

Yes No

19. If yes, please mention how the environment is congenial to you? (Please Tick \surd)

19.1 The room is air-conditioned

19.2 Central Air-conditioned

19.3 Well ventilated with sufficient fan

20. Do you think the accommodation problems are a problem of your library? (Please Tick \surd)

Yes No

21. If you are a user of other library/libraries please list them in the descending order of use

Order	Name of the Library
01.	
02.	
03.	
04.	

22. To which extent the above libraries you are using are meeting your information needs (Please Tick \surd)

Completely Moderately

Partially Not at all

23. When you do not get the material/ information you are looking for in the library you often use, what alternatives do you take? (Please Tick \surd)

a. Go to other libraries

b. Request the librarian to get the desired information/material

c. Take assistance from senior colleagues

d. Contact international information centers

e. Search substitute information/material

f. Leave the search

In case of (b) above please mark the status of the service and it was:

I. Timely received

II. Received too late

III. Service was experience

IV. Reference were:

Most relevant Relevant

Almost relevant Not relevant

24. Are you a user of any national / international databases? (Please Tick \surd)

Yes No

If yes, please name the database(s) along with your observation about their usefulness using the following scale

[Most useful (1), Useful (2), Moderately useful (3), Not useful (4)]

Name of Database

Degree of Usefulness

25. How often have you been availing the following library services within your institutional library and outside libraries? Please indicate the frequency of use by applying following scale [Frequently (1), Sometimes (2), Rarely (3), Never (4)] :

	Nature of Service	Institutional library	Outside libraries
1	Borrowing of books		
2	Inter-library loan (through your institutional library)		
3	Photocopying of book materials		
4	Photocopying of articles from journals		
5	Translations		
6	Computerized data search: a) CD-ROM search b) Online access c) in-house database		
7	Any other services, please specify		

26. Are you pleased with the above services? If not, what more services are you

expecting? Please mention:

27. Do you think your library should provide inter-library loans? (Inter-library loan is a system of sharing library materials among selected libraries under specific agreement.) (Please Tick √)

Yes No

28. Does your library have any digital library/collection form which you borrow to your home? (Please Tick √)

Yes No

29. Are you getting Internet/E-mail facilities from the library? (Please Tick √)

Yes No

30. If yes, please mention. (Please Tick √)

30.1 Fee based

30.2 Non-fee based

31. Does your library have any electronic journals? (Please Tick √)

Yes No

32. Are the present staffs sufficient to run the library? (Please Tick √)

Yes No

33. Do you think that the collection of the library is sufficient for users? (Please Tick √)

Yes No

34. Do you think that the services provided by the library, are sufficient for the Users? (Please Tick √)

Yes No

35. In which system you feel better to use the library? (Please Tick √)

35.1 Manual 35.2 Computerized

36. Do you think that your library is using ICT for most of the library functions? (Please Tick √)

Yes No

37. Overall, how satisfied are you with the library? (Please Tick ✓)

37.1 Fully Satisfied

37.2 Satisfied

37.3 Need to improve

38. Do you have any proposal to improve the services, which are provided by the library? (Please Tick ✓)

Yes No

39. If yes, Please mention your opinion/Proposal about the ideal characteristics of an efficient library and information services? (Please Mention)

39.1.....

39.2.....

39.3.....

39.4.....

39.5.....

Thank you.

Signature &

BIBLIOGRAPHY

BIBLIOGRAPHY

Adeyoyin, Samuel Olu (2005). Information and communication technology (ICT) literacy among the staff on Nigerian university libraries. *Library Review*, 54 (4).

Ahmed, S. M. Zabed (1998). Library automation in Bangladesh: problems and prospects. *Bangladesh Journal of Library and Information Science*, 1 (1).

Alam, Fakrul ed. (2009). *Newsletters of East West University*. IX (III). Dhaka: EWU.

Alam, Saiful (1998). Automation trends in special libraries of Bangladesh: some observations and future direction. *Bangladesh Journal of Library and Information Science*, 1 (1).

Alemna, A. A. and Antwi, I. K. (2002). Review of consortia building among university libraries in Africa. *Library Management*, 25 (4/5).

Alidousti, Sirous; Nazari, Maryam and Ardakan, Mohammad Abooyee (2008). A study of success factors of resource sharing in Iranian academic libraries. *Library Management*, 29 (89).

Ani, Okon E; Esin, Jacob E. and Edem Nkoyo (2005). Adoption of information and communication technology (ICT) in academic libraries: a strategy for library networking in Nigeria. *The Electronic Library*, 23 (6).

Anie, Sylvester and Achugbue, Edwin I. (2009). Library information and communication technology in Nigerian universities. *Library Hi Tech News*, V. 7.

Anwar, Mumtaz A. and Al-Jasem, Dheya Abdulqader (2001). Resource-sharing among major libraries of Kuwait. *The Electronic Library*, 19 (4).

Awal, Abdul K. M. (2005). *Bangladesh University Grants Commission and Library in higher education plan*. Dhaka: UGC.

Bakewell, K. G. B. (2007). Resource sharing: practice and problems. *Library Management*, 11 (3).

Ballard, Thomas H. (1986). Public library resource sharing in the United States. *Interlending & Document Supply*, 14 (2).

Bangladesh Academy of Science (2007). Dhaka.
[<http://www.bas.org.bd/Bangladesh-inasp-peri-consortium.html>].

Bangladesh Bureau of Educational Information and Statistics (2007). *Pocket Book on Educational Statistics*. Dhaka: BANBEIS.

Blurton, C. (1999). New directions in education. World communication and information Report. Paris: UNESCO.

Brochure of BRAC University Library.

BSMMU Library Brochure.

Chatterjee, Amitabha (2002). Resource sharing among libraries in digital era: role of consortia, Kolkata: Jadavpur University. Electronic address: www.isical.ac.in/serial/consortia/CBSOR-02.ppt.

Chisenga, J. (2004). ICT in libraries: an overview and general introduction to ICT in libraries in Africa. Paper presented at INASP ICT workshops, Johannesburg, South Africa, 21-23 July 2004. Available: <http://www.inasp.info/isp/ict-workshop-2004/sessional-chisenga.ppt>.

Cohen, Arlene (2002). Sharing the wealth-resource sharing developments in the Pacific making for a resource richer region. *Interlending and Document Supply*, 30 (3).

Dhaka University Library (2006). Flyer of Dhaka University Library. Dhaka: University of Dhaka.

Dobson, Philippa (2007). Networking in public libraries: an update on the Public Library Millennium Bids and Project EARL. *Vine*, 38.

Dugan, Rober (1983). Automated resource sharing in Massachusetts: a plan. Massachusetts: Massachusetts Board of Library Commissioners.

Dunmill, M. and Arslanagic, A. (2006). ICT in arts education. Literature review. New Zealand: University of Canterbury.

East West University (Fall 2008). Newsletters. VII (III). Dhaka: UWU.

Feller, Judith M. (1984). Assessing "readiness for resource sharing" in academic library. *Collection Building*, Spring.

Friend, Frederick J. (1994). Electronic document delivery through library cooperation: a trial using Super JANET and future possibilities. *Interlending & Document Supply*, 22 (4).

Ghosh, Maitrayee; Biswas, S.C. and Jeevan V.K.J. (2006). Strategic cooperation and consortia building for Indian libraries: models and methods. *Library Review*, 55 (9).

Gorman, G. E. and Cullen, Rowena (2000). The knowledge model applied to library networks in Asia. *Library Consortium Management: An International Journal*, 2 (7).

Gorman, Gary E. and Cullen, Rowena (2000). Models and opportunities for library cooperation in the Asian region. *Library Management*, 21 (7).

Gulati, Anjali (2004). Use of information and communication technology in libraries and information centers: an Indian scenario.

Haider, Syed Jalaluddin (2003). Not financial issues alone: moving towards better resource sharing in Pakistan. *The Bottom Line: Managing Library Finances*, 16 (2).

Haines, Margaret P. J. (1993). Developing HMIC: the healthcare management information consortium. *Library Management*, 14 (3).

Hamelink, C. J. (1997). New information and communication technologies: social development and cultural changes. Geneva: UNRISD.

Hendris, Frances (2004). You may think that I could not possible comment: a proposal view of resource sharing in the UK over recent years along with major events that have impeded progress. *Interlending & Document Supply*, 32 (3).

Hildreth, Charles R. (1987). Library networking in North America in 1980s, Part 1: the dreams; the realities. *The Electronic Library*, 5 (4).

[http://peri.inasp.info/peri/peri.pl?do=insert_institution&cid=4&iid=.](http://peri.inasp.info/peri/peri.pl?do=insert_institution&cid=4&iid=)

[http://www.bracuniversity.ac.bd/library/.](http://www.bracuniversity.ac.bd/library/)

[http://www.bsmmu.org/lib.](http://www.bsmmu.org/lib)

Islam, Md. Amwarul and Mezbaul-Islam, Muhammad (2007). Concept, issues and importance of library consortia: problems and prospects of university library consortium in Bangladesh. *Library Philosophy and Practice*.

Islam, Md. Shariful and Islam, Md. Nazmul (2006). Information and communication technology (ICT) in libraries: a new dimension in librarianship. *Asian Journal of Information Technology*, 5(8).

Islam, Md. Shariful and Islam, Md. Nazmul (2007). Use of ICT in libraries: an empirical study of selected libraries in Bangladesh. *Library Philosophy and Practice*, August.

Jalloh, Brimah (2000). A plan for the establishment of a library network or consortium for Swaziland: preliminary investigations and formulations. *Library Consortium Management: An International Journal*, 2 (8).

Kaske, Neal K. (1994). College library technology and cooperation grants program: an overview. *Library Hi Tech*, 46 (12: 2).

Khalid, H. M. (2000). Cooperation networking in library and information systems of advanced countries: a framework for countries with less developed systems. *Library Review*, 49 (2).

Man, Dianne Leong (1992). Post-apartheid Southern Africa: a glimmer of networking. *New Library World*, 93 (1103).

Mannan, S. M. (1997). Networking and resource sharing among the libraries in Bangladesh: present conditions and future prospect. (an unpublished Ph. D. dissertation). Dhaka: University of Dhaka.

Mannan, S. M. (1998). The availability of automation facilities for networking and resource sharing in Bangladesh. *Bangladesh Journal of Library and Information Science*, 1 (1).

Mannan, S. M. and Begum, Suraiya (2000). Bangladesh academic and special library network: a proposal. *The Dhaka University Studies*, 57(1).

Mannan, S. M. and 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).

Martey, A. K. (2002). Management issues in library networking: focus on a pilot library networking project in Ghana. *Library Management*, 23 (4/5).

Martey, A. K. (2004). The future library consortium in Ghana. *Library Hi Tech News*, 2.

Massam, Diana (1993). Resource sharing: present applications and future potential. *Library Management*, 14 (4).

Meng, Liansheng and Liu, Yan Quan (2005). The present and future of China's National Science and Technology library: a new paradigm of sci-tech information resource sharing. *New Library World*, 106 (1214/1225).

Mercelle (1998). Available:
<http://education.pwv.gov.za/content/documents/143pdf>.

Middleton, M. R. (1983). Library networks in Australia: linking regional consortia into a national bibliographic network. *The Electronic Library*, 1 (3).

Mishra, Sanjaya (2001). Organization factors in local library networks development in India. *The Electronic Library*, 19 (1).

Moghaddam, Golnessa Galyani and Talawar, V. G. (2009). Library consortia in developing countries: an overview. *Program: electronic library and information system*, 43(1).

Mostofa, Md. Golam and Bandyopadhyay, Amit Kumar (2004). University libraries in Bangladesh: problems and prospects. Rajshahi: Fouzia Mostafa.

Munshi, M Nasiruddin and Roknuzzaman, M. (2002). Technological influences on library environment: contemporary challenges for the professionals of Bangladesh. *Rajshahi University Studies, Part-C*, 10.

Munshi, Nasiruddin (1998). Assessing the use of information technology and its impact on libraries and information centers in Bangladesh. *Bangladesh Journal of Library and Information Science*, 1 (1).

Patterson, Avril (2008). Resource sharing for the future: building-blocks to success. *Interrelating & Document Supply*, 36 (2).

Patterson, Avril (2009). Research support through resource sharing: challenges and opportunities for Irish academic libraries. *Interrelating & Document Supply*, 32 (2).

Pradhan, M. R. (2004). Developing digital libraries: technologies and challenges. *Library Herald*, 42.

Purdy, G. Flint (1969). Interrelations among public, school, and academic libraries. *Library Networks-Promise and Performance*. Edited by. Leon Carnovsky. Chicago: The University Press.

Rahim, Muhammad Abdur (1981). The history of the University of Dacca. Dhaka: University of Dhaka.

Rajashekharan, K (1987). Resource sharing in agricultural libraries in Kerala: a proposal. Seminar paper on modernization in libraries: Indian Library Association.

Rao, Siriginidi Subba (2001). Networking of libraries and information centres: challenges in India. *Library Hi Tech*, 19 (2).

Ruenwai, Narumol and Morris, Anne (2008). Blueprint for Thailand: S&T information resource sharing. *Library Management*, 29 (4/5).

Schofield, Frances; McMenemy, David and Henderson, Kay (2004). People's network libraries: comparative case studies of old and new ICT learning. *Library Review*, 53 (3).

Smith, Peter (1995). Networking in public libraries: collaborative developments at LASER. *Vine*, 98.

Talagala, Deepali and Gamage, Premila (2003). Library automation in Sri Lanka: an overview. *International Caliber*.

Tameem, Jamal A. (1988). School/public library co-operation. *Aslib Proceedings*, 40 (3).

Tedd, Lucy A. (1995). Report on a seminar on global information networking for library applications. *Program*, 29 (3). *The Electronic Library*, 22 (4).

UKOLN (1993). Networks, libraries and information: priorities for the UK. *The Electronic Library*, 11 (2).

University Grants Commission of Bangladesh (2008). 38th Annual report. Dhaka: UGC.

University Grants Commission of Bangladesh (2009). Handbook: Universities of Bangladesh. Dhaka: UGC.

Wanner, Gail; Beaubien, Anne and Jeske, Michelle (2007). The rethinking resource-sharing initiative: a new development in the USA. *Interrelating & Document Supply*, 35 (2).

Wheelhouse, Helen (1988). Resource sharing: a critical view of the literature. *Interlending & Document Supply*, 16 (4).

Wood, Patricia A. and Walther, James H. (2000). The future of academic libraries: changing formats and changing delivery. *The Bottom Line: Managing Library Finances*, 13 (4).

Wordsworth, Anne (1991). Library cooperation and networking, a basic reader. New York: Neal Schuman Publishers.

www.bas.org.bd/bangladesh-inasp-peri-consortium.html.

www.bas.org.bd/general/aims-and-objectives.html.

Yang, Chih-Ching Emily (1999). Establishing the National Bibliographic Information Network (NBINet) in Taiwan: an information technology and network perspective. *Asian Libraries*, 8 (7).

Zamir, Hasan (2009). Information resource sharing among selected private university libraries in Bangladesh. (an unpublished M. A. degree thesis). Dhaka: Department of Information Science and Library Management, University of Dhaka.