

**A PLAN FOR MODERNIZATION OF UNIVERSITY
LIBRARIES IN BANGLADESH**

DOCTOR OF PHILOSOPHY

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To

**My Parents, Eldest Brother,
My wife Sharmin and daughter Wadia –
Source of all my inspirations**

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IN BANGLADESH**

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**Thesis submitted to the University of Dhaka
for the Degree of Doctor of Philosophy
in Information Science and Library Management**

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Certified that the work incorporated in the thesis entitled **A Plan for Modernization of University Libraries in Bangladesh** was carried out by Md. Zillur Rahman under my supervision.

(Dr. S. M. Mannan)
Supervisor

DECLARATION

The work reported in this thesis is original and has not been submitted by me to any university or institution for the award of any degree or diploma.

Such material as has been obtained from other sources is duly acknowledged in the thesis.

Md. Zillur Rahman

PREFACE

Universities are the central hub of higher studies and research of a country and library plays the role of the most important organ of the university. Intellectuals of a country are the products of the university who contribute to the country's development. Over the years university education has been reshaping itself due to diverse forces such as technological advancement, market based economy, new field of research initiatives and social transformation. In this environment, higher studies require sophisticated learning resources, knowledge and information. Intellectual properties and advanced knowledge of the world are preserved in the library to serve all the educational needs of the university. "The university libraries are thus the pivot of the university education. Their neglect or degeneration is likely to cause a vicious and multiplier effect on the entire academic community and the education in general (Inamdar & Ramaiah, 1989, p.xii)". In this era of information explosion, university libraries have to struggle to manage right information from a bulk of information every time. Libraries have to include dynamism in all of its activities also. As a consequence, university libraries need continuous development to cope with the changing environment. This is an incessant process and efforts have to be made for its persistence. In this respect, modern information and communication technology (ICT) are being used in developed world. Developing countries like Bangladesh are also not lacking behind in the use of modern tools and techniques in the libraries. Over the last two decades university libraries of Bangladesh are trying to modernize themselves in line with the latest developments. A few top ranked public and private university library has achieved remarkable progress in using ICT and modern tools and techniques but rest of the universities did not able to successfully modernize their libraries yet.

University libraries (ULs) of Bangladesh have been suffering from many problems for the last four decades. With the exception of recent initiatives by the UGC, no proper attention was given by the Government for the development of ULs since 1971. University libraries have been suffering mainly for the lack of proper architectural plans and building design, insufficient space, lack of modern furniture and

equipment, insufficient budget, acquisition of latest books and journal, resource sharing and cooperation, marketing of library products, proper HR planning, motivation of the staff, training and development, bargaining power of the library manager, professionally qualified librarians, national policy and standard, and lack of implementation of ICT.

There are no proper guidelines for implementation either from the Government or the UGC at the national level except a few recommendations in FYP, education commission report and university formulation charters. Although professional associations are taking initiatives for professional development by conducting training programs and workshop recently but inactive in various issues, the intellectuals are silent, and there is no individual initiative from the society. A national 'University Library Policy' similar to the National Education Policy or National Development Policy, etc is a prerequisite for the university libraries to be effective instruments of service. Considering this fact different standards and guidelines has been proposed during the research on the issues like : (a) The size of book stock or collections, (b) The size and composition of staff in terms of numbers of professional librarians, (c) The percentage of the institution's total budget to be used to determine the library's budget, (d) The seating capacity of the library (usually written in terms of the percentage of the student body which can sit down in the library at any given time), (e) The library's services, and facilities, (f) The library's administration and staffing pattern that should be common for every university library, (g) The automation and digitization activities, (h) The library's marketing strategy and communication, and (i) The library's cooperative programs. Besides, the role of the Government, UGC, professional bodies and the individuals has been emphasized for better realization of the matter. The study suggested to constitute a 'national body' to formulate university library 'policy' and 'standards' in the country. Finally, a model plan for modernization of university libraries in Bangladesh has been proposed.

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LIST OF ABBREVIATIONS AND ACRONYMS

360	—	360 Degree Appraisal
AACR-2	—	Anglo American Cataloguing Rules - 2
AC	—	Air Conditioner/Cooler
ACM	—	Association for Computing Machinery
ACR	—	Annual Confidential Record/Annual Cumulative Record
ACS	—	American Chemical Society
ADP	—	Annual Development Programme
AGORA	—	Access to Global Online Research in Agriculture
AIC	—	Agricultural Information Center
AIF	—	Academic Innovation Fund
ALA	—	American Library Association
APSO	—	Airport Sorting Office
ARL/ACRL	—	Association of Research Libraries/ Association of College and Research Libraries
ASAU BL	—	ASA University Bangladesh Library
ATHENS	—	Advanced Thematic Navigation System
AUST	—	Ahsanullah University of Science & Technology
B.Ed	—	Bachelor of Education
BALID	—	Bangladesh Association of Librarians, Information Scientists and Documentlists
BANBEIS	—	Bangladesh Bureau of Educational Information and Statistics Bangladesh
BANSDOC	—	Bangladesh National Scientific & Technical Documentation Centre
BANSLINK	—	Bangladesh National Scientific and Library Information Networks
BARS	—	Behaviorally Anchored Rating Scale
BAS	—	Bangladesh Academy of Science
BASLIBNET	—	Bangladesh Academic and Special Library Network
BAU	—	Bangladesh Agricultural University
BAUL	—	Bangladesh Agricultural University Library

BBA	—	Bachelor of Business Administration
BBS	—	Bangladesh Bureau of Statistics
BdREN	—	Bangladesh Research and Education Network
BDS	—	Bachelor of Dental Surgery
BDSIC	—	Bangladesh Development Support Information and Communication Network
BERNET	—	Bangladesh Education and Research Network
BFA	—	Bachelor of Fine Arts
BOU	—	Bangladesh Open University
BPED	—	Bachelor of Physical Education
BRACUL	—	BRAC University Library
BRS	—	Bibliographic Research Service
BRU	—	Begum Rokeya University
BSc	—	Bachelor of Science
BSc.Eng.	—	Bachelor of Engineering
BSMMU	—	Bangabandhu Sheikh Mujib Medical University
BSMMUL	—	Bangabandhu Sheikh Mujib Medical University Library
BSMRAU	—	Bangabandhu Sheikh Mujibur Rahman Agricultural University
BSMRSTU	—	Bangabandhu Sheikh Mujibur Rahman Science and Technology University
BTCL	—	Bangladesh Telecommunications Company Limited
BU	—	Barisal University
BUETL	—	Bangladesh University of Engineering and Technology Library
BUP	—	Bangladesh University of Professionals
BUTEX	—	Bangladesh University of Textiles
CALIS	—	China Academic Library and Information System
CAS	—	Current Awareness Services
CCC	—	Close Circuit Camera
CCF	—	Common Communication Format
CD-ROM	—	Compact Disc-Read Only Memory
CDS/ISIS	—	Computerized Documentation System/Integrated Set of Information System
CERNET	—	China Education and Research Network

CIU	—	Chittagong Independent University
CIRDAP	—	Centre on Integrated Rural Development for Asia and the Pacific
CJ	—	Chicago Journals
CMS	—	Content Management System
CONCERT	—	CONsortium on Core Electronic Resources in Taiwan
CONSER	—	Cooperative Online Serials
COPPUL	—	Council of Prairie and Pacific University Libraries
COU	—	Comilla University
CSULB	—	California State University Long Beach
CU	—	Chittagong University
CSIR	—	Council of Scientific and Industrial Research
CUETL	—	Chittagong University of Engineering and Technology Library
CUL	—	Chittagong University Library
CVASUL	—	Chittagong Veterinary and Animal Sciences University Library
DC	—	Dublin Core
DDC	—	Dewey Decimal Classification
DDS	—	Document Delivery Service
DEVENSA	—	Development on Information Network on South Asia
DOBIS	—	Dortmunder Bibliotheks System
DOE	—	Department of Environment
DUETL	—	Dhaka University of Engineering and Technology Library
DUL	—	Dhaka University Library
DULAP	—	Dhaka University Library Automation Project
DULIS	—	Dhaka University Library Integrated System
DVD-ROM	—	Digital Video Disc-Read Only Memory [or Digital Versatile Disc]
DVR	—	Digital Video Recorder
E-Book	—	Electronic Book
E-Journals	—	Electronic Journal
EWUL	—	East West University Library
FYP	—	Five Year Plan
FFYP	—	First Five Year Plan

FFYP	—	Fifth Five Year Plan
FFYP	—	Fourth Five Year Plan
GDP	—	Gross Domestic Product
GLAS	—	Graphical Library Automation Software/System
GO's	—	Government Organizations
GPO	—	General Post Office
HBR	—	Harvard Business Review
HeLLIS	—	Heath Literature, Library and Information Services
HEQEP	—	Higher Education Quality Enhancement Project
HINARI	—	Health Inter-Network Access to Research Initiative
HR	—	Human Resources
HRD	—	Human Resources Department
HSC	—	Higher Secondary Certificate
HSTU	—	Hajee Mohammad Danesh Science and Technology University
ICDDR'B	—	International Centre for Diarrhoeal Disease Research, Bangladesh
IBM	—	International Business Machines
ICL	—	International Copyright Law
ICT	—	Information Communication Technology
IEEE	—	Institute of Electrical and Electronics Engineers
IL	—	Information Literary
ILS	—	Integrated Library Systems/Software
INASP Perii	—	International Network for the Availability of Scientific Information System
INMAGIC	—	Social Knowledge Network Experts
INRD	—	Information Network on Rural Development
INSDOC	—	Indian National Scientific Documentation Centre
IPGMR	—	Institute of Post Graduate Medicine and Research
IPSA	—	Institute of Postgraduate Studies in Agriculture
IR	—	Institutional Repository
ISBD	—	International Standard Bibliographic Description
ISLM	—	Information Science and Library Management
ISO	—	International Standard Organization

ISP	—	Information Service Patterns
ISRT	—	Institute of Statistical Research
IT	—	Information Technology
IU	—	Islamic University
IUBATL	—	International University of Business Agriculture and Technology Library
IUBL	—	Independent University, Bangladesh Library
JANET	—	Joint Academic Network
JKKNIU	—	Jatiyo Kabi Kazi Nazrul Islam University
JSTOR	—	Journal Storage
JSTUL	—	Jessore Science and Technology University Library
JUL	—	Jahangir Nagar University Library
KM	—	Knowledge Management
KU	—	Khulna University
KUET	—	Khulna University of Engineering and Technology
LAB	—	Library Association of Bangladesh
LC	—	Library of Congress Classification
LCSH	—	Library of Congress Subject Headings
LIAS	—	Libraries Information Access System
LIBIS	—	Leuven Integraal Bibliotheek System
LIS	—	Library and Information Science
LLB	—	Bachelor of Law
LLM	—	Master of Law
LRC	—	Learning Resource Center
LUL	—	Leading University Library
M.A	—	Master of Arts
M.Ed	—	Master of Education
M.Phil	—	Master of Philosophy
MARC 21	—	Machine Readable Catalog 21
MBA	—	Master of Business Administration
MBBS	—	Bachelor of Medicine/Bachelor of Surgery
MBO	—	Management by Objectives

MBSTU	—	Mawlana Bhashanee Science and Technology University
MCom	—	Master of Commerce
MeSH	—	Medical Subject Headings
MFA	—	Master of Fine Arts
MIT	—	Massachusetts Institute of Technology
MoE	—	Ministry of Education
MoF	—	Ministry of Finance
MSS	—	Master of Social Science
NAIS	—	National Agricultural Information System
NCH	—	National Culture and Heritage
NGO	—	Non-Government Organization
NLC	—	National Library of China
NOTIS	—	Northwestern Online Total Integrated System
NSF	—	National Science Foundation
NSTU	—	Noakhali Science and Technology University
NU	—	National University
OCR	—	Optical Character Reader
OAI-PMH	—	Open Access Initiatives – Protocol for Metadata Harvesting
OARE	—	Online Access to Research in the Environment
OPAC	—	Online Public Access Catalogue
OUP	—	Oxford University Press
PA	—	Performance Appraisal
PALS	—	Pacific County Library System
PBWG	—	Pakistan Bibliographical Working Group
PDF	—	Portable Document Format
PERI	—	Program for the Enhancement of Research Information
Ph.D	—	Doctor of Philosophy
PLA	—	Pakistan Library Association
PMUSE	—	Project MUSE
POPIN	—	Population Information Network
PR	—	Public Relation
PSTU	—	Patuakhali Science and Technology University

PULs	—	Public University Libraries
PUP	—	Primary Unit of Population
PUST	—	Pabna University of Science and Technology
PvtULs	—	Private University Libraries
R & D	—	Research & Development
RFID	—	Radio Frequency Identifier
RMG	—	Ready Made Garments
RUL	—	Rajshahi University Library
RUET	—	Rajshahi University of Engineering & Technology
SAARC	—	South Asian Association for Regional Cooperation
SAU	—	Sylhet Agricultural University
SAUL	—	Sher-e-Bangla Agricultural University Library
SDI	—	Selective Dissemination of Information
SFYP	—	Second Five Year Plan
SFYP	—	Sixth Five Year Plan
SGML	—	Standard Generalized Markup Language
SHERPA	—	Securing a Hybrid Environment for Research Preservation and Access
SMS	—	Short Message Service
SPSS	—	Statistical Package for the Social Sciences
SSRN	—	Social Science Research Network
SUL	—	Stamford University Library
SUST	—	Shahjalal University of Science and Technology
SWOT	—	Strength, Weakness, Opportunity and Threat
T & D	—	Training & Development
TFYP	—	Third Five Year Plan
TNA	—	Training Need Analysis
TQM	—	Total Quality Management
UBL	—	United Bank Limited
ULs	—	University Libraries
UGC	—	University Grants Commission
UGCBAIF	—	University Grants Commission of Bangladesh Academic Innovation Fund

UIUL	—	United International University Library
ULABL	—	University of Liberal Arts, Bangladesh Library
UN	—	United Nations
UNESCO	—	United Nations Educational, Scientific and Cultural Organization
UNICEF	—	United Nations International Children's Emergency Fund
USTC	—	University of Science and Technology Chittagong
VC	—	Vice Chancellor
VBNS	—	Very High Speed Backbone Network Service
VoIP	—	Voice over Internet Protocol
VSAT	—	Very Small Aperture Terminal
VTLS	—	Virginia Tech Library Systems
WB	—	World Bank
WiFi	—	Wireless Local Area Network
WILSONLINE	—	Wilsonline Company Databases
WWW	—	World Wide Web

ABSTRACT

This study aims to propose a modernization plan for university libraries of Bangladesh. The study discusses the present conditions of the university libraries as well as finds out the systems and services provided by the sampled university libraries. The objectives of the study were to find out the advancement in university libraries in the developed world; to find out the present scenario of university libraries of Bangladesh; to specify the sectors and divisions of university libraries needed to be modernized to implement the proposed plan; to assess the requirements for modernization of university libraries of Bangladesh; to conduct a comparative study on public and private university libraries to assess the existing status; to develop a plan for modernization of university libraries of Bangladesh; to find out barriers and limitations of modernization issues; and to put recommendation and concluding remarks.

A survey was conducted to gather information from the sample university libraries and their stakeholders. Twenty (10 public and 10 private) out of 111 university libraries have been selected purposively as a sample to conduct the study. Data have been collected by two sets of structured questionnaires, unstructured interviews of the senior professionals, observation and field visit of the sample universities to uncover the situation. The research finds that present condition of university libraries (public and private) of Bangladesh is not fully in line with the demand of higher studies and expansion of new education system. The findings of the study have been presented with eight chapters, 54 tables, and 32 figures/charts with detailed explanations. The researcher feels a larger percentage of the universities and its stakeholders may have participated but due to some constraints that was not possible. The research was conducted on the universities' main library excluding seminar and institutional libraries. Twenty-three newly established university libraries were not included in the study. The cost benefit effect of the proposed model has not been taken into consideration. Furthermore, the technological aspects for implementation of the model have also not been taken into account due to resource constraints.

This research provides an elementary model plan for establishing a modern university library for the country. Necessary phases have been incorporated to implement the plan so that university libraries can change their present conditions and future libraries can get right direction from the beginning. Therefore, it makes provisions not only for ensuring an effective guideline for policy makers from the part of the government but also university libraries of all kinds will find helpful directions to transform their existing situation towards modernization. The researchers' in this field will find new possibilities towards further research.

CHAPTER - 1

INTRODUCTION

CHAPTER 1

INTRODUCTION

'University Library' is an academic library which serves a university for the purpose of education and research. Library is the most important part of the university. No university can develop or produce effective work without a well-equipped library. The educational methods have so changed and contests so broadened that both teachers and students depend on the library. The library and knowledge of its use is an essential tool for getting the most out of the university (Shahabuddin, 1976, p.75).

The importance of the library at the university was realized by many social scientists of the world. Carlyle's declaration that the true university is a collection of books is an encouraging, if over-simplified starting point (Higham, 1980, p.10). The library is the heart of the university (Layman, 1972, p.293). The true phenomenon of twentieth century higher education has been the development of university libraries. Though their roots in the western world go back to medieval times, only in the present age indeed only in the last four or five decades have they blossomed (Thompson, 1980, p.1).

Over the past few decades, university education has been transformed by investment in electronic infrastructure and connectivity, as well as from the attention paid to e-learning and related approaches as key tools to enhance the quality of higher education and make it more accessible. University libraries are an important part of this transformation. They acquire, organize and deliver digital information. They enable and promote its use. Libraries provide the bridge between digital content and the end-user. They provide pathways through the Internet jungle" (Rosenberg, 2007).

University libraries enter the 1990s the challenges, both positive and negative to their role and operations are probably greater than at any time in their history. New technologies, rising serial prices, diminishing budgets, governmental and institutional interventionist policies and rising staff expectations are just some of the myriad of

factors impinging on the operations of university libraries (Steele, 1991). Off late it is evident that university education system, function and role have been changed tremendously and rushed to the new challenges. Despite the new challenges 'university Libraries should be designed to support the role which has been assumed by or assigned to the university' (Gelfand, 1968, p.20).

The present condition of university libraries (public and private) of Bangladesh is not fully in line with the demand of higher studies and expansion of new education system. The blessings of modern technology have touched library activities throughout the world but most of the libraries of Bangladesh are performing activities in traditional ways. Though a few top ranked public and private university libraries have been providing a few services using modern tools and technologies but many problems exist. These are mainly (a) proper use of library modern tools and technologies, (b) digitization of resources, (c) digitization of services, (d) creation of database and institutional repository, (e) building architecture and layout plan, (f) design of furniture and equipment, (g) space requirements, (h) issues related to the human resources, (i) library administration, (j) information marketing and communication, (k) user education and information literacy program, (l) forming consortium, (m) standardization, and (n) advocacy related to the library issues, etc.

The present study attempts to find out the problem areas of university libraries (both public and private) and indicate probable solution to these. The study also attempts to propose a standard for University Libraries (UL) of Bangladesh so that the ULs can change their present condition and future libraries can get right direction from the beginning.

Definition of the problem

Oxford Advanced Learner's Encyclopedic Dictionary (1992) defines modernization as "making something suitable for modern needs or habits or bring up to date." In another definition modernization is stated to be "adaptation of something to modern needs or habits, typically by installing modern equipment or adopting modern ideas or methods (Pearsall, 1998, p.1189). In the social sciences, 'Modernization' refers to a standardized evolutionary transition from a 'pre-modern'

or 'traditional' to a 'modern' society. The teleology of modernization is described in social evolutionism theories, as (i) “existing as a template that has been generally followed by societies that have achieved modernity (Brugger & Hannan, 1983 & Dixon, 1999)”, and (ii) “that states that social traits are selected over time and gradually develop into behavioral or social norms (Shakeel, n.d.)”.

From the above definitions it is clear that ‘social change’ takes a silhouette due to changes in expectations of the people, education, cultural intermingling, social norms, and technological development, etc. Over different periods higher education is in continuous change due to various forces such as new form of higher education, transformation in world of leadership, advancement of new technology, internationalization and economic restructuring of all over the world. As a result, higher studies and its vital organ the ‘Library’ have changed radically to cope with the expectation and needs of the intellectual communities.

For the present study modernization has been used to mean to adopt new thought, ideas, methods and technologies for renovating of the traditional form of university libraries as well as providing better services to the user communities. Thus, modernization of university libraries not only indicates the change of shape of the library building, furniture, infrastructure and materials but technological advancement and adoption of modern tools and techniques as well. Modernization of the university libraries denotes a wider area in which changes are essential to suit the requirements of the modern education system. Modern university library refers to the libraries that have fulfilled the following criteria during the entire period to achieve its goal:

1. Basic infrastructural facilities;
2. Balance library resources in every discipline [those subjects that are taught in a particular university] with sufficient number of reference materials;
3. Perform all the basic activities;
4. Provision for various service patterns including auxiliary services and facilities for persons with disabilities ;
5. Automation in its various functional areas including housekeeping activities;
6. Digitization of materials and services;

7. Connectivity with global of university libraries through Internet, networking and resources sharing;
8. Availability of modern tools and technologies including searching and content management tools;
9. Strong communication and public relation with Internal & External beneficiaries;
10. Provision for continuous user education;
11. Library friendly administration; and
12. Availability of trained and qualified human capital in the library.

In the university libraries (public and private) of Bangladesh, most of the operations, administrative functions, information management, human resources planning, reference services, dissemination of information and services are provided in traditional ways without modern library management tools and techniques. Furthermore, the changes in requirements for new service and information needs in university libraries for higher studies and research which have arisen over the last few decades are the 'consequence of new concepts relating to the university 'connected with the more widespread use of electronic media and data processing' (Szarejko & Trocka-Leszczynska, 2007). As a result, new functional solutions adapted to new academic requirements have emerged in order to achieve efficiency, effectiveness, value for money and quality in stakeholder's delivery.

Academic libraries have long enjoyed a status as the "heart of the university." However, in recent decades, higher education environments have changed (Association of College and Research Libraries, 2010). There have been numerous changes in university libraries throughout the world. The developed world is far away from the developing world in terms of modernization of the university libraries as they have no budgetary limitations (to some extent controversial) and other barriers to adopt new technologies. These changes happened due to diverse forces. If we analyze the current trends, we could find the changes happened in the following areas of the university library management:

- Library system component and operation
- New management models & frame work/change management
- Developed infrastructure

- Automation and technological development
- Strategic selection and collection development
- Database and information management and control
- Library & information services
- Conservation process & archiving/storage
- Information retrieval
- Cooperative database access
- Integrated library system trends
- Library cooperation and resources sharing
- Marketing information and dissemination
- Library vendor/publisher interface
- Advocacy

It should also be mentioned here that user education, information literacy and many preferences are included in the university library management but most of the university libraries of Bangladesh were not able to cope with the latest developments and changes due to limited resources, lack of proper education, need for education, political commitment, educational system, budget constrain, negligence, and lastly the inefficiency of the professionals.

Rationale of the Study

The educational system of Bangladesh has not taken any concrete shape even after 40 years of the country's independence. As a result, limited research activities are observed in the universities. This is a common trend among the third world countries. Mannan (1997) describes the scenario in this way that 'there is practically no demand for current information which would help one keep up to date in the subject concerned. The majority of our university community is not a frequent user of information. There is no recognizable pressure from the user end on the libraries and information for supplying information. Whatever demand is there for information among the scientific community in Bangladesh is negligible. There is however, a need based demand for information which is generally sought while writing a seminar or conference paper, dissertation or far research project, etc.' In

such a situation attitudes towards modernization i.e. adaptation of new management tools and techniques in university libraries is like a day dreaming. But due to the intense pressure of the modern technology and higher studies inside and abroad modernization or coping with the latest development in the field of the university library is the demand of the day. Despite the concrete needs within our capacity or socio-economic structure we have to adopt modern technology time to time otherwise we have to be lagged behind. It needs proper attention as well as collaborative effort of the politicians, policy makers, administrator, information professionals, professionals association so that university library can provide best service and academic needs of its stakeholder to build the better and knowledgeable nations.

Keeping all these in mind, the present study has been proposed mainly to develop a plan for modernization of university libraries of Bangladesh. More specifically, the study has been designed to ascertain:

- A clear picture on current trends and development in university libraries throughout the world;
- The present scenario of the university library services in Bangladesh;
- The availability of infrastructural facilities, manpower, finance and other resources required for modernization of the library;

It is expected that the findings of the study will provide useful guidelines in planning and modernizing the university libraries in the country.

Objectives of the study

The present study has been proposed mainly to develop a plan for modernization of university libraries of Bangladesh. More specifically, the study has been designed:

- to find out the advancement in university libraries in the developed world;
- to find out the present scenario of university libraries of Bangladesh;
- to specify the sectors and divisions of university libraries needed to be modernized to implement the proposed plan;
- to assess the requirements for modernization of university libraries of Bangladesh;
- to conduct a comparative study on public and private university libraries to assess the existing status;

- to develop a plan for modernization of university libraries of Bangladesh;
- to find out barriers and limitations of modernization issues; and
- to put recommendation and concluding remarks.

Scope of the Study

The need and importance of university library modernization have already been realized by the government and universities itself. The decision and initiative have been taken at the government level in various education commission report, Five Year Plan and government policy making and universities individually. The problems at implementation however may be many. With a view to formulate an action plan for modernization of the university libraries of Bangladesh, there is a strong need to assess the facilities in the existing university libraries in the country. For undertaking a national standardization for all type of universities libraries, importance should be given in continuing research, ensuring qualities of education in compare with the advanced world. Unfortunately, no such survey work of university libraries for standardization, infrastructural requirements of libraries, availability of resources has been conducted in the country so far.

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 university library modernization since there are the ones that are the most pertinent to the study:

- Available literature on university libraries problems and issues;
- Status of university libraries in Bangladesh;
- Status of the initiatives taken by the government and universities individually;
- Survey of some selected public and private universities and users in Bangladesh;
- A model plan for modernization and standardization of university libraries based on the survey result, literature review and other consideration; and
- Recommendation for implementation of the proposed plan.

There are huge potential of research in the field of university libraries in Bangladesh. First of all, this type of research was not done by anyone in Bangladesh. Secondly, the topic is very important to the librarian, administrator, policymakers for planning and policy making related to library development. To meet the huge demand of the

higher studies and for insurance of better education university libraries should be modernized with modern tools and techniques. So the present study will contribute significantly.

Significance of the study

A few surveys have been conducted to assess the modernization activities, application of new trends i.e. Information Technology (IT) and overall effectiveness of library services in universities of Bangladesh. This study, therefore, attempts to investigate the changes and new developments which relate to the application of IT, infrastructure, and other related renovation to make overall effectiveness of university libraries of Bangladesh and evaluate them with regard to the present needs of the higher studies.

However, the findings and recommendations from this study should hopefully lead to the solution of many problems in library administrative organization and in the formulation of long-range planning and policy making for transformation from the traditional system to the modern system of university libraries of Bangladesh so that the total system is geared to the satisfaction of user needs.

Methodology of the Study

The choice of an appropriate research methodology is important for any research study. Authentic research findings need sound scientific methodology (Mannan, 1997, p.6). In the present study, the following methodology and techniques have been adopted:

1) Study Design

The research design has been incorporated both the qualitative and quantitative approaches. In the first phase, the theoretical literatures from various sources have been explored to assess the type of research conducted on university library modernization and stakeholder's expectations as well as related issues. Consequently, the quantitative phase has been performed by a survey directly from stakeholders and policy makers of sampled university libraries through structured questionnaires. The present study can be visualized as in figure-1.1



Figure 1.1: Schematic view of the study

II) Review of related literature

Existing literature on the topic (international and national context) were studied and reviewed to examine the status of university libraries in various countries including Bangladesh. A comprehensive bibliography of the available literature (of Printed materials and of URL's) have been compiled, and given at the end of the dissertation.

III) Sample Design

There are various approaches to choice a sample size and sampling techniques but for the present study stratified random sampling methods have been applied to select primary unit of sample. Further the target populations have been divided into two strata which have been described in the Table 1.1 viz:

Table 1.1 Overall sampling of the study

SL	Type of the University and Library	Total Number
1.	Public	34
2.	Private	54
	Total	88

Twenty three newly established Private Universities were not considered in the primary unit of the sample size. Because these universities are newly approved by the government and on the way to establish.

(A) For ensuring appropriateness from public and private university libraries and considering the services and usefulness to the users, twenty (public: 10 and private: 10) university libraries of the country were purposefully selected and brought under the investigation at the first stage (sample size).

Public University Libraries

Table 1.2 Sample public university libraries

SL	Name of the University and Library	Year of Establishment	Location
1	University of Dhaka	1921	Dhaka
2	Bangladesh Agricultural University	1961	Mymensingh
3	Bangladesh University of Engineering and Technology	1962	Dhaka
4	Jahangir Nagar University	1970	Savar, Dhaka
5	Bangabandhu Sheikh Mujib Medical University	1998	Dhaka
6	Sher-e-Bangla Agricultural University	2001	Dhaka
7	Dhaka University of Engineering and Technology	2003	Dhaka
8	Chittagong University of Engineering and Technology	2003	Chittagong
9	Chittagong Veterinary and Animal Sciences University	2006	Chittagong
10	Jessore Science and Technology University	2008	Jessore

Private University Libraries

Table 1.3 Sample private university libraries

SL	Name of the University and Library	Year of Establishment	Location
1	University of Science and Technology Chittagong	1992	Chittagong
2	Independent University, Bangladesh	1993	Dhaka
3	International University of Business Agriculture and Technology	1993	Dhaka
4	East West University	1996	Dhaka
5	Leading University	2001	Sylhet
6	BRAC University	2001	Dhaka
7	Stamford University	2002	Dhaka
8	United International University	2003	Dhaka
9	University of Liberal Arts, Bangladesh	2003	Dhaka
10	ASA University Bangladesh	2006	Dhaka

(B) At the second stage, using judgment sampling techniques five hundred of the total secondary unit of population from various groups like students, teachers, researcher and administrators of the sampled universities were

interviewed using structured questionnaires. Four hundred and nineteen questionnaires were received filled up by the users which have been tabulated and analyzed. (Both the questionnaires are given in Appendix-1).

The sample consists of the following:

Student	Under graduate	174	293
	Graduate	119	
Teacher		61	
Researcher		43	
Administrators/staff		22	
		Total	419

Considerations for selection of the sample

The following samples were selected for the study:

- Year of establishment of the university libraries : from older to recent one;
- Libraries from various university categories;
- Libraries located in the various division of Bangladesh;
- Library which have some basic infrastructural facilities;
- Libraries which have satisfactory ranking according to the UGC of Bangladesh;
- Library which are going to implement HEQEP project of the UGC of Bangladesh;
- Library which have already undertaken automation programme;
- **Regarding Users:** Students, teachers, researchers and administrators from the sample universities who use libraries either frequently or on ad-hoc basis for meeting information needs were selected.

IV) Survey

Two sets of questionnaires were constructed. One set, based on administration related index instrument for conducting administrative survey focusing the present status of selected university libraries; and another one was based on expectations and opinion of the stakeholders (for user survey) to reveal their need for modernization. A strategic survey was also conducted through personal observation and taking interview from appropriate personalities in order to verify the validity of responses (regarding service limitations or point of dissatisfaction) from different users. The assessment of the user's may be necessary for detecting the causes of

user dissatisfaction over the existing services' quality and finding out possible solutions. Both the questionnaires were duly pre-tested and finally structured keeping in view the objectives of the study.

Based on the analysis of the general and specific objectives of this study, information on 13 categories of variables for university libraries and 12 categories of variables for users were identified. The variable(s) and indicators emerging out of the questionnaire for university libraries and users are shown in Table 1.4 and 1.5 respectively:

Table 1.4 Variable(s) and indicators (University Libraries)

Type of variable (s)		Indicators
01	Organizational Information	Name of the university, year of establishment, type of the university, number of the faculties/schools/departments, number of the students, teachers, and of the management staff, address, telephone, fax, email and websites.
02	Library Information	Name of the library, year of establishment, designation and qualification and total number of the library personnel, library time, number of users, access system, seminar/branch library, library rules and regulation, library resources, library divisions, library space, seating capacity, library automation status, availability of catalogue, classification system followed, used catalogue code, used subject heading, circulation system, stock taking, weeding policy, acquisition policy, library committee.
03	Library Building, Infrastructures and Furniture	Library building, architectural plan and layout, water supply, ventilation system, air conditioner, humidity controlling system, accommodation for reading materials, library staff and reading community, security measures, fire controlling system, subject to the environment, sufficient furniture and equipment, standard for various planning
04	Organizational Climate and HR Planning	Separate HR department, HR policies, formal recruitment policies, librarian and HR manager role in selection, advertisement for recruitment, selection devices, orientation program, training need analysis, training and education, sufficient budget, performance appraisal (PA) system, compensations, causes of PA, competitive salary, pay survey, non-financial benefits, association of employee
05	Information Service Pattern	Current awareness type, condensation type, location type, condensation, and repacking, evaluation and emphasis, reference type, back-up services, maintenance services, literature searching, category of reference service.
06	Use of Modern Technology	List of equipments and technologies, use of ICT, library database, archives and repositories, library software, copyright law, content management system, serial control, bar code identifier, searching option, library security system
07	Library Budget	Library expansion, furniture and equipment, IT, database

(Table 1.4 contd.)

		creation, software development, new personnel recruitment, staff development, journal/magazines purchase, electronic journal & archives, books and stationeries.
08	Library Public Relation and Marketing	Public relation policy, medium of advertisement of information product, marketing medium, discussion group, any special categories
09	Library Cooperation and Resource Sharing	Resource sharing and networking status, area of networking and resources sharing
10	Library Advocacy	Seeks suggestion, creation of pressure to the authority, librarian's power to select books, hiring of external expert, member in different committee, advocacy policy, librarians' power in decision making, plan for development, continuous communication with higher authority, involvement in various pressure group.
11	Major Problems	Lack of national policy, standard for university library, budget, initiative of the authority and personnel, full time librarian, space, R&D, vision, mission and objectives, qualified professional staff, knowledge about latest tools and technology, library committee, T&D, library education, initiative from professional bodies, separate library building
12	Opinion	Library should open maximum hours of a day, loan period, recreational corner in library, professional staff, academic status, competitive salary, technological facilities, vision, mission and objectives, library standards, proper planning, open access system, staff role, certain budget, national policy, organogram, library charges, satisfaction level
13	Background information	Type of university, professional type, age group, marital status, official designation, qualification, year of experience, overall experience, reported persons, year of experience in the present position, number of promotion, number of organization worked for, participation in training program, financial agency

Table 1.5 Variables and indicators (users)

Type of variable (s)	Indicators
01 Background	University type, Name of the university, gender, age group,

	Information	category of users, purpose of library visit, frequency of visit
02	Library collection	Text book, reference book, thesis, journals/magazines, newspaper, digital collection, online journals, audio visual, CD-Rom, E-books
03	Library Building, Architecture, and infrastructural Facilities	Location of the library, exterior view, internal environment, other facilities, space for reading and safekeeping, CCC, furniture and equipment is standard, reading booth and cabinet, group study facilities, washroom and water supply, drinking water
04	Library catalogue and database	Availability of library catalogue, library database, CD-Rom database, digital archives, access to other resources, digital library items, IR, Institutional bibliographies, collection of other agencies, library websites
05	Library Software and Searching Facilities	Availability of Library software, MyAthens, VuFind, Archival Software, database software, IR Software, Joomla.
06	Library Equipment and IT Facilities	Sufficient computer, entrance and exist system, online Internet connectivity, audio visual equipment, RFID tagging and security system
07	Library Service and Facilities	Borrowing facilities, book reservation, book renewal, photocopying, scanning, CD-Rom writing, spiral binding, printing, CAS, SDI, newspaper clipping, online acquisition and internet browsing services with full text downloading facilities
08	Library Marketing and Public Relation	Arrangement of seminar, training and orientation, delivering of speech at the orientation, library week and quiz competition, usage of social networking for advertisement, newsletter, leaflet or brochure, IR program, reader's circle or reading group
09	Attitude of Library Professionals	Initiatives of the librarian, behavior of the circulation officer, assistanceship, cooperation in reference section, professionalism, staff overall cooperation
10	Advocacy from the part of the users	Complain of the users, opportunity for selecting library resources, changing of service pattern
11	Library Overall Impression	Possession of recent books, open access system, confidential area, recent books on displays, usage of old books, staff size, use of modern tools and technologies, satisfactory level of library operation and activities, the users satisfaction
12	Opinion	Library should open maximum hours of a day, loan period, recreational corner in library, professional staff, academic status, competitive salary, technological facilities, vision, mission and objectives, library standards, proper planning, open access system, staff role, certain budget, national policy

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. The data were collected upon the variables identified for the libraries and users.

VI) Data processing and analysis

Two sets of questionnaire of this study were duly edited to verify that the data recorded in the questionnaire 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 into the computer;
- conducting validation checks to ensure that data have been correctly entered into the computer;
- preparation of output table.

The SPSS (16th edition) and MS Office Excel 2007 have been used to enter, edit, and analyze data. Findings of the study have been presented in various Tables and Figures using bivariate and multivariate analyses as per their applicability.

VII) Interpretation of results

After processing and analysis of the data, appropriate physical meaning and interpretation to the numerical results in real life was given for each of the Table and Figures. Findings of the study have been presented in 54 Tables and 32 Figures.

VIII) Implementation

The study was implemented in three steps:

- Step – I : Reviewing of all available relevant literature, preparation of reading list/bibliography for background study;
- Step – II : Designing and testing of questionnaires, sample designing, data collection, data analysis, presentation; and
- Step – III : Finding of the problems and recommendation.

Along with the above a number of the techniques and methods have been applied to find related literature and to make the investigation success. These are: search of renowned journals, research visits, various content analysis, personal interview of senior professionals on the field, visiting of websites and digital archives, etc.

Organization of the Text

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

Chapter One is devoted to the background of the study, definition, rationale, objectives, scope, significance, methodology applied to the study and organization.

Chapter Two deals with review of the related literature: international and national context mostly associated to the modernization issues.

Chapter Three contains development of university libraries in Bangladesh including structure of the education, types of the universities, and structure of university libraries, higher studies system in Bangladesh, rationale of development of private universities in Bangladesh and a brief description of the sample university libraries.

Chapter Four illustrates existing status of university library modernization in Bangladesh and Government and other's initiatives to improve the situation.

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

Chapter Six presents results of the findings in a form of chart, figures, and graphs along with necessary discussion and interpretations.

Chapter Seven contains comparisons between public and private university libraries on various variables and indicators to measure difference.

Chapter Eight provides modernization plan for university libraries of Bangladesh in light of the findings and long term development objectives and suggestive action plans

The study concludes with some suggestion, limitation of the study and future research proposals.

CHAPTER - 2

Review of the related Literature

Section – I

**Studies on University Library Modernization
International Context**

Section – II

**Studies on University Library Modernization
National Context**

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

Every piece of ongoing research needs to be connected with the work already done, to attain an overall relevance and purpose. The review of literature thus becomes a link between the research proposed and the studies already done (Kumar, 2009). Literature review involves scanning the pages of any published literature like books, newspaper, magazine, website, webpage, collection, paper, pamphlet, and the like where someone may be able to find any reference to the same topic that someone is researching on (Prime Dissertations, n.d.). For the purpose of the present study this researcher reviewed relevant articles and found no research has yet been done focusing on the main theme of the present study in Bangladesh. Relatively a certain number of books and research articles have been found related to the automation and application of ICT. To establish overall relevance with the work already done by other people on the proposed subject, existing literature (on international and national context) were studied and reviewed modernization activities of university libraries of the developed and developing world including Bangladesh. Hence, this chapter is divided into two sections:

SECTION – I

STUDIES ON UNIVERSITY LIBRARY MODERNIZATION: INTERNATIONAL CONTEXT

Review of the literature on international context regarding the proposed study indicates that university libraries (ULs) of the developed world are in continuous transformation due to diverse forces like new forms of higher education, transformed world of librarianship, advancement of new technology, internationalization and economic restructuring throughout the world. At the same time world ULs are also struggling due to squeezed budgets, economic recession and limited resources. Despite various limitations, ULs of the developed world as well as

developing countries are moving towards to adopting new tools and technologies besides ensuring modern infrastructural facilities. These fact has been revealed in various research conducted by the prominent library and information scientists of the world. Brief accounts of the related literature are given below:

The urgent need for scientists, technologist, doctors and administrations in developing countries has resulted in a rapid expansion in both the number and size of universities and other institutions of higher education (Gelfand, 1968). Today, since information is being produced faster and in more quantity than one can grasp it (Laloo, 2002). To coincide with this, and in the light of this need, changes are also occurring in the qualitative nature of education. The ultimate goal is rapid social and economic progress, and universities are expected to produce the specialists who will guide a country towards its attainment. In the daily life of the university, the library plays a major role. Needless to say, its organization must also be geared to present and future needs and be oriented to the demand of the modern world's students, teacher and research workers (Gelfand, 1968).

The true phenomenon of the twentieth century higher education has been largely dependent on the development of university libraries. Though their roots in the western world go back to the medieval times, only in the present age, indeed only in the last four or five decades, have they blossomed (Thompson, 1980, p.1). Laloo (2002) describes the importance of the university library in this way that the teacher required information besides their classroom teaching, research and publication as subject related, teaching methods, latest development and student's psychology. Considering the type of work they perform and the variety of information that they require, it would be expected that university faculty would spend a major part of their free time in the library.

The emerging challenges posed by the contemporary environment are great in number. These challenges are posed by the application of ICT, manifested in many forms or notions, such as digital repositories, open access, user centric services (e-learning, e-teaching, information literacy, orientation programmes), web-based library services, the application of social networking, library cooperation (including

consortia), and legal issues. The scholarly community tries hard to adopt the existing forms and catch up with the newer forms to facilitate their business of learning/teaching. Librarianship, not to be left behind, as is the tradition, strives to achieve new competencies and skills as well as exploring how these can be put into use to further library and information services (Thomas, C. Satpathi, & J. N. Satpathi, 2010).

World University Libraries are in Continuous Change

The knowledge explosion and related information handling problems acknowledged widely in more recent years did not arrive suddenly. More than two decades ago it was noted by Fremont Rider that libraries do not grow in size arithmetically but tend to follow an exponential or parabolic curve, and that those located in better established American universities at least the small number for which a few reliable statistics can be advanced have doubled in size approximately every sixteen years since 1830. Bearing out Rider's conclusions in the main are results of a study completed in 1965 at Purdue. Purdue reported that for fifty eight larger research universities, the average period of doubling since 1950 had been seventeen years, while the rates of annual acquisition had actually doubled in from nine to twelve year (Dunn et al.,1967)

Shuler (2005) states that in this era of technological revolution, newer technology is coming rapidly with a greater efficiency and newer dimension. These technologies have been using for improving the situation with comparing with need and demand of the changing world. Higher educational institution is not exception of these. Present higher education is shaping to the new technology dependent system. As a result it is indispensable to change in higher education system as well as its related components. As a heart of the higher educational institutions library needs to modernize similar with the need and demand of the university. In the last ten years, academic libraries have seen their role as the "first place to go" displaced by the Web.

For more than a decade, academic libraries have been under the pressure to change its conventional way of operation. First, the rising costs resulting from inflation and

the tight budget cause difficulty in keeping up with the increasing demand for information services. At the same time, the appearance of online databases and easy access to the WWW has made competitors for the libraries in providing information services. Second, services outside libraries become more customer-oriented and responsive. This tends to overturn the traditional position held by the librarians that the needs of the library system are placed above those of the external user (Davies & Kirkpatrick, 1995). It implies a psychological barrier to the new way of thinking, an issue of managing people as well as services (Wang, 2006). University libraries have been posed to new dimension due to the following reasons:

- Environmental force;
- Transformed world of librarianship;
- Advancement of new technology;
- Internationalization.

Environmental force

Worldwide economic recession of the early 1990s affecting much of the world in the late 1980s and early 1990s. Similar with other sector university grant has been downturned greatly. As a result, university libraries have been struggling due to the recession till date in many developed countries. Bailey-Hainer & Forsman (2005) describes that demonstrating how academic libraries contribute to the research, teaching and learning goals of a university are a difficult task in tougher accounting and financial environments. University libraries are expensive and “funding will not continue to flow to the library during periods of simultaneous fiscal pressure and reinvention unless academic librarians do better job providing a clear picture of the library of tomorrow.

Wells (2007) indicates that the benefit of excellent user service came at the cost of duplicate systems and autonomous processes. As times got harder and technological developments put library budgets under pressure, the costs of maintaining the library structure came to be questioned more frequently. The structure was developed to support a pre-digital, print-based service model which emphasized on-site physical interaction of users, staff and resources. Trends in usage statistics made

clear what library staff could see. Like other academic libraries around the world, measurement showed that times were changing: reference, circulation, and shelving statistics were in a downward trend. Yet allocating sufficient resources to enable innovation, research and development was difficult: the library model (pre-digital print-based model) was not flexible enough to meet the new challenges. Tennant (2006) & Wells (2007) points that mediated access to scarce information resources has been replaced by disintermediation and ubiquity of information resources. On campus, the academic library no longer enjoys the gateway role or controls supply of information. With few exceptions, virtually overnight, we are now perceived as irrelevant by many.

Transformed world of librarianship

Line (1990) has argued that the academic library of the future must be efficiently managed, and be able to prove that it is efficiently managed. It must be much more user-oriented, it must have clear objectives and it must be planned. The utmost efforts must be devoted to developing staff so as to increase their personal satisfaction and at the same time increase their productivity. Line's contributors cover the issues that may well necessitate a new 'generation' of academic libraries. Veaner (1990) has also provided a succinct overview of the 'transformed world of librarianship', especially from a management or administrative perspective. He is particularly conscious of the need for libraries to be aware in a proactive sense of the political, social and technological changes which are concurring around them. Steele (1991) commented on this issue that Veaner reflects upon the perceived inadequacies in socialization for administration and management, the changes in staff attitudes and expectations and the declines in intuitional autonomy.

Advancement of new technology

Prior to computerization, library tasks were performed manually and independently from one another. Selectors ordered materials with ordering slips, cataloguers manually catalogued items and indexed them with the card catalog system (in which all bibliographic data was kept on a single index card), and users signed books out manually, indicating their name on cue cards which were then kept at the circulation

desk. Early mechanization came in 1936, when the University of Texas began using a punch card system to manage library circulation (Wallace, 1991, cited in Wikipedia). While the punch card system allowed for more efficient tracking of loans, library services were far from being integrated, and no other library task was affected by this change (integrated Library System, n.d.). Following this, the next big innovation came with the advent of MARC standards in the 1960s which coincided with the growth of computer technologies – library automation was born (Wallace, 1991, cited in Wikipedia).

Lynch & Young (1990) noted that ‘the challenge of advancing technology combined with related academic and social dynamics make this a very uncertain time for academic libraries’. To this end they have brought together a number of authors to examine the research base of academic librarianship, from collection development and management to bibliographical control and access services. These analyses, while largely retrospective, do provide guidelines for the future. Saw & Williamson (1990) have looked into future in a survey review of the perceptions of Australian university library managers of the key issues and problems in the 1990s. These were identified as the impact of technology, the need for improved planning and decision-making, the fiscal crisis, collection development, user education, equity and equal opportunity, professional development linkages with the private sector, organizational effectiveness and resources-sharing.

Heseltine (1993, pp.125-129) identifies three generations of library management systems. The first refers to the original mainframe-based offline cataloguing and circulations systems of the 1970s. The second generation is the minicomputer-based, online, integrated, modular systems that make up the majority of the existing market. The third generation, which is appearing in the 1990s, makes use of low cost, high performance hardware as well as using standards for communicating systems and relational databases management systems and other similar ‘building blocks’; the general term used for this is ‘open systems’.

The 2000s are an era of digital libraries, virtual collections, paperless environment and round the clock instant remote access to unlimited resources. The Rapid

advancements in computers and telecommunications, exponential growth of Information and media, availability of online databases, reduction in hardware and Software costs, passion of using the internet, provision of cost effective communication mechanism and growing user demands are the major factors responsible for the increasing use of IT in libraries around the world (McCallum, 2003; Moyo, 2004; Jain and Babbar, 2006; El-Sherbini & Wilson, 2007).

The adoption of Integrated Library Systems (ILS) became prevalent in the 1980s and 1990s as libraries began or continued to automate their processes. These systems enabled library staff to work, in many cases, more efficiently than they had been in the past. However, these systems were also restrictive especially as the nature of the work began to change, largely in response to the growth of electronic and digital resources for which these systems were not intended to manage. New library systems led to the second (or next) generation library systems are needed in order to effectively manage the processes of acquiring, describing and making available all library resources (Wang & Dawes, 2012, p.1).

Internationalization

The world is now a global village. What happens in the USA is instantly transmitted around the world; a decision on the Middle East could affect the whole world. Due to political, economic or social reasons immigrants are common in many countries as professionals move and work in different countries. To cope with the situation, efforts have been taken to internationalize education and to ensure equivalence and reciprocity of qualifications and experience for the benefit of mankind (Kigongo-Bukenya, 1999). We are witnessing globalization in different walks of life. Globalization has made its impact on libraries as well. Due to globalization, technology-based solutions adapted in Western countries are also relevant to us. In addition, many of the problems faced by them are also likely to be faced by us in the near future (Kumar, 2003).

Trends of IT Applications in Libraries

Information and telecommunication technology has brought a revolutionary way of information acquisition, processing, storage, retrieval and transmission. Consequently appropriate course have cropped up in academic libraries viz: database development and management, networks management, online retrieval, and others preferences of library management (Kigongo-Bukenya, 1999).

Vankataramana (2004, p.24) mentioned that rapid advances in IT in the past two decades have brought revolutionary changes in the concept, organization, functioning and management of library and information systems through out the world. The impact of these changes is pervasive and affecting all the aspects of library operations, information resources and services, staff skills requirements and users expectations. The accelerating pace of technological developments has tremendously increased the ability to access, store, process, communicate and deliver information services in libraries. World wide libraries have been exploring new technologies as a means of providing better and faster access to vast array of information resources and efficient information services to their users. IT has a huge potential for providing wide range of new opportunities and offering better solutions to achieve greater levels of efficiency, productivity and higher standards of quality services in libraries. In the 1990s the trend is towards more user-friendly interfaces based on an open systems approach.

The monopoly libraries have had on information provision is over. Today libraries are shifting their role from the custodian of traditional information resources to the provider of service-oriented digital information resources. Widespread use of computers, increased reliance on computer networks, rapid growth of Internet and explosion in the quality, and quantity of information compelled libraries to adopt new means and methods for the storage, retrieval and dissemination of information. Library automation, development of digital libraries and application of innovative information and communication technologies (ICT) have tremendously increased because it provides enhanced user satisfaction, cost effectiveness, rapid responses, and easier operational procedures (Haneefa, 2007).

Haneefa (2007) further mentioned that libraries and information centres have been employing ICT and electronic information resources and services to satisfy the diverse information needs of their users. E-journals, CD-ROM databases, online databases, e-books, web-based resources, and a variety of other electronic media are fast replacing the traditional resources of libraries. While libraries automated their library management activities and procure expensive electronic resources, these may not be optimally used. This is the main concern of librarians around the world. There are a lot of reasons for this state of affairs, like lack of sufficient funds, inadequate infrastructure, lack of qualified library professionals, and the like.

Information technology had a tremendous impact on the efficiency of library operations and the delivery of information services. Use of IT has facilitated networking and resource sharing, eliminated duplication of effort, improved the speed of operations, increased access to information resources and improved the quality of information services (Peyala, 2011, p. 1). Further he indicates that rapid advances in IT have brought revolutionary changes in society and the impact of these changes is pervasive and affects all the spheres of human activities and institutions including libraries. Since the 1960s, libraries worldwide have been exploring new technologies as a means of providing better and faster access to the vast array of information resources and providing efficient information services to their users. Recent advances in IT have not only increased tremendously the ability to access, store and process information within the library but also have brought significant changes in the concept, organization, functioning and management of library and information systems (Peyala, 2011, p. 1)

Internet

Since 1960s, worldwide libraries have been using technology in general and computers in particular to automate a wide range of administrative, technical tasks and information services. During the last decade, IT has played an increasingly influential role in library management system as they have immense capabilities in handling and processing huge volume of information held in libraries. A large

number of studies investigated the utilization of technological applications in library and information centers all over the world.

The growth of the Internet and its popularization across the globe, along with the immense potential of emerging high-speed, satellite-based communication technologies, provide ample justification for our desire to search for terms that capture the essence of what we are experiencing and what may lie ahead. Our daily lives personal and professional already reflect the convergence of digital information technologies with the human experience. From home to schools to hospitals to small business to high-tech agencies to libraries, digital information technologies are drastically transforming the cultural, social, psychological, and economic landscape. This is true not only in development nations but also in those that are sometimes characterized as “third world nations” (Sierpe, 2004).

Global Scenario

University libraries in Western countries have been fully computerized. For library users, digital libraries possibly represent the biggest advance in library research since the invention of card catalogue. The libraries are putting online their indexes, catalogues, texts of journals, books, manuscripts, photographs and other research materials (include fragile ones) as well as material representing heritage. As a consequence, the access of information has improved tremendously. Distance learning has become easier and convenient (Kumar, 2003).

United States of America (USA)

Based on a long-standing awareness of the problems inherent in manual operation of library functions and activities, libraries in United States started automated system using various technologies. The age of library automation had started particularly in ULs all over the country with the exploration of use of punched card (unit record) equipment and computers in a range of 'backroom' operations (Groenewegen, n.d.). Since the 1960s, libraries have used technology in general and computer in particular, to automate a wide range of administrative, public, and technical services tasks. The area includes circulation control, descriptive cataloguing, catalog maintenance and production, reference service acquisitions and

serial control. As a result, LC developed MARC format in the late 1960s. During the period of 1960s to mid of 1970 most of the academic libraries were relied on mainframe and minicomputer based products and used various software like NOTIS, DOBIS/LIBIS, PALS, LIAS, and VTLS for circulation purpose. Till the 1980s many library software and system were developed in USA including DIALOG, WILSONLINE, LIONS, INMAGIC, MINISIS, CONSER, BRS (Saffady, 1989).

Hauptman & Anderson (1994, pp.249-256) surveyed 800 different types of American libraries and reported that out of 238 respondents, majority of libraries have the most advanced technologies. Large academic and research libraries are now almost entirely dependent on technology, but even small special and public libraries can hardly function without computers, modems, CD-ROM readers, fax machine and other equipment. Results indicated that only one third of respondents have OPACs or use electronic mail, and less than 50 per cent have access to CD-ROMs. He concluded that, as money tightens throughout the 1990s, libraries will have to seek out new technologies as a means of delivering quality information services at a reasonable cost (cited in Chakroborty, 2005 & Rahman, 2008).

Tenopir (2001) described that there are several identifiable trends in the way American university libraries are approaching the issue of electronic formats and wide area networks. University libraries have dealt with information in different formats for decades; however, information in an electronic format has the potential for a much greater impact on the profession. University libraries are providing commercial or private databases for their communities; the ownership versus access approach to the evaluation libraries; libraries are using new technology to automate old processes before using it creatively; libraries are concerned about the higher cost of electronic information; some universities have merged their library and computing units on campus; higher user expectations; and use of alternate information sources (Metz, 1990). According to a survey of 70 American academic libraries, 99 percent offer e-mail reference, and 29 percent offer real-time reference service.

Sackett (2001) identified that academic libraries of USA are under tremendous pressure to change, and technological advances have caused many of those pressures. Research methods have changed as technology has made electronic resources available. Portable laptop computers require power and data outlets and network connections. Where once an electric typewriter was considered state-of-the-art, staff work are as need more and more equipment: computers, faster computers, larger monitors, printers, laser printers, color laser printers, scanners, keyboard trays, fax machines, copiers, digital cameras, electronic hand-held organizers, and so forth. Technological change is not the only important change library planners face at the turn of the century, but like organizational and instructional changes, it cannot be ignored.

Librarians and information specialists now argue that to ensure a prominent position within the future world of academia, library faculty must market their skills, services and resources (Brunsdale, 2000; Dodsworth, 1998; McCarthy, 1994; Rowley, 1995). In view with this Neuhaus & Snowden (2003) shared their experience of a top most American university that in 1999 library marketing committee was created on the University of Northern Iowa Campus to heighten administrator, faculty and student awareness of library resources, services and showing capabilities of the library in galvanizing, nurturing, and supporting the research of the university community. During 2000 and 2001 various marketing efforts and experiments were employed by this committee including: promotional newsletters and e-mail postings, student surveys, co-operative marketing studies conducted with marketing students, participation in student and faculty orientations and creative advertising via library pens, library shirts, online library newsletters and sidewalk slogans. While results from this ongoing experiment are encouraging, committee members discovered that significant time, effort and money can be expended in marketing a library.

Kumar (2003) who was most of the time in USA, Canada, and Kuwait in 1999 was found that most of university libraries in USA have a strong digital library programme and embarked upon digitization of items of significance for cultural heritage in a big way. They have a very strong user education programme. These are provided at different levels for various subjects and different technologies. The libraries are run

with minimum staff. Evening shifts or on holidays, most of the staff may be part time. Entrance to libraries is user friendly. There are no attendants at the entrance. However, it is a normal practice to have hidden digital cameras, which record the movement of the users and staff. It is an excellent surveillance system, which is not noticeable, is very effective. Users and the staff know that they are under watch. The issue system is fully computerized with bar coding. In case, some reader takes out a book or any other document without getting it issued properly, then it will cause an alarm at the exit point. They also face the problem of loss of books or damage to books. Library various departments are connected with LAN and information are provided through internet accessibility, e-mail, and webpage.

Canada

Kumar (2003) describes that most the university libraries in Canada have online library catalogue, premium databases, websites, e-resources including journals, In addition, library's indexes and catalogues have been put online. Provides free internet services, subscribes to premium websites and databases, making them accessible to the members, orientation for faculty and students to library services, collections and online databases is provided through general information workshops and focused curriculum-based orientation. At the University of Toronto Library, more than 25 per cent of the access to the library holdings is disseminated by electronic means. The percentages of access are increasing year by year. The faculty and graduate students are allowed access at Ontario and Quebec academic libraries. They may also register to borrow from COPPUL libraries in British Columbia, Alberta, Saskatchewan and Manitoba. Similar arrangements exist in other university libraries in Canada.

United Kingdom (UK)

Brindley (1989) stated that Universities in UK have been major users of computers since the latter first appeared. In the latter part of the 1980s the creation of the Joint Academic Network encouraged a diversity of networking activities in universities, which also become leading users of networking in recent years. At the end of the

1990s, he felt that IT would have increasing impact on all the main strands of higher education - teaching, research and administration during 1990s.

Erens (1996) summarizes the results of a 1995 survey of over 2,000 UK academics in UK which was conducted between 1989 to 1990 and found that recent development in university libraries for the cause of advancement of technology was great. The growing use of electronic services has, to some extent, mitigated the potentially detrimental effects for research of deteriorating collections. Electronic services permit easier access to a wide range of information, a view which has led to increasing satisfaction with library services over time. The result also indicated that the use of e-mail, electronic publication, bibliographic database, use of electronic collection and searching external databases, browsing in online catalogue, gaining popularity among the university libraries in various disciplines.

Still (2001) conducted a study on content analysis of the English speaking countries' (Australia, Canada, the UK and the USA) university library Web sites and found visual display of information was quite similar across all the countries. He observed that the UK has a national access plan, ATHENS [content management software]. It enables secure sign-on access to information services and is currently used by over 400 organisations in the UK. The result of the study revealed that the university libraries have been providing various services through websites in which update date, physical address, description of subjects and departments, link to the library's' OPAC, link to other OPACs, links to subscription to the encyclopedia, links to subscription database/journals/indexes, reference section/links, pathfinders to local resources, link to search engines, links to internet subject resources, request forms, library news/events, email contact/link were notable.

McManus, & Loughridge (2002) conducted a survey on university libraries of UK on why KM is unpopular in university libraries and from the investigation it was found that technology was important for the sharing and storing of knowledge. Not only that it could help in various process such as effective communication of information and knowledge via e-mail and its facilities such as group distribution lists, and its speed of message transmission compared with other forms of communication. Most

universities already had, or were working towards, the comprehensive technological infrastructure necessary for implementing features such as intranets, which are closely associated with knowledge management.

Japan

Hasegawa (1997) identified various trends that have posed by different forces in university libraries in Japan and noted that up until now, university and college libraries in Japan have managed to cope with various changing elements. In national libraries the emphasis placed on modernizing the equipment was seemingly of paramount importance. After updating the library's administration side, there was a strong will to promote inter-academic LAN systems, the Internet, multimedia and ultimately the development and expansion of the electronic publication library. The modernization of Japanese private university libraries, however, was not able to reach the same level of progress and development. This was understandably due to the financial restrictions placed on these institutions.

There was also an emerging scenario of use related to the advancement of electronic services. The OPAC, article database and electronic journals were being welcomed. At the same time, new issues born out of these were also recognized, such as the necessity of usage guidance brought forth by the installment of new systems for both undergraduate and graduate students, and the maintenance of the usage environment including the improvement of interfaces (Sato, Kytomaki, & Gerrard, 2005). The Internet and electronic mail systems provide the tools for future librarians and their operations. It is by the increase in new technological advances in communication that the national university libraries will, I am sure, progress and develop (Hasegawa, 1997).

China

Academic libraries are being transformed from their separated and isolated past into integrated systems and networked operations (Zhu, 1998, p. 169). In February 1986, Shanghai Jiaotong University Library employed the first library automation system: "an information management system and a light pen library management system were operated on an IBM PC/XT" (Ma & Pourciau, 1992, p. 53). Academic libraries -

the forerunners of library automation are moving towards networking and digitization because changes in society are prompting libraries to develop services that are more in tune with the needs of individuals and communities.

Academic library automation in China started in the late 1980s. Computer laboratories are provided in academic libraries, electronic publications have been introduced, audio-visual and multimedia reading rooms are provided, and CD-ROMs and the Internet services are offered. Digital libraries are now a reality. Launching of CERNET between 1993 to 1995 more than 400 academic libraries are connected with the network. With the establishment of CERNET, academic libraries now have the means to put their services online and their collections digitized. Universities are providing online access to the materials, OPAC has introduced in various university libraries and traditional card catalogue almost shun at the beginning of 2000 (Tang, 2001).

Malaysia

Yaacob & Harun (1996, pp.233-242) investigated the impact of new technologies on the management of libraries in Malaysia. User training is an area undertaken seriously by libraries and information centers. Most established libraries and information centers in Malaysia have embarked on library automation, or are in the process of implementing it. They state that in 1994, 50 libraries automated fully using different software packages. The number has increased dramatically to 169 in 1995 with the additional application of advanced IT. There has been a close correlation between the librarian's attitude towards IT and the speed of the library automation (cited in Chakroborty, 2005).

As a part of Vision 2020, the Malaysian National Library plans to become a world class library with high-tech facilities. Out of total of nine universities and four technical colleges in Malaysia, five universities provide Internet access to their library catalogues. With the improvement in telecommunication technology, libraries in Malaysia will be able to provide better services and take advantage of resource sharing (Fong, 1997 cited in Chakroborty, 2005).

Libraries in Kuwait

University libraries are fully computerized libraries having latest equipment and large resources. Kuwait University Library was rebuilt after Kuwait-Iraq war. The building is very impressive. Library is fully equipped with latest information technology. Considering the large resources that are available, the number of users is far less (Kumar, 2003).

Pakistan

On the issues and status of library automation in Pakistan Malik (1996) stated that the history of library automation is not a long one. It dates back to the 1950s and 1960s in America and Europe. In Pakistan, library automation was introduced in the 1980s and a number of libraries were computerized during or after 1987. He also noted that a number of libraries in Pakistan have developed their in-house library databases using dBase: dBase III+ (introduced in 1985) and dBase IV (released in 1989) are mostly being used. Various software like INMAGIC, CDS/ISIS, MINIISIS and so many customized software are being used by many university libraries.

Mahmood (1999) described the library modernization and adaptation of new technologies in Pakistan in ways that although the use of computers in libraries and information centres is a recent innovation in the developed world, during the last ten years a significant number of Pakistani libraries have also been enjoying the benefits of this technology and is being successfully introduced in all types of libraries and information centres. With the inception of computer technology in libraries new terms like “information technology” and “library automation” have become common. Computers, telecommunications and microelectronics are used in libraries for obtaining, storing and transferring information. The ability of a computer to carry out these library functions quickly, accurately, and systematically, makes it a most useful tool.

Saeed, Asghar, Anwar, & Ramzan conducted a survey in 2000 to examine the status and use of the Internet in university libraries of Pakistan and result indicated that half the university libraries in Pakistan have access to the Internet and it has become an essential part of the library services. The Internet is also being heavily used for

performing various library functions such as reference work, classification and cataloguing, document delivery service, subscription to online journals, etc.

Ramzan (2004) wrote about the library modernization situation in Pakistan that computers were first used in Pakistan Scientific and Technological Information Centre in 1968 to produce the country's first union catalogue of scientific periodicals, followed by automation of libraries of agriculture universities and research centres, Lahore University of Management Sciences, and other private sector institutions during the 1980s. The year 1992 was important in the history of library automation in Pakistan when the country's telecommunication sector started expanding its services and five computer-training centres were established for working librarians. The same year, University of Peshawar organized a conference on "Challenges in automating the library services" that helped produce Pakistan's library automation literature (Haider, 1998). In 1995, the government of Pakistan established electronic mail service. By 1997, eight companies launched Internet services with total connections approaching 10,000. He also mentioned that major IT used in Pakistan are computer, CD-Rom, Photocopier, word processor, online catalogue, e-mail, internet, online database. From the research he found out major problems of IT installation were budget, standard software, hardware, skilled human resources, cost of hardware, management attitude, and so on.

Mahmood (2008) conducted a survey on various kinds of university and special libraries in 2008 on dependency on WWW for library various functions and found that the computerization of libraries in Pakistan was started in the mid-1980s. Cataloguing has always been a popular area for automation in Pakistan. Some libraries use Expensive imported software packages while others have developed their own in-house programs. To provide users access to library collections online public access catalogues (OPACs) have been developed.

Indian Scenario

Kumar (1994, pp.327-339) surveyed the usage of modern technologies in different types of 300 libraries in India. He found that some of the libraries have automated their routines while majority of them are still in the planning stages. He examined

the impact of modern technologies on these libraries and problems faced by them. He suggested measures for implementation of modern technologies.

Gopinath (1995, pp.129-143) observed that the developments in IT have been revolutionizing the library and information services. He stated that the technology is evolving rapidly and is providing additional facilities such as network access, electronic document delivery, information interfacing and modeling facilities etc., IT has to be built on a flexible frame to provide instant, conducive approaches towards identification, location, access, retrieval and usage of the information to satisfy the end users (cited in Chakroborty, 2005).

Kaula (1997, pp.1-5) observed that over the last two decades, libraries have become increasingly aware of the revolutionary impact of developments in information and communication technologies on their key functions. The new developments challenge the library's traditional role as electronic information products and services open up a previously unimaginable array of options. With the reduced importance of physical libraries as predicted, librarians and information specialists will need to be proactive and promote their special services to their user community. Much of the future will undoubtedly be decided by our own response to the new technology. But, technology has to be used as a tool to render assistance to achieve our goal of the profession to serve the end-user as providers of information, pinpointedly, expeditiously and exhaustively. It is time to embrace these challenges, to grasp the future and push ourselves forward (cited in Chakroborty, 2005).

Libraries in India are at a critical juncture due to the pressure created by technological changes, shrinking library budgets, high cost of documents and increasing information needs of users. Recognizing the fact that use of IT opens new avenues for better services, an increasing number of libraries and information centers have made several attempts to computerize their activities in India. However, it is only during the recent years that the library and information centers have become more earnest to computerize their operations and services (Vankataramana, 1998, p.37).

Chandrakar (2003, p.1) described the situation of university library modernization in India in such a way that on the one hand the world has reached last stages of library automation, while, on the other, the Internet has revolutionized it with different concepts such as electronic, digital, virtual and library without walls. Now professionals are reaching knowledge management, Internet cataloguing, copy cataloguing, metadata, Z39.50 retrieval protocol, and resource sharing in the context of inter-library loan, document delivery services, and Internet services through Net etc. unfortunately in an Indian context, libraries are still in the process of the automation and digitization of their resources.

Guha & Saraf identified that university libraries provide a computerized catalogue known as the online public access catalogue (OPAC). The OPAC is not a completely new tool for locating documents in libraries in developed countries. It has been used since the late 1970s and became popular in the 1980s (Guha & Saraf, 2005). Subsequently, its use expanded horizontally as well as intensified in developing countries. In India, the OPAC appeared during the 1990s (Babu & Tamizhchelvan, 2003) and some libraries started to adopt its use (Kumar, 2011).

Kumar further notes that to boost computerization of libraries in India, Information and Library Network was established by the University Grants Commission, and it provided funds and technical support for the automation of library functions in academic libraries. Thus, the OPAC is becoming popular in Indian libraries. Many libraries in India are currently providing this service to users for findings the documents that they require (Kumar, 2011).

Computer technology in India has become an almost integral part of school, college, and university education as an additional specialized professional qualification. Students use the internet for communication, entertainment, socializing and education. The web search engine, Google, has become an important source of information. The Web searching of these students is strengthened all the more when they enter the University system. This experience affects their information search patterns for finding requisite information on information channels available university libraries (Kumar, 2012). According to Kumar and Kaur (2005), both the

current information revolution and the increasing impact of ICT have gone a long way in modernizing the process of teaching, learning, research, and searching for information in Indian universities.

Madhusudhan & Nagabhushanam (2012) conducted a research on 20 university libraries on web-based information services in India and found an important result that as more libraries move towards providing services in a web environment, the improved access to remote library collections is making the use of electronic Information resources more realistic and more attractive. Indian university libraries also have realized the paradigm shift in library services and they are providing better Web-based library services to their current techno savvy users.

From the literature on international perspective it is observed that almost all the developed countries have made significant progress in modernization of university libraries (ULs) to suit the needs of higher studies and cope with the latest developments in information and communication technologies. Developing countries are not lagging behind with recent developments though they have many constraints. From the discussion above it is indicated that the world of ULs have made tremendous progress in basic functions i.e. automated acquisition, processing, circulation and reference of the ULs, database creation, digitization of resources, E-resources management, content management, remote access to the documents, quick and effective retrieval of information, personalized services, information services, cooperation and making consortium, institutional repositories and archives, publishing and advertising of library product, information literacy program and user education, library standardization, departmentalization, policy formulation, library administration, human resources management, security measures, library auditing and in related areas.

SECTION – II

STUDIES ON UNIVERSITY LIBRARY MODERNIZATION: NATIONAL CONTEXT

Nearly two hundred years of British occupation (1765-1947) in the Indo-Pak subcontinent, many social norms of these areas have changed and shaped into British style. Till date, its impacts have been observed on culture, history, building, administration, education, and in tradition. As a consequence of that, after the independence of Pakistan from British ruling in 1947, university and library building of many universities took shape on British style. Throughout the Pakistan period from 1947 to 1970, only five public universities were setup in East Pakistan (at present Bangladesh) like Rajshahi University (1953) in Rajshahi, Bangladesh Agricultural University (1961) in Mymensingh, Bangladesh University of Engineering and Technology (1962) in Dhaka, Chittagong University (1966) in Chittagong, Jahangir Nagar University (1970) in Savar, Dhaka. During the Pakistan regime, initiative for university library modernization was hardly seen. A few initiatives was taken by the East Pakistan Government for human resources development, innovation in new library building, adoption of form catalogue, modernization in access system, etc.

Role and Functions of University Libraries in Higher studies

The main functions of modern University Libraries in addition to the traditional function to support instructional needs of students and teachers with regard to books are: to encourage students and faculty to make full use of library facilities for self-discovery, personal growth, securing information, critical study and the sharpening of intellectual curiosity; to ensure that prospective reader is aware of what literature exists which may interest him; to supply the literature the research worker requires; to help faculty members in keeping abreast with development in their fields (Khan, 1974, p.177).

To perform above functions, the university libraries should be provided with necessary and good collections in every aspect of subject so that no individual filed is

inadequately decorated with reading, research and reference materials and university libraries grow out of their own need and must grow without any barrier on its way. This is proved in every developing and developed country, even in undeveloped countries of the world. Bangladesh is no exception to this. It will be clearly understood from the collection of libraries, staff strength, size of the building and status and pay-scale of the professional members of staff and services rendered by the libraries (Khan, 1974, p.177).

University libraries in the world and not only those in Bangladesh now stand at the parting of the ways. 'From the days of their inception they have grown up in the long and continuous way of traditional scholarship and have acquired some sort of a set pattern of rigidity which however necessary *prima facie* in the earlier days in now becoming sadly anachronistic and even growingly obstructive to the reader's service now expected from efficient modern libraries (Khan, 1969).' Khan (1969) also identified few factors which ultimately changes the university libraries:

1. Financial implication of building up an *ad infinitum* collections of books in the ever-widening fields of knowledge; (p. 22)
2. Growth and availability of specialized collection of books and materials, in special and research libraries attached to learned or scientific institutions (or sometimes attached to universities albeit as independent units) and societies; (p. 23)
3. Automation and Mechanization in libraries (p. 25)

Khan (1974) also describes that the rapid rate of development of higher education during the last few decades, especially in the private sector, the significance increase in the network of institutions of higher learning, and the expansion of their activity created very favorable condition for the development of libraries in higher education. The leading place among the libraries of institutions of higher learning belongs unquestionably to the university libraries. This will be proved if we examine the books held by any university libraries.

It is opt-repeated saying that "the library is the heart of the university" and, speaking purely from the academic and scholastic point of view, this statement cannot be

controverted, the vital importance for a library to the academic community, students, teachers, and researchers is universally accepted (Khan, 1972, p.73).

Realizing the above facts, in the year 1979, Mr. Stephen Parker, an UNESCO expert and library consultant undertook a survey of public libraries in Bangladesh and submitted his report to the Government of Bangladesh (Parker, 1979). A few Surveys of Bangladeshi public and special libraries have been undertaken by Bangladeshi national. But no attempt has ever been made to survey the university libraries in Bangladesh till today. Recognizing the fact that a library has central and critical importance in a university the government department concerned with higher education in Bangladesh with assistance of the British Council has formulated a set of standards for university libraries to assist university administrators, libraries and others in evaluating improving university library services and resources. This seminar on university library administration in Bangladesh was well attended by the library educationists, university librarians, Librarians of the National Libraries, librarians of the various organizations of Bangladesh and representatives of the Library Association of Bangladesh (Rahman, 1988).

The seminar on “University Library Administration” which was held as stated before, under the auspices of the British Council, Dhaka. In March, 1986 strongly felt that there should have some kind of standards and drafted a set of standards entitled as ‘Recommendations of the British Council Seminars on University Library Administration in Bangladesh’ (British Council, 1986). However, these recommendations are still waiting for approval from the Ministry of Education for implementation and have not been implemented in the absence of any other standards or guidelines for the university libraries in Bangladesh till date (Rahman, 1988).

Infrastructure

The university libraries are now facing a new situation. The unprecedented expansion and complex procedures which university libraries of to-day experience in the functioning of libraries are unexpected. The tremendous increase in the number of students at the undergraduate and post-graduate levels, the information

revolution, the proliferation of new subject areas and the explosive situation of new and viable books and periodicals in English and other languages are some of the chief factors to be reckoned with in the organization and functioning of the university libraries to meet the new demands made on them (Rahman, 1988).

Situational report on 'National S&T Information Infrastructure and Services in Bangladesh' by BANSDOC reveals that most of the university library buildings are not well planned, and the architecture does not meet the requirements of automation and modernization. On the other hand, the traditional card catalogues are prevailing. Most university libraries have open access to their reference collections. Most of the government university libraries have been participating in the compilation of the National Union Catalogue of Foreign Scientific and Technical Periodicals, organized by BANSDOC (BANSDOC, 1996, p.28).

Library and laboratory conditions are not conducive for quality education. There is no denying the fact that the use of library facilities by students and teachers have declined over the years. The teachers in most cases seem to rely on particular texts and the students seem to possess increasingly poorer language ability to comprehend and explore the vast expanse of scholarship that the libraries hold. The libraries are poor as they lack adequate resources to buy recent publications and order for the basic journals (Monem & Baniamin, 2010).

Facilities

Almost all the university libraries of Bangladesh have been providing various kinds of facilities, like photocopy machine, microfilms and microfilm reader, microfiches, slide projectors, microcomputers, and fax. The Dhaka University Library, Bangladesh University of Engineering and Technology Library, Jahangirnagar University Library, and the Bangladesh Agricultural University Library have already begun to create their own databases of the library holdings (BANSDOC, 1996, p.28).

Haq (2001) pointed out different things in the article entitled "A Scenario of Higher Education in Bangladesh" that private universities are suffering from different problems and barriers from the administration and environments. The author also

explained that most of the private universities in Bangladesh have not yet emerged as full-blown university. It also revealed that most of the private universities do not have rich library facilities. The relevant reference books and standard foreign and national journals are hardly found in the library of the private universities. He also mentioned that most of the private universities of the country are poorly equipped with necessary reading materials and electronic devices.

Library Cooperation

The government university libraries have established cooperation among themselves and with many foreign partners, especially in the field of book and journal exchange. Many government university libraries enjoy the facility of NAIS, DEVINSA, HeLLIS, Medline, Popline, etc. (BANSDOC, 1996, p.28).

Mannan (1998) conducted a study on 25 public, private and special libraries regarding "The availability of automation facilities for networking and resources sharing in Bangladesh" and the result indicated that people and the institutions of Bangladesh are going very slow pace in entering the use of technology for networking and communication. Only 16% of libraries are using telex, 36% are using E-mail, and 44% are using Fax. It is observed that 80% of libraries have been using computer. 20% of libraries are found their facilities are much adequate. It is found that 64% of the libraries initiated computerization of their documents. Almost 50% of the academic libraries have computerized their circulation work. Computerized databases are available at 36% of the libraries and most of the academic libraries do not have this database. It indicates very unsatisfactory performance of the libraries in Bangladesh. 64% of the libraries have access into the existing networking system in the country. Concluding remark of the study is that the advancement in library automation in Bangladesh is not prominent. The barriers identified for these are mainly lack of legal sanctions by the concerned authorities, adequate financial supports, skilled staff, basic legislative support, proper policy and technological facilities.

Library Administration

The attitude of the university authority to the development of the library is the most important factor. In almost all cases the authority interprets the development of the library as synonymous with the development of the university, but when the question of provision of the library facilities clashes with provisions of facilities for any other department of the university, the interests of the later invariable supervene (Shahabuddin, 1970). This situation has been continuing till date.

Human Resource Development

After the independence of Pakistan from British regime in 1947 there was no formal library education and training program in East Pakistan (present Bangladesh) till 1952. Only two professionals (Mr. A. M. Motahar Ali Khan and Mr. Siddique Ahamed Chowdhury) having certificate course in librarianship from the Punjab University were available. During the period close to 1952 to 1955 about a dozen matured scholars from Pakistan were sent to USA, UK, Canada and New Zealand for training and higher education in library Science. "The professional development in the country started with the 3-month training programme (certificate course) initiated by the Dhaka University Library in 1952 (Hossain, 1983, p.75)". LAB launched a formal 6-month certificate course in library science in 1958. Dhaka University (DU) introduced Post-graduate diploma in 1959. One year Master programme was introduced by DU in 1962. LAB started publication of professional journal *The Eastern Librarian* in 1966. "After independent in 1971, libraries in Bangladesh received more attention than ever before. The most notable events which contributes further development were: the opening of a two-year masters and a two-year M.Phil programme by the DU in 1976; the launching of a doctoral programme by the DU in 1976; and opening of the 3-year Bachelor's (Honours) programme in Library and Information in 1988 by the DU and University of Rajshahi launched a 3-year Bachelor's Degree (Honours) course in 1993 (Ahmed, 1998)". Without the above a number of certificate, diploma and M. A courses were offered in various institutions and colleges under National University. By this time many professionals took training from abroad by his/her own funding as well as with support of the Government and foreign scholarship.

Professional Status of the Librarian

Hanif Uddin (2005) discusses about the Private University Act in the article entitled "Library and proposed Private University Ordinance" where he pointed out different university (Public and Private) act and their different weak points. He showed that one of the main reasons of better condition of the public university library is that in public university ordinance there is a rule of establishing libraries in each university and librarian is announced as a university officer. But in the first Private University Ordinance 1992, there was no rule to establish library strictly and the name of librarian was not included in the list of officer. By realizing the matter, the National Educational System Compilation Committee-1997 reformed the Private University Act and has recommended to include the term of library establishment (Cited in Islam, 2003).

Nazim Uddin (2005) pointed out different side of the Private University Act and the status of librarian in his article "The status or librarian in the Private University Act and recent Education Commission Report" where he revealed the status of librarians in the Private University Act. He also discussed about status of the librarian in foreign private universities where professional librarians are considered to be research staff or director. In 1940, an American association of university professors absolutely proposed to be enlisted all professional librarians in their association. This proposal earned recognition for the librarians to be equal in rank with others. The author reported that in USA, UK, Australia, Canada and other developed countries in the world, librarians are getting faculty/academic status. At the end of the study the author suggested to provide academic status of the professional librarians of Bangladesh (Cited in Islam, 2003).

Modernization of Library Building

Before the technological invention like communication and computer technologies most of the changes happened related to the library service and in other sectors. If we look back to the Dhaka university library which founded in 1921, the first university in Bangladesh was started its journey with '18,000 books inherited from the library of the Dhaka College and Dhaka Law College (Aziz, 1975, p.iii)' and housed in a temporary building. 'Dhaka University Library was moved to its new building in the present Arts Faculty campus during 1964 (Mirdah, 1965, pp.40-44). Rajshahi

University Library to its present location in 1964. Bangladesh Agricultural University Library was started in a single room of administrative building, moved to its new building in the early part of 1969. The BUET Central Library has its own separate building and moved to its new accommodation in 1973. The Chittagong University Library was launched in the month of November, 1966 in a temporary building towards the end of 1973 the library was shifted to the present building. Jahangir Nagar University library housed in a rented accommodation. Subsequently the Library shifted to the campus in a big room attached to a half of faculty residence. A tin-shed was rented soon to serve as reading room for students and teachers. Finally in 1982 the library moved to its new building having a total plinth area of 65,000sqft.

Introduction of Traditional Catalogue at Dhaka University Library

The current catalogue of DU is maintained in card format and can be approached by author, title, or subject. There is also an historical 'sheaf catalogue' for older materials. The sheaf catalogue was introduced during the session of 1923-24 (Dacca University Annual Report, 1924, p.6). The sheaf catalogue consists of books received up to 1952. Books obtained after 1952 were entered into card catalogue. The library has also been upholding a dictionary catalogue. During the session of 1927-28, the library books have been catalogued according to American Library Association Rules (Dacca University Annual Report, 1928, p.29). Today the library follows AACR-2 Codes (Chowdhury, 2006, p.131).

Access System

The Dhaka University introduced an 'open access system' in 1934. It proved to be successful as the volume of books on issue increased tremendously, which spoke volumes about the library's popularity (Bengal, Ninth Quinquennial Review, 1937, p.69). However, this system had to be abandoned when it was noticed that there were weighty losses in essential books and valuable journals. This forced the library to use a 'close access' system (Rahman, 1983, pp.61-66), which is currently in use. During 1952-53 the Dhaka University Library introduced the Dewey decimal classification system (Dacca University Annual Report, 1953, pp.27-28). This book classification system is still in use.

Introduction of Microfilm/Microfiche Reader and Photocopy Machines

Dhaka University Library introduced microfilming and photocopying section on 21st November 1962 (Mirdah, 1969). This is the only remarkable event in university library modernization in Bangladesh. Exact date and year of set up of cyclostyle, typewriting machine, fax machine, telephone, punch card, photocopy machine in public university were unknown. Traditional forms of cataloguing were used in almost all the public universities which were setup during the time to 1921 to 1992s. Change in circulation system and service pattern was seen mostly after the 1980s. Subsequently with the innovation of the computer and communication technology, library system and administrative procedure changed gradually.

Use of Information Technology

Information and Communication Technologies (ICT) made possible the tasks for digitalization of library resources, expanding the service network, smoothing the resource sharing process, and modernizing the study environment and other services. The major tasks are identified, such as – developing web-based integrated library management system, building sustainable digital collection, improving searching facilities, strengthening the existing networking systems, developing automated documentation services, building an automated tracking of library materials using RFID that will ensure security and automated circulation systems etc.

Bangladesh entered into the computer era in 1964 with the installation of an IBM 1620 machine at the Atomic Energy Commission at Dhaka. Institute of Statistical Research and Training (ISRT) installed IBM 101 Statistical Machine in 1964. Commercial application of computer was initiated by Janata Bank with an IBM 1401 in 1967 followed by Adamjee Jute Mills Ltd. in 1970. The Government use of computer began in 1973 with the procurement of an IBM 360/30 machine for the Bureau of Statistics. Bangladesh University of Engineering and Technology (BUET) started its computer application in 1968 by offering courses in Numerical Methods and Computer Programming, acquiring IBM 029 Data Entry Machines (Patwari, Alam & Rahman, 1996, p.1-2).

The 1980s are considered the beginning of the automation era as far as libraries and information centers in Bangladesh are concerned. The International Center of Diarrhoeal Disease Research, Bangladesh (ICDDR,B) Library and the Agricultural Information Center (AIC) are pioneers in creating bibliographic databases on specialized fields using microcomputers (Khan, 1989, p.38 & Ahmed, 1998, pp.40-41). Very recently, in view of the changing attitudes of information users in getting specific information, a number of libraries and information centers of the country have taken initiative to establish a proper system for providing desired information to their users by using automation (Ahmed, 1998, p.41).

Mottalib (2001) stated that in the late 1970s, the first Institute of Computer Science was established in the Bangladesh Atomic Energy Commission, Dhaka, Bangladesh. According to Karim (2001), described that a new industry in Bangladesh is shaping rapidly i.e. the Information Technology (IT) industry. Use of computers in Bangladesh as a research and data manipulation tool dates back more than 30 years.

Rahman (2002) summarized that ICT involves collection, storage, processing and distribution of information using electronic means. Importance of ICT and scientific and technological information for research and socio-economic development of the country has been analyzed. Suggestions have been made to create information repositories with online accessibility and to upgrade existing information repositories with ICT tools and techniques. Important components of modern information infrastructure have been analyzed in the context of Bangladesh. Big difference in access to information for urban and rural populations has been pointed out and suggestions have been made to set up community information and communication centers in the rural areas to reduce digital divide in the country. In Bangladesh applications of ICT are expanding fast and some application areas are publishing, financial services, entertainment, healthcare, transportation, administration etc. The Internet is the largest source of information and the Internet applications have started to influence our economic, social and cultural activities.

Every major historical transformation needs an enabler. Today, advances in technology has left us in no doubt that Information and Communication Technology (ICT) is the leading enabler not only for global competitiveness and driving innovation

but also for nation's won prosperity and development (Digital World'2012, p.9). As perceived the latitude of ICT for all type of evolution in human way of life in recent years. We found this kind of evolution in every aspects and library is not expectation of this. From the pre-modern to the modern period we found evolution of university libraries not only in the western world but also in Bangladesh significantly due to the demand of new fields and requirements of higher studies.

Automation in University Libraries

Among the public universities, the Dhaka University Library first took library automation project and use of computer technology by installing GLAS software in November 1998 in a joint project funded by the United Nations Development Programme (UNDP) and UGC (Chowdhury, 2006, p.134). Subsequently many other universities have been successfully installed library automation software and various automation technologies.

From almost very beginning, BUET Central Library had been performing its systems and services with the help of modern technologies. It was continuing the book processing and bibliographic services using CDS/ISIS since 1990s. In the year 1999 the library itself developed Visual FoxPro based software to extend the computerized library systems. In line with this advancement, the library had developed an Oracle based integrated library software named BUETLIB along with website provision, cooperated by the department of Computer Science and Engineering of the university in 2004 (Kabej, Habib & Hossain, 2012).

After the Private University Act 1992, the journey of private universities (PvtUs) has been started in Bangladesh. From the very beginning PvtUs has been trying to avoid traditional activities by applying technologies. Among the PvtUs, Independent University, Bangladesh (IUB) is playing a pioneering role in this respect. From the first day of its establishment in 1993 IUB library has been using computerized catalogue to till date. North South University is also using library software instead of traditional library catalogue from the very beginning. Afterward EWU, BRACU has been using library automation software. Initially, these universities were trying automation activities by using CDS/ISIS, customized and software packages. Rahman (1998) in his

article described that certainly there are some constraints which seriously hindrance our attempts to automate libraries in Bangladesh. These are psychological problems of the employees, lack of fund, technically trained personnel, infrastructural support, administrative apathy, ignorance of users, increasing cost of automated systems.

Bashir (1998) conducted a study on "Information system and services of the private university libraries in Dhaka city: a critical study" which revealed that there are many problems in private university libraries of Bangladesh. Private Universities have opened a new avenue of opportunities for library modernization though some universities are in primary stage. This study also highlighted some universities which are facing UGC's punitive actions for their different limitations including library.

Munshi & Ahamed (2000) carried out a study on 65 library and information centers (9 public and 8 private university libraries, 2 national, 1 public and 45 special libraries) in Bangladesh regarding "Status of library automation in Bangladesh" where they observed that the present status of library automation of Bangladesh is not satisfactory at all. A number of problems compel in using small number of computers in the libraries. The study also revealed that considering the socioeconomic conditions of Bangladesh, it is not easy to build up an automated library system due to less computing resources, telecommunication facilities, poor logistic support and non-availability of trained personnel.

Hasan (2001) conducted a study on "Private university libraries in Bangladesh" where he observed that PvtULs need a clarification of many problems to formulate a long-range policy and to undertake co-operative effort among private university libraries in Bangladesh. The author also gave strong opinions that PvtULs should initiate regularly and complete evaluation of their operations and services in order to identify weakness build upon strengths and further the planning process. The researcher found out that problem lies in Private University Act and demanded amendment from the Government.

Uddin (2001) carried out a study entitled "Extent of the use of modern technology in library service" on some selected private university libraries in Rajshai division and found that use of new technologies in their services is embryonic stage. Users are

not fully satisfied with their technological facilities and services. The major problems were identified related to the use of modern technologies are proper initiative, manpower, training, own library building, cost and effectiveness of software packages and so on.

University Grants Commission & Commonwealth of Learning (2002) jointly organized a seminar on "Quality Assurance in Higher Education in Bangladesh" where various recommendations emerged on the issue. Emphasis was given on development of library and laboratory by the speakers. The speakers note that paucity of fund is a serious constraint for developing library and laboratory. Thus the seminar proposed to provide sufficient fund and trained personnel to the library. The seminar also suggested to introduce new technology like Internet facilities for gathering updated knowledge.

Mostafa (2004) discussed existing situation of university libraries in Bangladesh in his work "University libraries in Bangladesh problems and prospects". He reported that public university libraries are providing basic facilities; performing routine functions; and providing automation facilities. The work also revealed different drawbacks of the university libraries and pointed out that the situation of university library is not very encouraging. However, the most positive feature of his studies is that the author admires today's' informational professionals who are facing many challenges. The barriers identified for these are lack of effective leadership, sufficient fund, shortage of skilled manpower etc.

Islam & Rahman (2007) conducted a research on constraints to implement ICT based activities in some selected academic and special libraries of Bangladesh. Researchers took 3 public, 3 private and 2 special libraries as a sample. The research revealed that overall conditions of ICT in libraries of Bangladesh are not at satisfactory level and found many constraints in infrastructural facilities, library budget, manpower, long-term planning, and in training program.

Alam & Islam (2011) conducted a study on "Digital library initiatives in Bangladesh", twenty public and private university libraries were selected as sample and found that digitization and automated library system in Bangladesh are still in the infancy level

and these activities are very much related to the development of bibliographic and full text database, hosting e-papers and metadata on the web, online searching and downloading facilities etc. However, in the recent times a very few initiative have been noticed taken by different institutions. The study revealed that 60% of sample libraries do not have any e-books. 55% of libraries subscribe and/or have free access to e-journals. Based on survey data 2010, the study indicates that libraries hold some electronic literature on CD-ROMs and DVDs. 15% of libraries reported that they preserve their research output in electronic format. The study also revealed that digitization activities have been hampered for the cause of dual expertise particularly in prefect OCR level scanning, metadata extraction, subject analysis, searching and retrieval. Besides, unskilled manpower, lack of fund, misconception of digitization library automation and mechanization, techno phobia, unhelpful attitudes of the management etc. are the major impediments toward digital information system.

Munshi, Siddike & Sayeed (2011) carried out a research entitled “The adoption of information and communication technology (ICT) in the university libraries of Bangladesh” on twenty public and private universities of Bangladesh which revealed that six libraries are partially computerized and CDS/ISIS or WINISIS is the commonly used software. Among the universities, two were found using Koha and GLAS software. Cataloguing and database creation were found top most rank in computerization activities. Major ICT based services were found CD-Rom search and other services are OPAC, Internet, E-mail, and reprographic services for their users. Major source of fund for library automation was found UGC, international organization and alumni of the universities. Libraries were found inadequate funds, lack of trained personnel, lack of awareness, and shortage of manpower. A final remark of the study is that library field has been facing negligence from the very beginning of library movement in Bangladesh.

Chowdhury & Sameni (2011) carried out a survey on BAUL, BSMMUL, SUSTL, BRACUL, EWUL and IUBL regarding “usage of Internet and e-resources” and found that library automation and development of databases for information collection, storage and dissemination has been started in every sampled university library. The

study revealed that use of Internet has increased tremendously; libraries are providing computerized services; use of e-journal and e-resources has increased; library are using computer for house-keeping operations etc. the study also depicted that these university libraries have made tremendous progress in using open-source software and in computer based information systems.

Rahman & Bandyopadhyay (2011) conducted a research on 80 university libraries of Bangladesh to unmask various facts and figures and also to know the status of library automation. The research revealed that 90.91% of public university and 97.67% private university libraries have installed computer for house-keeping operation. The study also showed that ICT infrastructure of Bangladesh is not at par with the developed countries, but a significant changing is shown in the field of library and information science.

Contribution of BRAC University Library

BRAC University Ayesha Abed Library (BRACUL) has made a milestone in using open source software in Bangladesh. According to the BRACUL Website (2013) and Afroz (2012) the successes of BRACUL have been presented chronologically in the following:

The first customized Library Software BULMS was launched in October 2004. Digital Institutional Repository using Open Source Software Dspace was established in April 2008-the first university library in Bangladesh with financial support from INASP. Content management software MyAthense was installed in 2008. The Elsevier Foundation awards grant for implementing popular and world-wide used open source Integrated Library System software Koha in March 2009. Library Learning Resource Center was established in December 2009 to conduct session on Information literacy and training and workshops for library professionals, staff and faculty and the library was redesigned and renovated funded by BRAC Bank. For the description of bibliographic items in digital formats BRACUL is the first to introduce MARC 21 and a complete integrated library system Koha in Bangladesh in February 2010. Open source library search engine VuFind was introduced in May 2010 to allows users to search and browse beyond the resources of a traditional OPAC.

BRACUL has successfully completed this discovery tool project with financial support from INASP, UK. Open Source Discovery Tool VuFind project was launched in January 2011 first time in Bangladesh. Free wireless internet access (WiFi) has been introduced in March 2011 at all library floor. For automatic identification and tracking of library resources BRACUL introduced the first-ever RFID System on 28 October 2011 in Bangladesh. Free and open source content management system Drupal-based web site has been introduced in BRACUL in January 2012. BRACUL offers SMS Service – the first time in Bangladesh from February 2012.

BRACUL conducted various training program and various workshop on the title 'using open source content management system Drupal to build library Websites', on October 7, 2012, training on VuFind Discovery tool, 5-6 January 2011, follow-up workshop on Koha, 5-6 August, 2009, training on MARC 21, 4th-7th March, 2009, workshop on Koha March 15, 2009, workshop on Dspace June 26, 2008 are various notable events of BRACUL. Without these BRACUL experts conducted sixteen training and software installation support from 2007 to 2013 to the number of institution and universities in Bangladesh (BRACUL website, 2013).

Advent of Internet and Open source Software

Since the mid-1990s the Internet has had a drastic impact on culture and commerce, including the rise of near-instant communication by electronic mail, instant messaging, Voice over Internet Protocol (VoIP) "phone calls", two-way interactive video calls, and the World Wide Web with its discussion forums, blogs, social networking, and online shopping sites. The research and education community continues to develop and use advanced networks such as NSF's very high speed Backbone Network Service (vBNS), Internet2, and National LambdaRail. Increasing amounts of data are transmitted at higher and higher speeds over fiber optic networks operating at 1-Gbit/s, 10-Gbit/s, or more. The Internet continues to grow, driven by ever greater amounts of online information and knowledge, commerce, entertainment (Wikipedia).

With the tremendous flourishing of Internet and availability in Bangladesh in 1993 with e-mail service using dial up network connection. Bangladesh entered into the

horizon of the open source software. When the various advantages of the open source software opened towards the mass people many universities of Bangladesh have been trying to introduce OPAC and with the help of open source from 1993s. BRAC University first took initiative to install Koha and DSpace with funding and project by INSP-Peri in Bangladesh.

ICT infrastructural development

BTCL has taken necessary action in achieving “Vision 2021” of the government to create “Digital Bangladesh”. With that end in view, BTCL is providing adequate telecommunication infrastructures support. BTCL has already initiated a numbers of projects to facilitate e-governance, video conferencing and digitization of government services. Besides development of urban ICT infrastructure, grand plan has also been adopted to connect all the Union Parishads through Optical Fiber Network, broadband line with minimum 1Mbps speed.

Table 2.2.1 Bangladesh telecommunication infrastructures

Infrastructural Facilities	Total Number
Telephone capacity	14.28 lac
Telephone connection	9.43 lac
Asymmetric Digital Subscriber Line (ADSL) Capacity	46,878
ADSL Subscriber	12000
Digital Exchanges	768
Total Exchanges	768
Upazilla (Digital Exchanges)	485
Growth Centre (Digital Exchange)	187
Trunk Automatic Exchange (TAX)	18
Total National Long Distance Circuits	52,216
International Trunk Exchange (ITX)	5
Total International Circuit (Satellite + Submarine)	80,676
Satellite Circuits	6,500
SMW4 (Sub-Marine Cable)	74,176
Satellite Earth Station	3
IIG Bandwidth	3.34Gbps
Total Optical Fiber	4,950KM

Source: BTCL Annual Report 2011-12

Besides government initiatives, mobile phone operators, Internet provider, VSAT Companies, and Computer Societies have been working in private sectors for providing high speed Internet facilities building a national wide networking on shared basis.

In last 4 years, there has been a significant growth in the access & penetration on communication technology in Bangladesh. Annual growth rate of Internet usage is 20% which has consecutively increased every year. Internet subscriber penetration by population & household has gained numbers like never before. Mobile service penetration is 56% now with a record of 10% increase rate than last year. Fixed line penetration is 4.5% whereas there are 2.8 million Facebook users till now in 2012 which is ever increasing with remarkable activities. Overall the society has proved to be generous adapter of digital and information technology for betterment of livelihood with purpose to excel in education, income & networking (Digital World Secretariat, 2012).

Review of the related literature in the Bangladesh context reveals that few works have been done on the present research topic. Existing literature on modernization issues of university libraries in Bangladesh have failed to depict explicitly the areas of problems and guidelines for improvement. A few literatures described about library automation status, use of information technology and digitization of library materials but did not cover all other aspects of modernization of university libraries of Bangladesh. Despite of scarcity of literature on the present research, an effort has been made to show the history of development of university libraries by adopting modern tools and techniques for ensuring quality education in higher studies.

CHAPTER – 3

Development of University Libraries in Bangladesh

CHAPTER 3

DEVELOPMENT OF UNIVERSITY LIBRARIES IN BANGLADESH

Higher education of Bangladesh is undergoing substantial changes in terms of the ways college, universities are organized and functions. “This change is being driven by the combined forces of demographics, globalization, economic restructuring, and information technology-forces that will over the coming decade, lead us to adapt new concept of educational markets, organizational structures, how we teach, and what we teach (Morrison, 2003).” As consequences, higher educational institution and its vital organ ‘Library’ are in continuous change. Academic libraries in general and university libraries in particular have been changing at the same dimension and speed to fulfill the changing demand of its stakeholders. ‘The tremendous growth in enrolment in higher education during the post-liberation period in Bangladesh has forced to change in the universities far beyond rarely asking them larger. The university has become a very complicated institution; yet in Bangladesh most university libraries specially the four general universities have made few changes to cope with this tremendous increase in students (Khan, 1973, p.9).’ Hence, the purpose of this chapter is to sketch a historical development of the university libraries in Bangladesh and their ever changing scenarios.

Structure of the Education

Education in Bangladesh has three major stages-primary, secondary and higher educations. Primary education is a 5-year cycle while secondary education is a 7-year one with three sub-stages: 3 years of junior secondary, 2 years of secondary and 2 years of higher secondary. The entry age for primary is 6 years. The junior, secondary and higher stages are designed for age groups 11-13, 14-15 and 16-17 years. Higher secondary is followed by graduate level education in general, technical, engineering, agriculture, business studies, and medical streams requiring 5-6 years to obtain a Masters degree. In the general education stream, higher secondary is followed by college/university level education through the Pass/Honors Graduate Courses (4 years). The masters Degree is of one year duration for holders of Bachelor

Degree (Honors) and two years duration for holders of (Pass) Bachelor Degree. Higher education in the technical area also starts after higher secondary level. Engineering, agriculture, business, medical and information & communication technology are the major technical and technological education areas. In each of the courses of study, except for medical education, a 5- year course of study is required for the first degree (Ministry of Education, 2008).

Table 3.1 Present educational structure of Bangladesh

THE PRESENT EDUCATIONAL STRUCTURE OF BANGLADESH																
Age	Grade															
26+																
25+	XX					Ph. D(Engr)	Ph.D(Medical)									
24+	XIX			Ph. D	PostMBBS Dipl			Ph. D (Education)								
23+	XVIII			M.Phil	M.Phil(Medical)											
22+	XVII	MA/MSc /MCom/MSS/MBA		LLM	M B B S BDS	MSc(Engr)	MSc.(Agr)		MBA	M.Ed & M A(Edn)	MFA	MA(LSc)				
21+	XVI	Bachelor (Hons)	Masters (Prel)	LLB(Hons)	BSc.Eng BSc.Agr BSc.Text BSc.Leath	BSc.Eng	BSc (Tech.Edn)	BBA	B.Ed Dip.Ed & BP ED	Dip.(LSc)	Kami					
20+	XV		Bachelor													
19+	XIV		Bachelor (Pass)									Diploma (Engineering)		BFA		Diploma in Nursing
18+	XIII											Fazil				
17+	XII	Secondary	Examination		HSC	Diploma in Comm	HSC Voc, C in Ag	C in Edu.	Pre-Degree BFA	Diploma in Comm	Alim					
16+	XI		HIGHER SECONDARY EDUCATION													
e15+	X		Examination		SSC							TRADE Certificate/ SSC Vocational	ARTISAN COURSE e.g. CERAMICS			
14+	IX	SECONDARY EDUCATION		Dakhil												
13+	VIII	JUNIOR SECONDARY EDUCATION														
12+	VII															
11+	VI															
10+	V	PRIMARY EDUCATION														
9+	IV															
8+	III															
7+	II															
6+	I															
5+		PRE-PRIMARY EDUCATION														
4+																
3+																

Source: BANBEIS. Retrieved May 11, 2012 from http://www.banbeis.gov.bd/es_bd.htm

In Bangladesh, because of the British occupation in this sub-continent for nearly two hundred years, university education has been developed on the British pattern. But Bangladesh could not achieve the progress made by British universities due to non-availability of adequate funds and partly due to the negligence of the authorities (Rahman, 1988, p.54). In Bangladesh, historically the universities, particularly general universities, have been developed on lines of the British universities and the

engineering and agricultural universities on lines of the American ones (FFYP, 1998, p.655).

Types of the Universities

There are various types of universities in Bangladesh. National Education Commission (2003) summarized (1-7) the following types of universities in Bangladesh:

1. General University
2. Engineering University
3. Agricultural University
4. Medical University
5. Science and Technology University
6. Affiliating University
7. Open University
8. Veterinary University
9. Textile University
10. Islamic University
11. Professionals University [Bangladesh University of Professionals (BUP) established by the Armed Forces of Bangladesh]

Higher Studies in Bangladesh

As stated above at present there are various levels of education in Bangladesh. Namely: primary, secondary and tertiary level of education. Tertiary education in Bangladesh comprises two categories of institutions: degree awarding universities and colleges affiliated to the National University (NU) (Bangladesh Country Summery of Higher Education, n.d.). Every year many students are passing secondary level education and try to enroll into higher or tertiary level studies. In 2013, a total number of examinees were 10,02,496 and of them 7,44,891 came out successfully (Hoque, 2013, pp.1&19). On the other hand only 50000 (estimated) students can accommodate in different public universities (University Grants Commission, 2008). Access to tertiary level education in Bangladesh is still very limited. Only about 12 percent of the year twelve graduates can enter into higher education. More than 80 percent of these students are in the NU affiliated colleges. Others are in the public and private universities. Though the number of private universities increased in recent decade, the student population served by these private universities is growing rather slowly (Bangladesh Country Summery of Higher Education, n.d.). According to a UGC report 166,179 seats in 2010 & 200,399 seats in 2011 has been created for

under graduate students in private universities in Bangladesh (Dhaka Tribune, 2013). As a result, a gradual demand has been observed for higher education in the country.

Structure of university libraries

Universities have administratively different library structure, such as (i) central library with independent, subject libraries attached with the departments and colleges (ii) central library with seminar or reference libraries in departments and colleges (iii) only central library. It may be described as both centralized and decentralized (Ameen & Haider, 2007). There are another two kinds of libraries which deal with university: (i) institute library, and (ii) hall library. One of the studies by Ameen (2005) found that in most of the cases, the authority regarding financial grants, administrative and policy decisions, purchase and personnel recruitment lies in the hierarchy of the syndicate, academic council and library committee to run the central library system. A library committee usually consists of Vice-Chancellor as a chair, chief librarian (member secretary/ex-officio member) and nominees of syndicate, academic council, faculty and administration. However, all of the universities have not formulated a library committee. The chief librarian oversees the internal management and activities but mostly decision comes from higher authority.

The role of a university library is obviously to meet the research and information needs of its community. If we look at the functioning of a university in the developed world, they manage information and learning resources to provide their clients with local and remote access to the collections in all kinds and formats of IT. This is not completely true for the least developed countries like Bangladesh. The university library collections have been based mainly on books and then serial publications like newspapers, magazines and journals (Ameen, 2005). Recently, the university libraries of Bangladesh collecting materials on electronic format.

University Library Origin and Development

The developments of university libraries are closely related to the development of universities. "Almost all the university libraries were formed together with the universities" (Rahman, 1988, p. 69). As country was needed universities for different disciplines, a number of universities were developed from the beginning and late of the 20th Century. This development may be divided into two major periods: (1) pre-independence, and (2) post independence of Bangladesh.

(1) Pre-Independence periods divided into two periods (1857-1970):

(a) British periods (1857-1947)

(b) Pakistan Periods (1947-1970)

(2) Post-Independence periods also divided into two arenas (1971-2013):

(a) Periods of Public University Libraries (1986-2013)

(b) Periods of Private University Libraries (1992-2013)

Pre-independence (1857-1970)

(a) British Period (1857-1947)

Bangladesh formerly was a part of the British India as East Bengal. The area comprising the present Bangladesh had no university for a long time during the British rule (UGC-Handbook Universities of Bangladesh, 2009, p. xvii). The British settled and stayed on for nearly two hundred years, initially for trading. They subsequently started to establish academic institutions and libraries on a small scale (Kabir, 1987). It may seem unbelievable, but the first universities were set up under the colonial rule of the British now East India Company in 1857 in the then three principal cities Calcutta, Bombay and Madras. They were established on the model of the University of London (Rahim, 1991). The first university adjacent to Bangladesh was the University of Calcutta. It will be seen from the history that Bengal was the center of learning and also an important state in the whole of sub-continent but no university was setup during the period (Khan, 1974, p.179). The first university in Bengal was the University of Dacca which came into existence through the Dacca University Act, 1929 (Journal of Pakistan Historical Society, 1968, p.52).

Dacca University was not a voluntarily established university by the British Government in Bengal. "In 1905, during the period of Lord Curzon, Bengal was divided and a province named East Bengal and Assam was carved out with its capital in Dhaka. A country-wide agitation was led by the privileged class in Calcutta against the partition and in 1911 the partition of Bengal was annulled" (UGC-Handbook Universities of Bangladesh, 2009, p. xvii).

This left a deep mark of anger, sorrow and frustration in the minds of the majority Muslim population of Eastern Bengal and Assam. In January 1912 the leading personalities of the Muslim community led by the Nawab of Dhaka, Sir Salimullah, Nawab Syed Nawab Ali Chowdhury and Sher-e-Bangla A.K. Fazlul Huq, made strong representations to the British Viceroy, Lord Hardinge, in favour of setting up a university at Dhaka. To assuage the feelings of the Muslims, the government issued a communique in February 1912, assuring them that it would be set up. In May 1912 the then government of Bengal set up a committee known as the Nathan Committee to recommend a scheme for the establishment of the university. In 1913 the government of India passed a resolution to establish some teaching and residential universities in British India including one in Dhaka. Finally, following the recommendations of the Calcutta University Commission, also known as the Sadler Commission of 1917, a teaching-cum-residential university was set up in Dhaka and the University opened its door to the students on 1 July 1921 (UGC-Handbook Universities of Bangladesh, 2009, p. xvii).

(b) Pakistan Period (1947-1970)

The Indian subcontinent when achieved independence from the British rule in August 14, 1947 was divided into two separate states in the name of India and Pakistan. The Pakistan was divided into two wings i.e. West Pakistan as East Pakistan (presently Bangladesh). At that time very few notable libraries came in the share of Pakistan. Pakistan being a new born state was facing many problems of utmost importance, so due attention could not be given to the development of libraries (Ahmed, 1987). During the Pakistan regime the second university in this region was established in 1953 in Rajshahi, and educational institutions in the Rajshahi and Khulna divisions came under its jurisdiction.

Next, on the recommendation of the Shariff Education Commission, which was set up by the then government of Pakistan in 1958, it was decided to establish two technological universities - a university of engineering and technology (by upgrading the erstwhile Ahsanullah Engineering College into BUET in Dhaka) and an agricultural university (by upgrading the then East Pakistan College of Veterinary Science and Animal Husbandry into BAU in Mymensingh). Educations being in the list of concurrent subjects, these universities were established in each part (in 1961) by ordinance of the respective provincial governments (UGC-Handbook Universities of Bangladesh, 2009, p. xviii).

The next university to be set up was the University of Chittagong in 1966, at a distance of about 20 kilometers from the port city of Chittagong. During the period of Pakistan the last university to be established was Jahangirnagar University (1970) , formerly Jahangirnagar Muslim University (the word 'Muslim' was dropped in 1972) about 30 kilometers from Dhaka.

After the establishment of Dhaka University up to 1970 there were six universities in East Bengal and subsequently East Pakistan. The date of the establishment of the university libraries corresponding to the date of the foundation of universities are given in chronological order:

Table 3.2 Chronological list of public university library development (before independence)

SL.	Name of the University and Library	Year of Establishment	Location
01	Dhaka University Library (DUL)	1921	Dhaka
02	Rajshahi University Library (RUL)	1953	Rajshahi
03	Bangladesh Agricultural University Library (BAUL)	1961	Mymensingh
04	Bangladesh University of Engineering and Technology library (BUETL)	1962	Dhaka
05	Chittagong University Library (CUL)	1966	Chittagong
06	Jahangir Nagar University Library (JUL)	1970	Savar, Dhaka

Of the six universities, four offer general courses, one offer courses on Agriculture and one offer courses in Engineering and Technology (Ahmad, 1994, p.195).

Status of the above six university libraries

Dhaka University Library is the premier library and ranks first of its kind in Bangladesh. To describe the present state of University libraries in Bangladesh, the University of Rajshahi, Chittagong and Jahangirnagar come second, third and fourth in rank respectively, among the four general universities, so far as its origin, growth and present position, etc, are concerned (Ahmad, 1994, p.196).

Post-independence (1971-2013)

Bangladesh emerged as an independent country on the 16th December 1971 when it ceded from Pakistan after a nine-month war of liberation (Statistical Year Book of Bangladesh, 1989 & Ahmad, 1994). Besides the first education commission in 1972 the University Grants Commission (UGC) was set up in 1972 to accelerate higher education and oversee all the activities of the universities of the new born country-Bangladesh. "The UGC is the statutory apex body in the field of higher education in Bangladesh. The primary objectives of the UGC are to supervise, maintain, promote and coordinate university education. It is also responsible for maintaining standard and quality in all the public and private universities in Bangladesh. The UGC assesses the needs of the public universities in terms of funding and advice Government in various issues related to higher education in Bangladesh. The UGC was established under the President's Order (P.O.) No. 10 of 1973 which was deemed to have come into force with effect from 16 December 1972 (UGC-Handbook Universities of Bangladesh, 2009, p. xi).

Besides education commission and UGC there were taken several Five Year Plans for development of higher education in Bangladesh. At present the Sixth Five Year Plan has been running in Bangladesh. In each FYP, Bangladesh Government took several steps for the development of higher education in Bangladesh.

At the time of independence of Bangladesh, there were only six universities. After the independence no new universities were established until 1986, though there had been much public discussion about doing so because of the heavy student pressure for admission into higher educational institutions. After the independence, the

scenario has changed radically (UGC-Handbook Universities of Bangladesh, 2009, p.xix).

Post-independence period can be divided into two arenas like public universities and private universities. During this period a total of 105 (public 28 and private 77) universities were established in Bangladesh.

Periods of Public University Libraries (1986-2013)

An Islamic University, with five departments in two faculties, was established in 1986 at Shantidanga-Dulalpur in Kushtia-Jessore districts. A new university named Shahjalal University of Science and Technology in Sylhet District started functioning in February 1991 with five departments in two faculties with 20 teaching staff and 205 students (178 male and 27 female). The foundation stone of the university was laid on 5 September 1987. Khulna University, a new general university, started functioning in 1990-91 with four departments in two faculties, 12 teaching staff and 78 students (66 male and 12 female). In 1992 the government established the National University now located at Gazipur near Dhaka, an affiliating institution which has largely taken over the functions of affiliation from the affiliating general universities (UGC-Handbook Universities of Bangladesh, 2009, p.xix).

A government established Open University located at Gazipur near Dhaka started functioning in 1992-93 by the assistance and support from donor agency Asian Development Bank. In 1994, the Institute of Postgraduate Studies in Agriculture (IPSA) (which since 1983 had been affiliated to BAU) at Salna Joydebpur near Dhaka, was accorded autonomy by the government and empowered to award its own degrees. The IPSA is now transformed into Bangabandhu Sheikh Mujibur Rahman Agricultural University by an Ordinance passed in 1998 (UGC-Handbook Universities of Bangladesh, 2009, p.xix).

The Institute of Postgraduate Medical Research (IPGMR), established in 1965 has been similarly transformed into Bangabandhu Sheikh Mujib Medical University by an ordinance in 1998. This University proposes affiliation for most of the Institute of Medical Sciences and the Faculties of Medicines existing in the universities of Dhaka,

Rajshahi, Chittagong and Shahjalal University of Science & Technology (UGC-Handbook Universities of Bangladesh, 2009, p.xix).

The Executive Committee of the National Economic Council (ECNEC) of Bangladesh Government approved a project in 2001 for the establishment of twelve science and technology (S & T) universities across the country where no such universities existed (Islam, 2011). Under this project, number of S & T University was established from 2001 to 2011 in different part of the country. The project advocated for transformation of Patuakhali Agricultural College into full-fledged Patuakhali Science and Technology University that came into being through a Parliamentary Act passed on 12 July 2001 (PSTU Website, n.d.). Under such initiative of the Government “Hajee Mohammad Danesh University of Science and Technology” was established in Dinajpur. The Act of the University was passed on 8 July 2001 in the Jatio Shongsad (National Assembly) that was followed by a gazette notification on 8 April 2002 (HSTU Website, n.d.). In Tangail “Mawlana Bhashanee University of Science and Technology” was also established in 2001. The Government passed an ordinance in 2001 to upgrade the then “Bengal Agricultural Institute (BAI)” into “Sher-e-Bangla Agricultural University (SAU)” in Sher-e-Bangla Nagar, Dhaka. BAI was established in 1938. Before creation as a public university, it was the oldest agricultural institution not only in Bangladesh but also in South Asia (SAU Website, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.93).

To meet increasing demand of the Engineering Graduate in the country and abroad, Chittagong University of Engineering & Technology (CUET) was created out of Engineering College, Chittagong, which was established in 1968. The Engineering College Chittagong had been functioning as the Faculty of Engineering of the University of Chittagong before upgrading to a public university in 2003. Though a Government Ordinance in 1986 the college was converted into an institution (BIT, Chittagong) (CUET Website, n.d.). There were three other similar Institutes of Technology in the country namely BIT Khulna, BIT Rajshahi and BIT Dhaka that were also converted to Khulna University of Engineering & Technology (KUET), Rajshahi University of Engineering & Technology (RUET), Dhaka University of Engineering &

Technology (DUET) in the same year (UGC-Handbook Universities of Bangladesh, 2009, p.112 & CUET Website, n.d.).

Under the Government's S & T university project, Noakhali Science and Technology University was established as a public university in the coastal terrain Noakhali of Bangladesh. Its foundation stone was laid on 11 October 2003 and academic activities started on 22 June 2006. Government took an initiative to transform Jagannath College (the oldest college in Bangladesh, established in 1858) into Jagannath University in 2005 by passing a bill named Jagannath University Act-2005 in the national parliament (NSTU Website, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.117).

To commemorate the memory of the national poet Kazi Nazrul Islam, a university was established by the government of Bangladesh on 1 March 2005, though the initiative was taken some years before firstly by a non-official group of socio-cultural local elites: Greater Mymensingh Cultural Forum. The university was originally conceived to be the first culture-based university in Bangladesh, but the University Act of 2006 made it a general university with a special focus on liberal arts education and activities (JKKNIU Website, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.126).

Realizing the increasing demand of the veterinary surgeon and animal diseases practitioner in the country, the then Chittagong Government Veterinary College was upgraded to "Chittagong Veterinary and Animal Sciences University (CVASU)" on February 2, 2006 at Khulshi, Chittagong though it was established in 1995 under the affiliation of the University of Chittagong (CVASU Website, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.129).

Under the proposed S & T university project of ECNEC in 2001 one of the S & T University was planned to establish at Kotbari in Comilla. Instead, the government granted a general university and its charter passed in the National Parliament on May 8, 2006, as the 26th public university under which the university is being operated. The university formally started its journey on May 28, 2007 (Comilla University, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.123).

The Government of Bangladesh took an initiative to establish an Agricultural University in Sylhet Division realizing its importance in this area and issued a notification as per requirement of the “Sylhet Agricultural University (SAU) Act 2006” which was passed in the National Parliament on 3 October 2006 and officially started its functioning from November 2, 2006. In fact, the faculty of Veterinary and Animal Science has come into being SAU through the up gradation of Sylhet Government Veterinary College (SGVC). The SGVC was established in 1995 and had been functioning as “School of Life Sciences” under Shahjalal University of Science and Technology, Sylhet, Bangladesh before creating as a public university (Sylhet Agricultural University, n.d.).

The Government of Bangladesh established first professional university in 2008 at Mirpur, Dhaka named “Bangladesh University of Professionals (BUP)” aiming to run all educational institutions of the army, navy and air force and facilitate professional degrees for armed forces personnel and civilians through its affiliated institutions of Bangladesh. BUP is the 30th public university of Bangladesh (BUP Website, n.d., & Bangladesh University of Professionals, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.140).

The Government passed an Act in 15 July 2001 to establish a science and technology university in Pabna under the S & T university project. The academic curriculum of the Pabna University of Science & Technology (PUST) was started on 15 July 2008. This is the third public university in Rajshahi Division and first public university in Pabna. PUST was established in 2008 and started four-year undergraduate programme from 2009 (PUST Website, n.d., & Pabna University of Science and Technology, n.d., & UGC-Handbook Universities of Bangladesh, 2009, p.145).

There was no university in northern district of Bangladesh till 2008 but its importance was felt long back from 1947. A popular demand for a kind of university which can reach out to a large number of students desiring higher education in this vast region has always been intensely felt but has never been fulfilled. In 2001 the Government laid the foundations of Rangpur University of Science and Technology. However, later on the establishment was cancelled but the Government agreed in

principle to establish a full-fledged university in Rangpur. The Rangpur University Ordinance was approved by the cabinet on June 15, 2008. The university was named after the educationist and social reformer Begum Rokeya and located between Rangpur Cadet College and Carmichael College in Rangpur (BRU Website, 2009, & UGC-Handbook Universities of Bangladesh, 2009, p.143).

To expand the facilities for Science and Technology education in the country and to fulfill the demands of the people of greater Jessore district the government has approved the Project proposal, submitted by the University Grants Commission on 22/02/2006. The University Act (No-44, 2001, Published in Gazette on 15 July, 2001) passed by the National Parliament in the Year 2001 and was made effective through a gazette notification on 25 January 2007 (UGC-Handbook Universities of Bangladesh, 2009, p.138). "Jessore Science and Technology University (JSTU)" is the fourth public university in Khulna Division and the first public university in Jessore district (JSTU Website, n.d.).

RMG & textiles sectors have been flourishing rapidly for last three decades in Bangladesh. But there were no such university which solely contributes in these sectors till 2010. Realizing its importance the Government of Bangladesh declared the then "College of Textile Technology" as a university in 2010 by passing an act called Bangladesh University of Textiles Act and inaugurated on March 15, 2011. Textile University is the only university in Bangladesh that specializes in textiles. It meets the need for textile engineering and technology education in Bangladesh and around the world. (BUTEX Website, 2013).

After three decades, following strong demand for a university from the people of Barisal, the proposal was passed in ECNEC on November 29, 2008, by then Caretaker Government though its demand was first made in 1960 before the independence of Bangladesh. The University of Barisal is the only general public university in Barisal division, Bangladesh. It started educational activities on 25 January 2012 (BU Website, 2013).

During the post-independence period from 1986-2013, for the cause of ever increasing demand of higher education for its large number of population, 28 public universities were setup at the different area of the Bangladesh. These universities are 'self-governing institution, 95% of their total expenditure is provided by the Government as block grants through the University Grants Commission (Ahmad, 1994).' These universities are different in specialization (in subject) like general university, engineering university, agricultural university, medical university, science and technology university, subjugated [Affiliating] university, open university (Education Commission Report, 2003) veterinary university textile university, Islamic University, and professionals university. Irrespective of subject and specialization these universities have been maintaining a library with good collection of learning resources. Comparatively newer universities have a small number of collections than the older ones.

Up to 2013, "there were 34 public universities and 1778 degree colleges under the National University which caters to the needs of the higher education in Bangladesh" (SFYP, 2011, p.113). In the following table the chronological development of these university libraries are shown:

Table 3.3 Chronological list of public university libraries established in Bangladesh (1986-2013)

SL	Name of the University Library	Year of Establishment	Location
01	Islamic University	1986	Kushtia
02	Shahjalal University of Science and Technology	1987	Sylhet
03	Khulna University	1990	Khulna
04	National University	1992	Gazipur
05	Bangladesh Open University	1992	Gazipur
06	Bangabandhu Sheikh Mujibur Rahman Agricultural University	1998	Gazipur
07	Bangabandhu Sheikh Mujib Medical University	1998	Dhaka
08	Hajee Mohammad Danesh University of Science and Technology	2001	Dinajpur
09	Mawlana Bhashanee Science and Technology University	2001	Tangail
10	Patuakhali Science and Technology University	2001	Patuakhali
11	Sher-e-Bangla Agricultural University	2001	Dhaka

(Table 3.3 contd.)

12	Chittagong University of Engineering and Technology	2003	Chittagong
13	Khulna University of Engineering and Technology	2003	Khulna
14	Dhaka University of Engineering and Technology	2003	Dhaka
15	Rajshahi University of Engineering & Technology	2003	Rajshahi
16	Noakhali Science and Technology University	2004	Noakhali
17	Jagannath University	2005	Dhaka
18	Jatiyo Kabi Kazi Nazrul Islam University	2005	Mymensingh
19	Chittagong Veterinary and Animal Sciences University	2006	Chittagong
20	Comilla University	2006	Comilla
21	Sylhet Agricultural University	2006	Sylhet
22	Bangladesh University of Professionals	2008	Dhaka
23	Pabna University of Science and Technology	2008	Pabna
24	Begum Rokeya University	2008	Rangpur
25	Jessore Science and Technology University	2008*	Jessore
26	Bangladesh University of Textiles	2010	Dhaka
27	Bangabandhu Sheikh Mujibur Rahman Science and Technology University	2011	Gopalganj
28	Barisal University	2011	Barisal

*(Source: University Grants Commission: A profile, 2008, January & <http://www.ugc.gov.bd/university/?action=public>)

Note that six universities of pre-independence period have been mentioned earlier in the Table 3.2.

Table 3.4 Universities according to the type

SL	Type of the University	Number
01	General University	10
02	Engineering University	05
03	Agricultural University	04
04	Medical University	01
05	Science and Technology University	08
06	Affiliating University	01
07	Open University	01
08	Veterinary University	01
09	Textile University	01
10	Professional university	01
11	Islamic university	01
Total		34

Source : National Education Commission Report 2003:p.-107

Period of Private University Libraries (1992-2013)

There was a great demand of higher education in the country. Hence there was a rush of student's admission into the universities but the public universities cannot accommodate them. So, the government had in consultation with the UGC, accorded permission to a number of entrepreneurs to start universities in the private sector. This has been done in keeping with Private University Act, 1992, which got amended in 1998 (UGC-Handbook Universities of Bangladesh, 2009, p. xx). Private institutions play a major role in the delivery of education in Bangladesh. Private participation and Government-NGO collaboration have served the cause of education well (SFYP, 2011, p.121).

Private universities, particularly those emphasizing teaching and research in science and technology, have been encouraged during the Fifth Five Year Plan in line with public sector plans and objectives. The UGC scrutinized the proposals submitted by the entrepreneurs strictly on the guidelines/regulations provided by the government in order to maintain the quality of education and keep their social character, avoiding commercial motives. Experienced academicians and the interested citizens have been encouraged to set up such private universities (FFYP, 1997-2002, p.659].

Rational of development of private universities in Bangladesh

Up to 1992 there were only 11 general and specialized types of public universities in Bangladesh. But the increasing demand for higher education in the country government took an initiative to open universities in private sectors. After reviewing country's higher education situation and related literature (Islam, 2003 & Rahman, 2008) a brief accounts of the private university creation are given below:

Factors leading to the creation of private universities

There were several reasons for establishing private universities in Bangladesh. First of all, access to university education was strictly limited (Johanson, 2000) due to the fewer scope of university education as a result a huge number of the student was going abroad for higher studies. As consequences, thousand millions of foreign currencies had expended from 1971 to 1992 of Bangladesh. Private sector initiatives were so intended that 2, 20,752 students were enrolled in 51 private universities till

2010 (University Grants Commission, 2010). According to a UGC report, 99,552 students in 2011 and 87,766 students in 2010 were enrolled in private universities (Dhaka Tribune, 2013).

Secondly, worldwide creation of private universities was mainly justified from the perceived failure of public universities. “Evidence of failure ranges from inadequate and declining resources, inefficient use of existing resources, poor quality of instruction, and a lower market value of degrees awarded, to public institutions inability to meet the demand for increased access to higher education”, (World Bank, 1993, p.10).

Thirdly, some of these reasons were also advanced for the creation of private universities in Bangladesh. In spite of better facilities of both instructions and research, the public universities could not expand due to the fund constrain. They could increase their intake only compromising with further deterioration of quality education. That they did not. It was a good move for the public universities. So, the excess demand had to be met from somewhere other than the public universities. This was one compulsion for the government to enact laws for providing university education at the private sector.

Fourthly, the other compulsions came from economic and social reasons. On the supply side, the government also felt that there was a class of people and private trusts who were interested to establish university with private initiative including funds. These initiatives needed legal coverage. Hence the Private University Law 1992 was enacted. It was found that a large number of students failing to enter in to the public universities took admission (Second choice for many) in the affiliated colleges of National University or went abroad to study at a much higher cost. Public universities offer very limited number of admission into some disciplines such as Business Administration, Computer Science, Pharmacy, Medicine, Engineering, etc., which has a very high market demand. Public universities were not in a position to respond to the market demand to that extent. A good number of students failing to get admission in these disciplines either go abroad or get admitted into some

departments only to continue study with reluctance and later lose interest and drift to some activities not congenial for future life.

Fifthly, it was also reported in news media that more than 5,000 students study 'O' and 'A' level in 80 English medium schools and colleges in Dhaka city alone. They were interested to continue their further study in English medium. They too create demand for entry into universities where English was the medium of instruction. Study in the private universities with English as the medium fulfils that demand. Moreover, transfer of credit and linkage with North American Universities help many students to join universities in the middle of sessions and continue study. Violence, session jam, misdirects; student politics off and on closure of universities and delayed academic programme (popularly known as session jam) also encouraged people to establish private universities.

Last but not the least, there was a growing wealthy class of people who were ready to pay a higher price for the education of their wards, if a place was not found in state universities. So, options available to the government to meet the situation, was either to expand the present public universities with enhanced fund establish new university, create distance education system (which still cannot meet the demand of main stream education) or to encourage private sector to establish universities. In the early nineties, government opted for the last two options and enacted law for the establishment of Open University (in the public sector) and private universities. However, present government also established new university at the public sector and also permitted private sector entrepreneurs to establish new universities.

Growth of Private Universities in Bangladesh

The epoch-making Private University Act was passed in 1992. At present, there are 71 private universities (Prothom-alo, 2013) are imparting education in Bangladesh and questions have already been raised about their standard and other related issues such as shortage of qualified teachers, suitable campus for the students, modern academic facilities, and inadequate library facility for the students etc. Today, few of these universities have their own campus and most do not even have a permanent teaching staff. That being so the charge that several universities have

failed to live up to their justified. Thankfully this issue is now getting some attention from the authorities and the authorities have decided some private universities black listed by the UGC. However, the positive role of private universities in the higher education in Bangladesh is now undeniable.

List of private university libraries in Bangladesh

Last two decades, huge number of private universities has been established in different location of Bangladesh. During the period from 1992 to 2005, there were established 52 private universities. In 2006, a higher powered committee was formed by the Government of the People's Republic of Bangladesh to evaluate the condition of the private universities and the committee recommended on 22.10.2006 to close down the following universities for non-fulfilling the UGC's requirements:

Table 3.5 Banned private universities

SL	Name of the University	Year of Establishment	Location
1	Central Women's University	1993	Dhaka
2	Comilla University	1995	Comilla
3	American Bangladesh University	2002	Dhaka
4	Pundra University of Science & Technology	2002	Bogra
5	Queens University	1996	Dhaka

Source: University Grants Commission. Annual Report 2010, p. 144

In 2006, two more universities have been established in Bangladesh. These are ASA University and East Delta University. After the Government's ban; 3 out of the 5 universities sued case against the Government's decision. However, the Universities are operating by obtaining a stay order from the court now. These are:

1. Central Women's University
2. American Bangladesh University
3. Queens University

During the period from 2007 to 2011 no private university was setup in Bangladesh. As a result, from 1992 to 2006 a list of 54 private university libraries and their date of establishment are given below:

Table 3.6 List of private universities & libraries (1992-2006)

SL	Name of the University	Year of Establishment	Location
1	North South University	1992	Dhaka
2	University of Science and Technology, Chittagong	1992	Chittagong
3	Independent University, Bangladesh	1993	Dhaka
4	Central Women's University	1993	Dhaka
5	Darul Ihsan University*	1993	Dhaka
6	International University of Business Agriculture and Technology	1993	Dhaka
7	International Islamic University Chittagong	1995	Chittagong
8	Ahsanullah University of Science & Technology	1995	Dhaka
9	American International University Bangladesh	1995	Dhaka
10	Asian University of Bangladesh	1996	Dhaka
11	East-West University	1996	Dhaka
12	Queens University	1996	Dhaka
13	University of Asia Pacific	1996	Dhaka
14	Gono Bishwabidyalay	1996	Dhaka
15	The People's University of Bangladesh	1996	Dhaka
16	Dhaka International University	2000	Dhaka
17	BRAC University	2001	Dhaka
18	Manarat International University	2001	Dhaka
19	Bangladesh University	2001	Dhaka
20	Leading University	2001	Sylhet
21	BGC Trust University Bangladesh	2001	Chittagong
22	Sylhet International University	2001	Sylhet
24	Premeir University	2001	Chittagong
23	University of Development Alternative	2002	Dhaka
25	South-East University	2002	Dhaka
26	Stamford University	2002	Dhaka
27	Daffodil International University	2002	Dhaka
28	State University of Bangladesh	2002	Dhaka
29	IBAIS University	2002	Dhaka
30	City University	2002	Dhaka
31	American Bangladesh University	2002	Dhaka
32	Prime University	2002	Dhaka
33	Northern University, Bangladesh	2002	Dhaka
34	Green University of Bangladesh	2002	Dhaka
35	Southern University, Bangladesh	2003	Chittagong
36	World University	2003	Dhaka
37	Shanto Marium University of Creative Technology	2003	Dhaka
38	The Millennium University	2003	Dhaka
39	Eastern University	2003	Dhaka
40	Bangladesh University of Business & Technology	2003	Dhaka
41	Metropolitan University	2003	Sylhet
42	Uttara University	2003	Dhaka
43	United International University	2003	Dhaka
44	Victoria University	2003	Dhaka
45	University of South Asia	2003	Dhaka

(Table 3.6 contd.)

46	Presidency University	2003	Dhaka
47	University of Information Technology and Science	2003	Dhaka
48	Prime Asia University	2003	Dhaka
49	Royal University of Dhaka	2003	Dhaka
50	University of Liberal Arts, Bangladesh	2003	Dhaka
51	Atish Dipangker University of Science & Technology	2004	Dhaka
52	Bangladesh Islami University	2005	Dhaka
53	ASA University Bangladesh	2006	Dhaka
54	East Delta University Chittagong	2006	Dhaka

Source: University Grants Commission, Annual Report 2010

*Darul Ihsan University Functioning under stay order from the court (University Grants Commission, 2011).

New Private Universities (2012-13)

During the year 2012-2013 the Government of the People's Republic of Bangladesh has permitted twenty-three new private universities under the Private University Act 2010. As these universities are newly approved by the Government and on the way to establish, the researcher did not mention in the final list.

Table 3.7 New Private Universities (2012-2013)

SL	Name of the University	Year of Establishment	Location
1	European University of Bangladesh	2012	Mirpur, Dhaka
2	BGMEA University of Fashion & Technology	2012	Uttara, Dhaka
3	Hamdard University Bangladesh	2012	Sonargaon, Narayanganj
4	First Capital University of Bangladesh	2012	Chuadanga
5	IshaKha International University Bangladesh	2012	Sholakia, Kishorganj
6	North East University Bangladesh	2012	Sheikhghat, Sylhet
7	Barendra University	2012	Motihar, Rajshahi
8	Z H Shikder Science and Technology University	2012	Vedorganj, Shariatpur
9	EXIM Bank Agricultural University, Bangladesh	2012	Dhaka
10	Bangladesh University of Health Science	2012	Mirpur, Dhaka
11	Sonargaon University	2012	Dhaka
12	Feni University	2012	Feni
13	North Western University	2012	Khulna
14	Britenia University	2012	Comilla
15	Port City International University	2012	Chittagong
16	Khaza Yunus Ali University	2012	Sirajganj
17	Chittagong Independent University	2013	Chittagong
18	Sheikh Fazilatunnesa University	2013	Jamalpur
19	Cox's Bazar International University	2013	Cox's Bazar

(Table 3.7 contd.)

20	Ranada Prasad Saha University	2013	Tangail
21	North Bengal International University	2013	Rajshahi
22	Rajshahi Science and Technology University	2013	Natore
23	Far East International University	2013	Dhaka

1-8 Source: Khan (2012, March 14). *The Independent*

9-16 Source : Wasim Bin Habib (2012, November 19). *The Daily Star*

17 Source: Prothom-alo, Thursday, February 7, 2013, p.17.

18-23 Source: Dhaka Tribune [Electronic ver.], September 16, 2013

The state of private university libraries in Bangladesh is a bit satisfactory as compared to other types of libraries but this does not mean that except few are meeting the required standards or that they are participating in the universities educational and research programs satisfactorily (Islam, 2003, Rahman, 2008).

Table 3.8 Private university libraries according to type

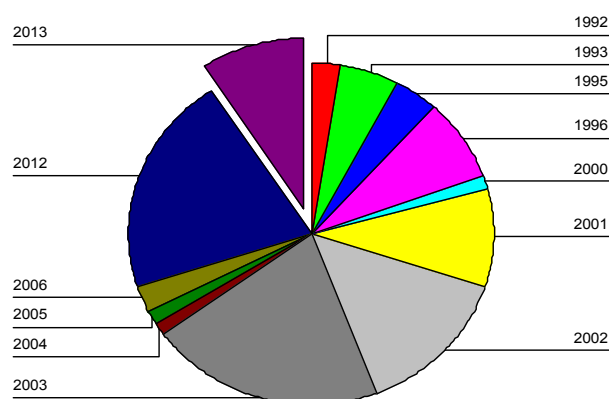
SL	Type of the University	Number
01	General University	62
02	Engineering University	-
03	Agricultural University	2
04	Medical University/Health Science + Technology	4
05	Science and Technology University	6
06	Affiliating University	-
07	Open University	-
08	Veterinary University	-
09	Textile University/Fashion	1
10	Professional university	-
11	Islamic university	2
Total		77

Source of categories: National Education Commission Report 2003: p.-107

Table 3.9 Year of establishment of private university libraries

Year of establishment	Number of Pvt. Universities
1992	2
1993	4
1995	3
1996	6
2000	1
2001	7
2002	11
2003	16
2004	1
2005	1
2006	2
2012	16
2013	7
	Total-77

The above table shows the year of establishment (Separately) of private universities in Bangladesh.

Figure 3.1 shows the year wise establishment of private university libraries in Bangladesh

In conclusion it can be said that university libraries were developed with the establishment of new universities in Bangladesh. During last 92 years from 1921 to 2013 there were developed 34 public universities and libraries in Bangladesh. Some of these public university libraries have long history and leading role for development of other university libraries in the country. In compare with other facilities in the university, library services quality and facilities did not increase due to

less attention by the university top level authority. These practices have been continuing decades after decades in Bangladesh. As a result, number of public university library has increased significantly without providing better services and facilities. The main strengths of these university libraries are: library separate building, wider space, and lots of potential for doing well in future. Recently, some top level public university libraries have been started modernization project by the help of the donor agencies and financed by UGC under various projects.

After the Private University Act 1992 and its amendment in 1998 and finally the Act of 2010 facilitated many private universities to be opened. As a result, 77 private universities and libraries were established during the period from 1992 to 2013 in Bangladesh. Some of these university libraries have been functioning by installing modern tools and technologies and others are in traditional ways. They have many problems as insufficient space, lack of manpower, lack of resources, and insufficient budget to operate it.

A BRIEF DESCRIPTION OF THE SAMPLE UNIVERSITY LIBRARIES

Sample Public University and Library

Dhaka University Library

Dhaka University Library (DUL) is the oldest university in the country. DUL was established in 1921. Initially, the library started with a collection of 18,000 of books received from Dhaka College and Dhaka Law College. The library has a separate building which is 150830 square feet spacious to serve the needs of 13 faculties, 71 departments, 10 institutes, 29573 students, 1899 teachers and 655 management staff. In the financial year 2011-2012, DU allocated Tk. 5,40,19,000.00 for library purpose. Being the largest library in the country, the DUL collection, at present comprises 6,39,133 volumes including bound periodicals. Besides, there are more than 30,000 rare collections of manuscripts written in Arabic, Urdu, Bengali, Sanskrit, Persian, Pali and other oriental languages preserved in the library. DUL adopted DULAP in 1998 and continued till 2007 and now working with DULIS for library OPAC facilities since 2009. DUL provides facilities for printing, CD/DVD writing, photocopy, carrel booking, online Catalogue Search, Borrowers' ID card, Teachers' Book Issue, Cyber Centre, Resource Centre, Reading Rooms, Manuscript Reading Room, Microfilm and Microfiche Reading Room, Personal Laptop. DUL offered OPAC search, online journals & archives, E-books, DU Repositories and manuscript gallery. It has a separate website (library.du.ac.bd) which was launched in May 5, 2013. DUL is planning for creating a journal repository with its in-house journals soon (Present Study & DUL Website).

Bangladesh Agricultural University Library (BAUL)

The Bangladesh Agricultural University Central Library came into existence as East Pakistan Agricultural University Library in 1961 just with the inception of the University itself. It started with the miniature collection of 5000 volumes of the East Pakistan College of Veterinary Science and Animal Husbandry.

The University Library, which was started in a single room of administrative building, moved to its new building in the early part of 1969. The Library has its own separate building, as designed by the famous architect Mr. Richard J. Neutra of United States of America, was a two storied fully air conditioned building having a total space of 44,000 square feet. It has been completed at a high cost out of a total grant of Tk. 15, 32, 000/= (Taka Fifteen Lacks Thirty Two Thousand). Later vertical expansion was made in 2001. Now the present three storied building has an area space of 66,000 square feet 'with the seat capacity of 600 students, faculty and researchers (present study).' Librarian's chamber, procurement, processing, audio-visual and documentation sub-section of the library are in 2nd Floor. Library office and reader's services sub-section is in ground and 1st Floor. The Library is situated at the centre of the university campus. Library facilities are open to all students, teachers, officers, staff and other persons, associated with this university. Outsiders, engaged in education and researches, are allowed library facilities on permission. It is being gradually provided with all modern library facilities (BAU Website). The BAUL has started automation projects by using Koha open-sourced software.

Present study finds that UL has 134494 books, 13169 thesis, 400 reports, 2123 titles of journals, 38238 bound volumes of journals, 40 audio cassettes, 400 CD-Rom, 15 video cassettes, 1494 microfiches, 105 microfilm, 16 slides, subscription to 25 E-journals' publishers, and 30 electronic database (Present Study & BAU Website).

Bangladesh University of Engineering and Technology Library

BUET library was established in 1962 just after the establishment of the university. The collection of the former Ahsanullah Engineering College formed the nucleus of the present library of the BUET (Ahmad, 1994). The library is housed in a 4-storied building of its own having approximately 20,000 square feet floor space with a seat capacity of 222 students, faculties, and researchers and stands close to the academic buildings. BUETL moved to its new accommodation in 1973. It is a compact library with built in facilities to provide various services to students, teachers and researchers and to perform administrative and technical jobs. The library hosts a vast and diverse collection of books, journals, monograms and periodicals of academic interest. The library has a collection of 1,42,913 items of information

materials of which 1,25,066 and 17,847 are books and bound periodicals respectively and 141 titles are in the current subscribed journals. It has more than 3000 thesis, 350 audio cassettes, approximate CD and DVD-Rom 800, E-journals subscribed from 43 publishers, approximate e-thesis 150, and E-book 156. The library is fully automated and database has been created by own initiatives along with web site provision www.buet.ac.bd/library. The library provides reading, reference, periodicals and research, reprographic, rental, lending, and browsing facilities to the users. It also includes a free internet browsing facility to facilitate research and academic activities of students and faculty members (Present Study & BUETL Website). BUETL is maintaining circulation and database with BUET-LIB customized software. The BUET library is implementing HEQEP under 2nd round AIF award by UGCBAIF for digitization of its central library now.

Jahangir Nagar University Library

Jahangir Nagar University Library was established in 1970. The library of the university started functioning along with the university and was temporarily housed in a rented accommodation. Subsequently the Library shifted to the campus in a big room attached to a half of faculty residence. A tin-shed was constructed soon to serve as reading room for students and teachers. Finally in 1982 the library moved to its new building having a total plinth area of 65,000 square feet. Of which 40,000 sft have been completed for use (Rahman, 1988, p.78). The whole area is covered with Wi-Fi technology. There are more than 110,000 books and 14,000 hard bound journals and 22,000 online journals in the library. More than 170 students can seat and study in the library. There is also a Cyber Center in the premises of the library. The library provides printing, photocopying, borrowing, CAS, SDI, and online journal facilities to the users. There are 41 staffs and 13 officers working hard enough to maintain this huge library in order to create a studious culture in the campus and offering a huge opportunity to study hard. The future plan of the library authority is to extend the library building and make the whole system computerized. Then it would be easier to lend the library books and the system would be more efficient (Present Study & JUL Website).

Bangabandhu Sheikh Mujib Medical University Library

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 upgraded the then IPGMR into a Medical University for expanding the facilities of higher medical education and research in the country. BSMMU library is a well equipped modern academic library known as Central Library. The Central 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 also has a modern electronic library known as Digital Library. This is located at the 5th floor of "A" block. The fully air-conditioned BSMMU Digital Library remains open every day of the week except on Friday and government holiday. Its' users can use library facilities from 8.15 am to 4.45 pm from Saturday to Thursday. At present the digital library has 86 new DELL brand computers with internet browsing facilities and e-mail access with 10 Mbps dedicated bandwidth. Chairman of every department and senior administrators have personal LAN connection from server room for internet use. Other faculty members, students & staffs of BSMMU can use the services provided by digital library. The library provides Internet browsing, e-mail checking, Medical e-journal & e-books searching through many publishers like HINARI, PERI, Medline/Pubmed, Blackwell, Springerlink, Wiley inter sciences and many more, laser printer, scanner and CD/DVD writing facilities. The BSMMU library has been implementing automation and digitization project under 1st round AIF award by UGCBAIF of HEQEP during the year 2011 to 2012 for digitization of its central library (Present Study & BSMMUL Website).

Sher-e-Bangla Agricultural University Library

Sher-e-Bangla Agricultural University (SAU) is the oldest agricultural institution in Bangladesh and South Asia, situated in Sher-e-Bangla Nagar, Dhaka. SAU was established as Bengal Agricultural Institute (BAI) on December 11, 1938 by Sher-e-Bangla A. K. Fazlul Huq, the then chief minister of undivided Bengal. The Bengal Agricultural Institute was renamed East Pakistan Agricultural Institute in 1947. After the emergence of Bangladesh as an independent country in 1971, the name of the

institute was spontaneously changed to Bangladesh Agricultural Institute (BAI). Since its inception in 1938, the BAI had been functioning as a Faculty of Agriculture under Dhaka University. After the establishment of Bangladesh Agricultural University (BAU) at Mymensingh in 1961 its academic function was transferred to BAU in 1964 until its upgrade to Sher-e-Bangla Agricultural University in 2001. The "Sher-e-Bangla Agricultural University Act 2001" was passed in the national Parliament on 09 July 2001. The SAU had started its formal functions on 11 September 2001 (SAU Website).

SAU Central Library is in the west wing of the university building. The library has a collection of around 40,000 books comprising the major subjects of agriculture and related subjects. It also collects all the popular national journals related to agriculture and a few international journals. Students and teachers can borrow books from the library; they use its reference books/journals during office hours. The library has 24 officers and staff. It has been providing Internet service and photocopy facilities to the users (Present Study, SAU Website & Wikipedia).

Dhaka University of Engineering and Technology Library

Dhaka University of Engineering & Technology (DUET), Gazipur is one of the reputed universities for the study of Engineering in Bangladesh. The University originated in 1980 as a Faculty of Engineering under the University of Dhaka offering four years ' Bachelor degree in Civil ,Electrical and Electronic and Mechanical Engineering ' to meet the growing need for advanced engineering education in Bangladesh. In June, 1986, under its name of Bangladesh Institute of Technology (BIT), Dhaka, the Institute became an autonomous institution empowered to award degrees. From 1st September 2003, the Institute has started its journey as a full-fledged University named as Dhaka University of Engineering and Technology, Gazipur. DUET library was established in 1980 to support the educational needs of the students. Over the year it has grown as a center for information and learning of the university.

The university devotes considerable effort and resources to the development of an outstanding library collection to meet the expanding need of teaching and research, and to serve as a resource reference center. The general library has over 35000

books on all subjects relevant to academic programmed. Library services include lending, reference, photocopy and document delivery to the users. The library has computerized information system to provide information about library materials for its members. Library all services are available to faculty and students. Except for certain designated official holidays, the library is open from 9:00 AM to 8:30 PM daily. Besides, the general library systems each academic discipline maintains rental library from which students can borrow text books at a nominal rate for the whole semester. Each department maintains its own affluent and modern rental library which provides sufficient books for the students of the respective disciplines (Present Study & DUETL Website).

Chittagong University of Engineering and Technology Library

Former Bangladesh Institute of Technology (BIT), Chittagong is presently Chittagong University of Engineering & Technology (CUET). It is one of the prominent and prestigious autonomous self-degree-awarding institutes in the engineering education of Bangladesh. CUET library was established in 1968. The library stands in the center of CUET campus. It is a compact library with built in facilities to provide various services to students, teachers and researchers and to perform administrative and technical jobs. The entire Ground and 1st floor of the library is dedicated for individual study and group discussion of the students. Multiple copies of different text books are available in the counter. The library has a total collection of 48046 books, 23 thesis, 180 journals, and 54 magazines. CUET library is partially automated and database and circulation are maintained with customized software. Students can issue books on production of ID card and library card from the counter and use these within the library and are not eligible for check out. Approximately 200 students can use these facilities at a time. There is also provision for 60 individual studies of researchers, faculty members and post-graduate students in the first floor. The library is fully central air conditioned. So the students can study there and feel ease. The daily newspapers are available there. A total of 12 professional, semi-professional and supporting staffs have been running the library smoothly (Present Study & CUETL Website).

Chittagong Veterinary and Animal Sciences University Library

Chittagong Veterinary and Animal Sciences University (CVASU) was established in 2006. Formerly this Institute was Chittagong Government Veterinary College. The Central Library of CVASU has been functioning from the beginning of the college. The Library is located in the ground floor and the half portion of 1st floor of administrative building. The CVASU Library hosts a vast and diverse collection of books, journals, periodicals of its academic interest. The aims of the Library are remaining dynamic, innovative and responsive to serve all users. It would be a center of academic excellence. The Library resources include books, periodicals, newspaper, audiocassettes, video cassettes, DVDs/CDs etc. The library has 3963 books, 41 thesis, 700 reports, 338 bound journals and 332 CD-ROMs. At present the users have access more than ten thousand books and journals, 11 local and national daily newspapers in both Bangla and English. Users also can access more than 7000 online journals at present. The library provides facilities for reservation, user education, library orientation, digital services, and computer lab facilities. Without these the also provides open access to books and thesis, borrowing facility, re-issue of books, internet browsing/downloading, display of newly arrived books, purchase of books for students through their faculties, photocopying of material, current awareness service (CAS), selective dissemination of information (SDI), document delivery service (DDS), indexing and abstracting service, reference and referral service, information service, and user education services. The CVASU library is implementing HEQEP under 2nd Round AIF award by UGCBAIF during the year 2012 to 2013 for digitization of its central library (Present Study & CVASUL Website).

Jessore Science and Technology University

The JSTU is one of the most recent government-financed public universities for higher studies in Bangladesh. It was established in 2007. About 440 undergraduate students are being admitted each year in twelve departments under four faculties. Jessore Science & Technology University started functioning from the 2008-2009 session.

The Central Library of JSTU is located at second floor of Administrative Building. There are at least 15,000 books available for both students and faculty members at

present. New books are being added to the collection every month. Students or faculty members can study or borrow desired book/s from the library (Present Study, JSTU Website & JSTUL Website).

Sample Private University & Library

University of Science and Technology Chittagong Library

University of Science and Technology Chittagong (USTC) was started as an Institute of Applied Health Sciences (IAHS) in Chittagong under Janasheba Foundation. IAHS was accorded recognition by Bangladesh Medical and Dental Council on 12 July 1990 and Chittagong University allowed the students to be enrolled and appear in the first professional examination in 1991. It established as a Private University soon after Private University Act 1992 came into force when Institute of Applied Health Sciences (IAHS) became its constituent body under Faculty of Medicine. Since then USTC started functioning with two Faculties, namely, Faculty of Medicine and Faculty of Basic Medical and Pharmaceutical Sciences. USTC has opened up a new horizon for the business community of the country by launching a new Faculty entitled 'Faculty of Business Administration' which is indeed another bold step by USTC in fulfilling its mission of expansion of higher education through private initiative. After a short period USTC set going two new Departments namely Department of Computer Science & Engineering under newly formed Faculty of Science, Engineering & Technology and Department of Biochemistry & Biotechnology under Faculty of Basic Medical and Pharmaceutical Sciences. They have been functioning with encouraging response from the students. USTC also opened Department of English Language and Literature under Faculty of Humanities & Social Sciences.

USTC library was established soon after the foundation of the university. 15th September 1997 is a memorable day for Central Library, USTC on which it (Central Library, former Sasakawa Central Library) started shifting from the Academic Building to its own seven-storied building in the USTC campus. At that time the building was incomplete, the Central Library was placed in the completed first and second floors of 16,242 square feet floor area. At present the library has 13570 books, 1607 thesis, 167 journals, 12 daily newspapers, 831 CD-ROMs. The library

provides borrowing and study room facilities. A total of 14 semi-professional personnel have been working in the library (Present Study, USTC Website & USTCL Website).

Independent University, Bangladesh Library

Founded in 1993, Independent University, Bangladesh is one of the oldest private universities in Bangladesh where academic excellence is a tradition, teaching a passion and lifelong learning a habit. The University has 6 schools, 3159 students, 219 faculty members, and 95 management staffs. IUB is located in Dhaka.

The Library is truly the heart of the Independent University, Bangladesh (IUB). It has been growing with the young university constantly serving the vibrant community of student and faculty since its inception. In 1993 the library launched in a room having around area of 850 sqft at House 8, Road 10, Baridhara, Dhaka and traveled to to-days permanent address at Bashundhara as IUB Central Library where the library occupies three floors for stacking reading materials, accommodating readers in reading rooms and the library personnel at work places. The library emphasizes services to clients, at the same time trying to increase their self help-and self-service capacities. The library is the major contributor the university's aim of developing independent learners. The library is fully automated. IUBL provides facilities for reading room, lending, discussion room, library online public access catalogue (OPAC), in-house computerized catalogue, information services. An on-demand information retrieval service is available for all clients. In addition, the library maintains the news clipping covering 40 titles and new arrivals, which publishes monthly with the list of books received in the previous months. The library also provides Indexing and current contents services. It also provides photocopy services, and free internet searching facilities for the users. Beside above mention services faculty corner, researcher's corner, audio-visual section, information literacy classroom, reference section, reserve section, report section, current journal section, institutional repository, archives and preservation, safe keeping are also available (Present Study & IUBL Website).

International University of Business Agriculture and Technology Library

IUBAT - International University of Business Agriculture and Technology is the first non government university established in Bangladesh. The initial planning began in 1989 and the university was established in 1991. Degree programs started in 1992 with agreement with Assumption University of Bangkok, Thailand. IUBAT strongly lobbied for the creation of non government universities and supported the initiative of the Government of Bangladesh in passing legislation for formal establishment of non government universities in the country. IUBAT now operates as a government approved university under the Non Government University Act of 1992.

The IUBAT Library and information Service is designed to serve the students needs for information. Use of the library is encouraged in IUBAT. All students, faculty, researchers, consultants, experts of all programs even alumni have the privilege of using the Library and they are welcome to use the different library services. The library is air-conditioned having sufficient chairs, tables, fans, racks and other utilities. IUBAT library have 13300 books, 200 journals, 100 cassettes, 90 DVDs. Library provides video-audio services and has collection of video, DVD, audio CDs and cassettes in connection with academic programs. The library subscribes and receives 190 journals, periodicals, newsletters, etc. on a regular basis. Besides, the library subscribes to all the English newspapers and weeklies published from Bangladesh for the users.

The library provides facilities for borrowing of learning resources, e-book downloading, photocopy and printing for academic purpose. The Library generally remains open from 8.30 am to 8.30 pm from Saturday to Thursday and Friday 8:30 am to 6:30 pm except all listed university holidays. From the beginning, the Library has started as a reference center and now has a good number of reference materials such as dictionaries, encyclopedias and all books recommended in the courses. IUBAT library have e-library service. There are 10 computers for e-library. From e-library students use different type of subject terminology (like mathematics, physics, chemistry and biology). The Library has a computerized information system and provides information about library materials for members. The Current Awareness Service bulletins are regularly published every three months, which contains

information on new acquisition of materials in the library (Present Study, IUBAT Website & IUBATL Website).

East West University Library

After being accorded permission by the Government under the Private University Act (Act 34) of 1992, East West University was launched in 1996. Today there are over 317 faculty members and approximately 7185 students, and 203 management staffs. EWU is located at Dhaka.

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 is located on the 2nd, 3rd, and 4th floors of the Foundation Building. In addition, new arrivals display board and pigeonhole area are located on the ground floor of the same building. About 2000 users visit the EWU Library everyday. Out of them, 500 to 600 users make use of circulation facilities, 100 to 200 utilize the photocopy services and 400 to 500 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.

The EWU library is fully automated. 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.

The Library collection has grown steadily. At present, the total number of library books and CDs are 23,740 and 1,400 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, and Public Health. 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.

East West University Library provides an array of facilities to library users with the help of state-of-the-art techniques and technologies like: 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, 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 i.e. UN corner, library users can get back issues of newspapers up to the last one month (Present Study, EWU Website & EWUL Website).

Leading University Library

Leading University (LU) is a private university of Bangladesh. It was established in 2001 by the Private University Act 1992. The Leading University was got permission

from the Ministry of Education, Bangladesh on 28 August 2001 to establish this university at Sylhet. The Leading University was inaugurated on 4 March 2002 and started its journey from that day. At present the university has 7 departments, 3000 students, 93 faculty members, and 23 management staffs.

LU Library is very rich with 9500 volumes of nationally and internationally published Books, 1142 Journals and 250 magazines. LU library provides borrowing facilities to the users. Besides, photocopy services, CAS and SDI are also offered (Present Study & Wikipedia).

BRAC University Library

From a modest beginning almost thirty years ago, BRAC has today grown into one of the largest non-government development organizations in the world. In line with BRAC's continued support to education as a force of change and development, BRAC University has been established in Dhaka in 2001 to provide a high quality of education to meet the demands of the modern age. BRAC University is 'not for profit' institution accredited by the UGC and approved by the Ministry of Education, Government of Bangladesh. The university has 7 schools/faculties, 3403 students, 341 teachers, and 169 management staffs.

BRAC University inherited the Ayesha Abed library from BRAC in June 2001. The Ayesha Abed Library at BRAC University aims to become a world-class Knowledge Resource Centre and provide innovative new services and a wider collection of books and resources to the teaching, learning and research communities, using latest technological developments of the 21st century. The development, organization and maintenance of archives in multiple locations; access to world class resources; personalized assistance in the use of library and information resources; and instruction on research strategies and tools have made this one of the richest libraries in the country. BRACUL is fully automated and provides all modern services to the users through computer and related information technologies.

BRAC university library has the vast resources of institutional repository, classic catalogue, social science library (on campus only), style guides & resources,

databases A-Z. It provides borrowing privileges, return/renew/hold, information literacy and classes, MyAthens login, login to My Account, course reserve, Athens activation form, mobile library site, etc (Present Study, BRACUL Website & BRACU Website).

Stamford University Library

Stamford University, Bangladesh was founded in the city of Dhaka in 1994 and then it was known as Stamford College Group, Bangladesh. It was upgraded as a private university with the permission of the Government of Bangladesh in 2002 and emerged as Stamford University, Bangladesh. Stamford College Group, Bangladesh began its journey in 1994 as a full-fledged educational institution with a promise of providing an international standard education. Stamford University, Bangladesh belongs to globally recognized Stamford University & College Group that has 160 campuses now in Asia, Europe, Africa, Australia and America. At present, SU has 9 faculties/departments, 9578 students, 598 teachers, 154 management staffs.

Stamford University has a rich and modern library with modern facilities for students. Library is providing its services efficiently as much as possible to students' satisfaction through computerized database and circulation system. Students are allowed to borrow books from the library and read books, journals, dailies, weeklies and etc. in the reading room of the library (Present Study SU Website).

United International University Library

United International University (UIU) is the outcome of the initiative taken by a couple of renowned academicians. It was established in Dhaka in 2003 with the generous support and patronage of the United Group, a successful business conglomerate operating in diverse business areas. At present the university has 3 faculties/schools, 3841 students, 275 faculty members, 112 management staffs.

The United International University Libraries primary mission is to support and enhance the University's learning-centered educational, research, and public service activities by providing access to information and scholarly resources in support of scholarship by University students and faculty. The UIU Library offers regular services

such as circulation, reference, counseling, indexing, bibliographical documentation, back up services, retrospective searches etc. The IT services at United International University provide the university library with adequate facilities. Under the present arrangement, there are fully network capable internet ready computers ready for use in the library .It allows students to perform research work digitally. Outlets are available for students to connect laptops and other electronic devices for connectivity. The library is well-furnished with modern equipment and reading materials. The library subscribes to 6 daily newspapers, 8 magazines, 5 fortnightly and 8 research journals. It provides learning resource borrowing facilities and facilities for using reference books and reserved materials inside the library or borrow only for two hours to photocopy them, internet browsing facility to its members so that they are able to connect themselves with the information super high way and get the best opportunity to up-date themselves, reference service according to need. Besides these, news clipping service, current awareness service etc. are also given to the users, if necessary. Library services are available from 9.00A.M. To 9.00P.M. Library will remain closed on Fridays and other public holidays (Present Study, UIUL Website & UIU Website).

University of Liberal Arts, Bangladesh Library

Permission for the opening of ULAB was received from the UGC in November of 2003. ULAB was formally launched at a ceremony on October 1, 2004. For its first two years the university operated from its original campus in Mohakhali, Dhaka. The new, purpose-built campus in the heart of Dhanmondi was opened in the Fall of 2006. In the Summer of 2008, ULAB opened its second campus, also in Dhanmondi. ULAB has 4 department/schools, 2697 students, 140 faculty member and 68 management staffs.

The Library is the center of the University of Liberal Arts Bangladesh (ULAB). In 2004, the Library was launched at 116 Arjatpara, Mohakhali, Tejgaon, Dhaka. In 2006, University of Liberal Arts Bangladesh and the Central Library moved to its own campus at House 56, Road 4A, Dhanmondi, Dhaka-1209. It has been growing with the young university constantly serving the vibrant community of students and faculty members since its establishment. Different types of text and reference books

for the departments of Media Studies & Journalism (MSJ), Computer Science & Engineering (CSE) and Electronics and Telecommunication Engineering (ETE) are available in the library. Among the various resources of ULABL are textbooks, reference books, rare collections, Bangladesh business reference collections, UN reference corner, periodicals, reports, directories & handbooks, newspapers, maps & atlases, e-resources, e-journals, e-books, e-magazines, and AV materials notable. ULAB Library provides services & facilities for borrowing services, language lab, library database, computerized catalog, information services, faculty handout, services, photocopy services, printout services, and pigeonhole (Present Study & ULABL Website).

ASA University Bangladesh Library

ASA University Bangladesh was established in 2006 in Dhaka under the auspicious of ASA Bangladesh a non-government development organization following the Private University Act 1992. ASAUB is an institution of higher education absolutely dedicated to quality education at affordable cost. It is a relatively new university and prides itself on its focus on career planning and employability of its graduates. ASAUB stands for academic and professional excellence. At present the university has 4 schools, 6000 students, 145 faculty members and 85 management staffs.

ASAUB library started its journey in 2007 with 1,000 volumes of books, now the collection of the books has reached about twelve thousand. The Library comprises an all-rounded collection of materials in the arts, business, social sciences, Pharmacy, Applied Sociology and Law, giving vital support to teaching and research in the University. The Library collections and services, physical and virtual, provide outstanding support for recognized research in various programs while also addressing the learning needs of about six thousand students across the campus. Students and faculty rank the Library as the most important source of information for their research. Library facilities are being framed as more flexible learning spaces—collaborative, individual study, instruction, and calm environments—to meet a variety of user needs. The library is providing library circulation and other services with Mirror library software packages (Present Study & ASAUBL Website).

CHAPTER – 4

Present Status of University Libraries in Bangladesh

CHAPTER 4

PRESENT STATUS OF UNIVERSITY LIBRARIES IN BANGLADESH

From the definition of the problem the concept 'modernization' refers to the transformation from older system to a modern system to cope with current trends. It is common habit of human nature to adopt the easiest system and technology for human life. 'While we talk about modern libraries it indicates to the services of libraries to modern society through its vast resources and variety of services (Sharma, 1990, p.vii).' Academic libraries attached with the university and higher education required continuous updating for the cause of newer requirements of the education system which are changing so rapidly that one can hardly cope with this change. The growing demand for information in the field of research and development for business, social science, economics and scientific invention is so great that libraries are lagging behind to provide required information at the right time. 'The global trend is now characterized with a fundamental shift from traditional information environment to an e-environment where emphasis is placed more on the acquisition of e-resources such as e-books, e-journals as well as online databases. However, traditional library and information services and functions are still relevant (Okon, 2005).'

Chapter-3 described development of University Libraries (ULs) in Bangladesh from the historical point of view. ULs have a long history which has been started in 1921 when Dhaka University was established in the undivided Indo-Pak Sub-Continent. Present Chapter has been devised to depict the present status of the University Libraries in Bangladesh. This chapter is divided into two sections:

SECTION – A

Existing status of university library modernization in Bangladesh

Library System

Universities are categorized in various ways: general, agricultural, medical, science and technology, subjugated (affiliating), open, veterinary, textile, professional and Islamic. The vision, mission, objectives and university ordinance of these universities are different. As a consequence, university libraries in Bangladesh have been operated and administered in different ways. The researcher found that most of the university libraries have been operated and administered with traditional as well as semi-automated, and automated methods. Some functions have been executed with automated system but rest of the portion maintained with the manual system.

Library administrative systems between public and private university libraries are a little bit different from each other in terms of the mechanization, financial grants, freedom of acquisition, satisfaction of stakeholder and professionals, and so on. Irrespective of the differences, the university libraries have been performing basic activities of a university library.

Evolution of Modernization

From the historical point of view it is observed that Dhaka University Library has made changes to adopt modern technology with its pace of time from the very beginning. For example DUL adopted all physical forms of cataloguing such as book catalogue, shelf list catalogue, author catalogue, title catalogue, dictionary catalogue for the users. DUL started following Anglo-American Cataloguing Rule-1 (AACR-1) soon after release of its 1st edition in 1967 in international arena (the rules for description in Part I of AACR are based on the general framework for the description of library materials, the ISBD (G)-General International Standard Bibliographic Description) and second edition of AACR has been followed after its released in 1978. Microfiche, microfilm, punched card technology was also used to locate library materials. To reproduce library materials DUL has been using photocopy machines, cyclostyle, type writer and electronic type writer machine since the 1960s. Library circulation procedures, modernization of equipment and furniture has taken place over the period of time to cope with the development of the modern technology. Bangladesh entered into the computer era in 1964 and BUET started its computer application in 1968 by offering courses in Numerical Methods and Computer Programming, acquiring IBM 029 Data Entry Machines (Patwari, Alam &

Rahman, 1996, p.1-2). Subsequently, DU introduced computer for academic purposes and the Dhaka University Computer Centre (DUCC) began its journey with an IBM 4331 Mainframe Computer in 1985 (Chowdhury, Murshed & Chowdhury, 2003). To serve its wider community DUL is always renovating services and adapting newer technology. This shows a positive trend towards evolution of modernization of the university libraries in Bangladesh.

Library building

Library is a growing organization. It occupies space continuously. Thus, planning of library building requires special attention so that it fulfills the present and future needs of the university. Library planning should determine whether adequate provision is being made for each library function and whether the building as a whole will be sufficiently flexible and expandable, so that it can accommodate itself to changing requirements, and be economical to operate. It is a usual trend that libraries in the university grow with the development of the university and start in a small room of the academic or administrative building. Subsequently, it moves toward its permanent location to meet the growing demand of the library. After analysis of the historical growth of the sample university libraries it is observed that all the university libraries started with a temporary arrangement and finally they moved toward their permanent building after a few years. For example DUL moved to its present arts faculty campus in 1964, BAUL in 1969, BUET library in 1973 and JUL in 1982. Library size and space also depends on the number of the students, faculties/disciplines, books added annually and on research activities. Library building planning, selecting proper sites, and in considering the future needs most of the public university library have failed to accommodate all these aspects properly. It is observed that most of the old universities have own building with sufficient space for reading communities but this is not completely true for the new public and private universities.

Infrastructure

Insufficiency in infrastructural facilities has been observed in university libraries in Bangladesh. Except few public and private university libraries, there is a lack of

sufficient space for reading, group studies, individual reading, research cube, experimental research dormitories, communication passages and space for administrative staff. Environmentally libraries are not congenial for the reading people. There are acute problems in sufficient natural light and ventilation system of the university library building. There are shortages in furniture and equipment. Almost all libraries have no noise prevention facilities, maintenance provision and fumigation equipments. Almost all public universities have failed to provide hygienic washroom facilities for male and female students. No university has recreation and refreshment rooms (cafeteria) attached with the library. There are some good examples also available like IUB, CIU, NSU, AUST, and BRAC University have been providing outstanding services to the users.

Administration and Library Committee

All the public universities are autonomous under the statutory apex body University Grants Commission (UGC) of Bangladesh. The administrations of the public universities are maintained by different committees who propose recommendation and final endorsements made by the syndicate. Private universities also came under the same system of governance under the UGC, Board of Trustees and syndicate after the amendment of the Private University Act 2010. As public universities have a unique format whereas there is no set format in Private University Act. As a result, some private universities have no library committee and library is maintained by the assigned person from the management.

University Library is overseen by a committee consisting of representatives from different faculties/departments and important administrative units of the University in Bangladesh. The Vice Chancellor of the respective university acts as the Chairperson of the Library Committee (LC). On the other hand, the Librarian acts as the Member-Secretary of the Committee. Responsibilities of the Committee are to advise the Library personnel, formulating library policies, procuring library materials, improving library and information services, operational matters, and so on.

It is observed that most of the public universities have LC committee. On the other hand a few private universities have library committees. This is due to the owner of

the university who controls everything with his relatives or trustworthy persons. A Library Committee has been drawn from the oldest public university of the country for showing actual structure of the committee:

Table 4.1 Dhaka University Library Committee

SL	Designation of the person	Status in the Committee
(i)	The Vice-Chancellor, University of Dhaka	Chairman
(ii)	The Pro-Vice-Chancellor, University of Dhaka	Member
(iii)	All Deans, University of Dhaka	Member
(iv)	Three members of the Academic Council to be appointed by the Academic Council for one year who will not be eligible for reappointment in the following year	Member
(v)	The Librarian, University of Dhaka	Member Secretary

Source: <http://www.library.du.ac.bd/?q=content/dhaka-university-library-committe>, retrieved June 15, 2013.

Library Budget

In spite of differences in type every university [public and private] reverses a budget for library in the annual development program which starts from 1st July of the current year and ends on 30th June of the following year. This budget is spent for purchase of learning resources; construction and repair of building, machineries, sundry equipment and tools; salary of the personnel; installation of IT; stationeries, contingencies and other expenses. This is a matter of reality that maximum heads of the library do not know how much money has been allocated exactly for different sectors. As a result, they are not able to evaluate the progress of development at the end of the financial year. Sometimes, library budget has been expended for development of the non-library related sectors of the university. Usually, annual budget of the public and private university library has been prepared by the university librarian on request of the accounts department. For the case of the public university final budget comes from UGC on the basis of proposals of the university budget committee. Private universities sanction annual budget by the Board of Trustees on the basis of proposals of the university finance committee. In most of the cases library budget are found to be insufficient in public and private university libraries.

Library Human Resources Management

As a vital part of the university, a library requires many personnel in different layers for taking care of the library and its contents, including the selection, processing, and organization of materials and the delivery of information, instructions, and loan services to meet needs of its users. Overall situation of the library personnel of the country is not good as expected with other developing countries of the world. "Most of the university libraries in Bangladesh do not have the requisite professional and qualified manpower to support the information and knowledge activities. Moreover, the library human resources in Bangladesh have been suffering a lot for a long time because of their lower social dignity, professional status and pay scale (Roknuzzaman, 2007, p.53)." Librarians have no bargaining power with the administration related to library development. Library personnel are not entitled to participate in different internal committees. This situation is worse in private than in public university libraries. In Private University Act 1992, librarian was the member of the private university syndicate but after the amendment in 2010 this provision is discarded. "But the success of the university library depends heavily upon the effective functioning of its manpower. Therefore, like business and ICT sectors, proper management and administration of human resources in a university library needs to be emphasized (Roknuzzaman, 2007, p.53)."

Pay Scale

The pay scale of the professional librarians in public university libraries is similar to other administrative staff of the university. Pay structure in private university does not follow any set rules in most of the cases. Payment is made according to negotiation.

Human Resources Practice

For the case of a traditional university administration and structure the task of HRD is handled by the university Registrar and Registrar Office's in Bangladesh. Few people are involved besides their regular duties. When some particular department requires personnel the registrar publishes job advertisements and conducts all

fundamental activities of selection procedures. But in recent times this situation is changing rapidly. Universities are setting up HR departments whose main duties include personnel planning, selection, training & development, retention & motivation, compensation and HR relation.

Basic Functions

University libraries of Bangladesh have been performing basic functions besides other activities in the university. These are acquisition, processing, circulation and reference. Present status of the above functions are described below:

Acquisition

Acquisition functions involve selection of required books, appointment of agents/suppliers, ordering, receiving, accessioning and payment to the supplier. All the public university libraries follow these sequences of tasks when they purchase books once a year or at the beginning of the semester. This is sometimes a tedious task to complete on the part of the library professionals. On the contrary, most of the private university libraries (PvtULs) do not follow the above sequence of tasks to purchase library materials. Usually, PvtULs purchase books throughout the year whenever the book is required. Generally, university libraries purchase books from local and foreign publishers through local and international suppliers, sometimes direct from the publisher and sometimes from the spot. Local suppliers are paid with local currencies and international suppliers are paid in US dollars. Few years ago, foreign draft was sent to the supplier but recently international credit card or swift banking are used to make payments to international suppliers. "Some leading private universities of Bangladesh sometimes try to procure books from abroad directly. But without license only a limited amount of foreign currency can be spent for book procurement. This limited amount is not sufficient for a university (Chowdhury, 2011, p. 512).

In Bangladesh in most cases large purchases are done through tendering process. Books procurement is not an exception. The vendor(s) who can provide maximum discount on the list price are usually selected for book supply (Chowdhury, 2011, p.512).

Import of books and periodicals is not easy in Bangladesh. Import license is not issued to everyone and anytime. For this reason, entrepreneurs have to wait a long time. Though they get license they have to wait for approval of foreign currencies from the central bank. After completing all the formalities when they forward the order for shipment they have to face another problem in the port for payment of VAT, tax, customs duty, warehouse duty and duty of clearing and forwarding agencies. In such a situation, import cost increases more than the actual cost.

After forty two years of independence of Bangladesh the above situation has not changed due to the lack of proper initiatives of the government and business community. Till date, university libraries have to purchase books and other materials from foreign publishers and they have to wait 6 to 8 weeks to get any purchase order. The situation has been changed to some extent for the cause of the demand for learning resources in higher studies in line with the demand of higher education day by day. Unlike our neighboring countries, especially India, we are not able to collaborate with foreign publishers to publish foreign titles in local environment. Though some world renowned publishers are marketing their products directly in Bangladesh recently.

To avoid the above situation and for the flexible payment procedure most of the university libraries are trying to purchase soft versions of all kinds of publication instead of hardcopy. Trends have been observed in purchasing of e-journals and archives, e-books and other e-resources recent years, which has been increasing every year.

Processing

The processing tasks involve cataloguing, classification, preparing catalogue, filing/indexing and shelving of books. A trend has been observed in using computerized catalogue specially the use of MARC21 format in Bangladesh recent years. Except few public university libraries all other private and public universities are trying to input bibliographic information of books into MARC21 format instead of into the traditional physical form of catalogue. In the case of classification, maximum university libraries have been using latest version of DDC. Some university libraries

(NSU, BRACU, etc.) are using LC classification system in Bangladesh. For assignment of subject heading some medical universities are using MeSH and others are using LCSH and Sears List of Subject Heading and Spine Thesaurus, etc.

Circulation

Many types of circulation systems have been followed by the university libraries of Bangladesh. These are Newark, Brown and computerized system. Few public university libraries have been using Brown Charging system. But in most of the cases computer based circulation has been used widely for performing all the tasks of a circulation section in recent times. These includes charging and discharging of library resources; provision of information on the location of circulation items – either all items or only those items on loan or elsewhere, i.e. at the binder, on reserve, being re-catalogued, etc; renewal of loans; notification to the library staff on overdue items and printing of overdue notices; calculation of fines, printing of notices, recording receipt of fines, and sometimes printing of fine receipts; calculation and printing of statistics of various types; provision for printing due date slips, automatically generating orders for lost books or needed (additional) copies and printing mailing labels for remote borrowers.

Reference

Two types of reference services have been provided by the university libraries of Bangladesh. These are ready reference and long range reference services. Ready reference service is performed with the help of ready reference books/works like dictionaries, handbooks, biographical and geographical dictionaries, etc. on the other hand long range reference service refers to a process of prolonged search of information involving the activities of “preparation service and assimilation.” Recently, university libraries have been installing computer technology in reference section for access into electronic resources. This section also provides free browsing, email, web form, programmed instructions and latest information in their fields of interest. Besides various kinds of reference services ULs are providing list of new additions books by subject, title and author; preparing current aware list of journals; preparing list of journal articles by subject and title; preparing annotated

bibliography of journal articles; preparing bibliography on dissertations; and preparing current aware list of articles published in the daily news paper.

The university libraries further provide certain auxiliary and supplementary services in relation to the basic services to enhance its' contribution to the university community. In this connection, auxiliary services include the activities associated with: conservation of library materials; photographic and other copying services; provision of reading equipment of materials in micro and machine-readable form, maintenance of equipment; and transportation and communication facilities for interlibrary purposes. Supplementary services may include: a variety of audiovisual services; special facilities and services for advanced students, researchers and scholars; lectures, concerts and dramatic performances central collection; browsing areas; abstracting and translating services; co-operative projects; mounting special exhibition, operating printing and publishing services and bookstores; conducting library service lectures, workshop, institutes and schools of library science and others.

Services & Facilities

Circulation, reference and some auxiliary services has already been mentioned earlier. Besides the above services, university libraries of Bangladesh have been providing basic services to the users. Services may vary due to the type and goal of the particular university. For example every public university does not provide Ph.D or higher research facilities. Similarly no private university provides PhD and M.Phil degrees. In this circumstance, services vary focusing on the needs of the students and activities of the university. Grossly services fell under the categories of: (a) borrowing services [materials rent and reservation], (b) reprographic services [recomposed and reproduction], (c) CAS, (d) SDI, (e) reference service [ready and long range], (f) printing, (g) scanning, (h) CD-Rom writing, (i) browsing and Internet services, and (j) special services [extension services, marketing and public relation, information literacy and user education, training and continuing education, printing and publication]. Facilities includes: (a) reading room, (b) study carrels, (c) reference room, (e) research cube, (f) journals, periodicals, magazines, and newspapers reading, (g) safekeeping of personal belongings, (h) electronic resources, (i) CCC, (j)

security gate, (k) archiving of library materials, (l) longer opening hours, (m) air conditioner, (n) pure drinking water, (o) washroom [for female & male], etc.

Automation

Library automation is the use of automatic and semiautomatic data processing machines (computer and related technologies) to perform such traditional library activities as acquisition, cataloguing, and circulation (Encyclopedia of Library and Information Science, 1968; Int. Lib. Rev., 1989). Bangladesh entered into the automation era in 1964. Initially computers were installed for industrial and research purposes. Most of the organizations started use of computers for housekeeping activities with the advent of micro-compute and its availability in Bangladesh since the 1990s. PvtULs first started the use of computer for database creation and maintenance of circulation since 1993. Among the PULs, BUETL first installed CDS/ISIS software for book processing and bibliographic services in 1990s and DUL installed GLAS software for automating its central library in 1998. Automation has been started in university libraries of Bangladesh. Till date, many public and private university libraries have achieved a remarkable progress in automation such as BUETL, BSMMUL, KUET, CVASUL, NSUL, IUBL, BRACUL, and EWUL.

Database Creation

ICDDR,B Library and the AIC are pioneers in creating bibliographic databases on specialized fields. University libraries mostly concentrated in creation of bibliographic and other databases on CD-Rom, in house database like books, journal/periodicals and magazines, journal and newspaper articles and various repositories in recent years. Among the public university libraries “BUET library started book processing and bibliographic services using CDS/ISIS in 1990s. In the year 1999 the library itself developed Visual FoxPro based software to extend the computerized library systems (Kabej, Habib & Hossain, 2012, p.118)”. DUL started creation of bibliographic databases in 1998 by installing Graphical Library Automation Software (GLAS). Subsequently, other public universities like BSMMU, SAU, BAU, SUST, KUET have introduced various databases by self support and under the funding of HEQEP, UGC. Among the private universities IUB is the pioneer in

creating different types of databases besides books like database of audios (cassettes), videos, CD/DVD-ROMs, journal/periodicals/Magazines articles, newspaper articles, and cartographical materials. It started database creation in 1993 using CDS/ISIS and MS-Access database software. NSU has also been using various databases from 1993 by CDS/ISIS software. Subsequently, BRAC, EWU, ULAB have devised many databases for the users. Presently, many public and private university libraries are trying to introduce free and open-sourced ILS (i.e. Koha, DSpace, Greenstone, Evergreen, etc.) software for creation of databases & repositories.

Software

Use of computers began in Bangladesh in the 1960s and assumed wider dimension in the nineties (Chowdhury, Murshed & Chowdhury, 2003). At the very beginning computer were mostly used in banks, insurance, statistical bureau, large scale industries, atomic energy sector and research organizations. Universities started use of computer in 1979 when BUET established a computer center for the first time in Bangladesh. Subsequently DU established a computer center in 1985. During the 1980s some special libraries started using software for bibliographic database creation and data entry into the computer. Although the journey of the private universities have started many years later than the public universities, but PvtULs have started use of software in library operation much earlier than the PULs. IUB library started use of software (CDS/ISIS & MS-Access database) in 1993 soon after the establishment of the university. NSU has been using Bi-lingual Library Management Software, developed by NSU Library since 1995 though it has started using CDS/ISIS in 1993. Among the PULs, DUL introduced Graphical Library Automation Software in 1998. In the year 1999 BUETL itself developed Visual FoxPro based software to automate the library system.

At present university libraries are using various types of software like customized, software package, and open-source software (OSS). Among these three types, OSS is being used widely in Bangladesh recently. The most popular software which are used by university libraries are: WINISIS, GLAS, Mirror, LibSIS, DSpace, Koha, Greenstone,

Drupal, Evergreen, VuFind, and MyAthens etc. At present more than 25 university libraries are using DSpace and Koha library automation software in Bangladesh.

Institutional Repository

An institutional repository (IR) is a new method for identifying, collecting, managing, disseminating, and preserving scholarly works created in digital form by the constituent members of an institution (Anuradha, 2005). IR is designed and created to access the content from a remote location. It is flexible, easy and cost effective medium of storage of intellectual properties of an institution. 'IR remains an open access model, and operates by centralizing and preserving the knowledge of an academic institution with the purpose to make that accessible to anyone with Internet access (Anuradha, 2005)'.

Bangladesh entered into IR activities in different university libraries in 2007 when BRAC University for the first time introduced IR project supported with fund from INASP using Dspace Software. Subsequently some private universities started IR project in their libraries. Chowdhury, Uddin, Afroz, & Sameni (2011) carried out a study on IR activities in Bangladesh funded by ICDDR'B and found that 'ICDDR,B and BRAC University, a leading private university in Bangladesh, are now working on IR using Dspace software. The NSU Library already started their activities using DSpace software. NSU is preserving intellectual outputs of their faculty members along with others online journal articles. EWU library is planning to move with greenstone digital library software for building digital library in East West University. IUB library is working to collect print copy materials from the faculty members and researchers. These materials will be digitalized and used in developing IR. IUB will use DSpace software. Bangabandhu Sheikh Mujib Medical University (BSMMU) is also trying to set up an IR in their Library.

This study also reveals (Chowdhury et al, 2011) that some initiatives have also been taken by BanglaJOL (www.banglajol.info) with the help of International Network for the Availability of Scientific Publications (INASP) to digitize all journal articles published in Bangladesh. BanglaJOL is a database of Bangladeshi journals, covering the full range of academic disciplines. The objective of BanglaJOL is to improve the

visibility of the participating journals and the research findings they carry. All the materials available on BanglaJOL are free to search, view and browse. Copyright of all included matters is retained by the journals or authors of respective journals. Permission is required for any use or reuse of the content that falls outside the concept of fair use.

D.Net, a new firm has recently been introduced in the knowledge management community, which deals with electronic resources in Bangladesh. They started working in September 2005. They have a separate, Knowledge Management Division (KMD) to digitize their resources with provisions for accessing digitized resources through Internet (<http://www.dnet-bangladesh.org/>) (Chowdhury et al, 2011).

Among the public universities BSMMU, KUET and SBAU started IR project under the HEQEP 1st Round (2011-12) AIF Award by UGCBAIF (HEQEP, 2010). In the 2nd Round (2012-13) of HEQEP, BUET, CVASU, RU-DISLM, SAU, and BAU have started IR project in their libraries (HEQEP, 2012). Dhaka University started digitization of old manuscripts and newspapers to create institutional repositories from 2012. All these universities are using DSpace and Koha open-source software for building an institutional repository.

University libraries have huge potential in making institutional repositories in Bangladesh. At present 77 private and 34 public universities are functioning in Bangladesh. Among these, few top universities have sufficient experience in creating and successful completion of IR projects. As a result, other universities may seek their expertise if they want to make IR in their institutions.

Consortium

Library cooperation, collaboration and networking are synonyms in the field of resources sharing among libraries. Library Consortium is another comprehensive term which has been using broadly in the field of library and information field recently. "Traditionally, the primary purpose of establishing a library consortium is to share physical resources including books and periodicals amongst members (University Grants Commission of India, 2007)." Previously, libraries had to depend

on various resource sharing mode and topologies. “But due to physical distance and other reasons even this limited system of cooperation was not being practiced widely (Chaterjee, 2002). However, the mode of cooperation has undergone a transformation with infusion of new information technology from print-based environment to digital environment. The emergence of Internet, particularly, the World Wide Web (WWW) as a new media of information delivery triggered proliferation of Web-based full-text online resources (University Grants Commission of India, 2007).

With the advent of ICT and its application in library activities, new opportunities opened up option for greater cooperation among libraries. In recent years availability of information resources in digital or electronic medium has 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). Shared subscription or consortia-based subscription to electronic resources through the consortia of libraries, on the one hand, permits successful deployment and desktop access to electronic resources at highly discounted rates of subscription and on the other hand, it meets the increasing pressures of diminishing budgets, increased user’s demand and rising cost of journals. With this change, libraries all over the world are forming consortia of all types and at all levels with an objective to take advantage of the current global network to promote better, faster and more cost-effective ways of providing electronic information resources to information seekers. GALILIO, OhioLink, TexShare, VIVA and SUNYConnect in USA, CALIS in China, CONCERT in Taiwan, INDEST-AICTE Consortium, UGC-INFONET Digital Library Consortium and CSIR E-Journals Consortium in India are some of the well-known library consortia (University Grants Commission of India, 2007).

An international standard University Consortium has not been built in Bangladesh yet. In this regard, University Grants Commission (UGC) of Bangladesh has been working relentlessly for years. “In the past the UGC had taken initiatives for sharing information resources of different universities for the benefits of the universities. UGC’s first ever initiative was taken in 1984 by adapting ‘Union Catalog Project’ and

'Central Journal Library Project in 1989 but not implemented. Afterward UGC initiated Bangladesh Education and Research Network (BERNET) and University Resources Center (URC) since 1999" (Awwal, 2008).

Since the independence of Bangladesh in 1971, several initiatives were taken by different organization including UGC to form cooperation among the university libraries of Bangladesh. "In 1998, there was a networking attempt called Bangladesh National Scientific and Library Information Network (BANSLINK). This project was initiated by the Bangladesh National Scientific Technical and Documentation Center (BANSDOC). It ventured to connect libraries across the country by setting up a network with 15 libraries, 6 out of Dhaka and 9 in Dhaka via dial up links. The initiative fell apart due to administrative reorganization at the top and subsequent lack of appreciation (Islam & Mezbah-ul-Islam, n.d.).

In case of university library consortium the situation is worse than other research organizations (Islam & Mezbah-ul-Islam, n.d.). There was no library consortium in Bangladesh before 2007. In the past, UGC had taken many initiatives for library cooperation for the benefits of universities. Since 1980, there have been a number of attempts by UGC for library cooperation but UGC could not succeed in any attempt. In 2006, an initiative was taken by the University Grants Commission (UGC) of Bangladesh to form a Digital Resource Consortium for university libraries in Bangladesh for sharing integrated library resources including e-resources and computer database. A 4-member committee has been assigned at the UGC to draft a concept paper on forming a consortium in Bangladesh. The implementation of this initiative will greatly help solving in accessing and using information resources, in higher education and research institutions in Bangladesh (Uddin & Chowdhury, 2006, p. 490-3, Uddin, 2009, p. 196).

In 2007, one consortium formed in Bangladesh was named Bangladesh INASP-PERI Consortium (BIPC) by the participation of major public universities, private universities and a few research institutions under the guidance and supervision of Bangladesh Academy of Sciences (BAS). Members of this consortium are enjoying benefits through the use of online resources (Uddin, 2009, p.196).

Modern Equipments and ICT

The use of information and communication technology (ICT) in university libraries have been widely started in Bangladesh recently. These are computer, WiFi, RFID, CCC, RFID detector gate, scanning machine, photocopy machine, printer, DVR, Barcode reader, spiral machine, multimedia projector, digital camera, scanner, notepad and laptop, etc.

Marketing of Information in University Libraries

Librarians face the fundamental challenge of creating awareness about their library's value and role in meeting information needs. Recently, almost all university libraries tried to collect the latest information for its stakeholder. In maximum cases these information remain unused among the users for a lack of awareness. Sometime faculty members raise requisition to purchase learning resources but they do not follow up whether his/her materials arrived in the library. In such cases, university librarian's have to take various measures like "marketing of information product" to disseminate information among the user community. In addition to the CAS, SDI, reference services, and documentation services, librarians have to take initiative for user education, introduction of information literacy program, latest information on new services by publicity and advertising materials and participating in various exhibitions, and fairs, etc.

University libraries in Bangladesh provide various services to the user community by adopting various traditional techniques like CAS, SDI, reference, and Documentation services. But the 'Marketing' of information products did not take shape yet. To modernized university libraries marketing activities should be one of the top most priorities.

Library Advocacy

This is a realized fact that among the various departments of a university, the library is always a less prioritized division. Its growth is comparatively slower than any other section of the university. This situation is continuing for decades in the academic libraries in general and university libraries in particular in developing countries. In this era of information communication technology (ICT), information explosion,

digitization, and social change this situation is changing due to continuous effort by the librarian, professionals and user communities. Now libraries are undertaking advocacy for better use of library services, for better inflow of finance, better infrastructure, and better faculty status and transforming the academic libraries to e-environment. University libraries of Bangladesh did not start library advocacy practices yet.

Standard for University Libraries

Library standardization and policy are very much essential to run a university library smoothly. Standardization means setting minimum requirements for the library on the basis of which the university library grow so that minimum service, staff, furniture, space, budget can be ensured for fulfilling the university's vision and mission.

In Bangladesh the standardization agency is working with the concerned ministries who raise the bill in the national parliament for approval and parliament endorse the bill finally. Different education commissions, national plans, professional associations and department of Information Science and Library Management (ISLM) contribute to formulate standardization. The analysis of the different bodies and their activities indicates that they have failed to contribute in setting standard for university library modernization till present date.

From the discussion of Chapter-3 it is observed that the developments of the universities in Bangladesh are of two categories: public sector and private sector. The public sector development depends on government initiatives and found different type of acts for different kinds of universities where the minimum matters of university clearly mentioned but library matters was not clear. For the case of private sector universities, all the university established according to the Private University Act 1992 and subsequently PvtU Act 2010. The Act clearly described different criteria and standard for the university various committees but the matter of the library was not covered clearly. As a result, libraries in both categories of universities are neglected sector, and did not grow according to minimum standards. From the study it is evident that university libraries in Bangladesh have been growing

haphazardly without ensuring minimum standard and policy defined by the university during its foundation.

SECTION – B

Government and other Initiatives to Improve the Situation in Bangladesh

Legislative bodies or Government of a country can take steps to modernize any department or system. Government circulates Ordinance/Acts to change system which are best suitable to the people and the country. The Government of Pakistan and after the independence of Bangladesh had taken several steps in various Five Year Plan (FYP) and National Education Policy. An overview of the Government's recommendations and policy are illustrated below:

Pre-Liberation period

During the Pakistan regime, the Government of Pakistan approved three Five Year Plans (FYP) from 1955 to 1970. In all FYP the Government realized the importance of the library in the University and found out a serious shortage of library amenities. Books are in short supply and many of them out dated. There is negligible regular flow of good literature suitable for the needs of the age group concerned or their teachers. No appropriate measures were taken to improve the situation (Cited in Mia & Saifullah, 1969, p.60-61).

The Government of Pakistan established three important education commissions from 1959 to 1964. These are Education Commission, 1959, Scientific Commission, 1960, and Commission on Student Problems and Welfare, 1964. These reports emphasized the need of libraries, provision for training and proper condition of service of librarians. The commission recommended expansion and proper management of libraries through increased financial support to purchase good books for best use and thereby to stimulate and create reading habits among users. The report also suggested that university and college libraries should be spacious and remain open long enough to meet all the requirements of students and staff. Scientific Commission 1960, among other things, vividly outlined the condition of

libraries and position of librarians and made many recommendations but during the execution period no progress was found in real sense (Pakistan, Ministry of Education, 1959, cited in Ahmad, 1987).

Post-Liberation period

After the independence of Bangladesh in 1971, 6 FYP's have been taken from 1973 to 2011 by the Government of the People's Republic of Bangladesh. The FFYP (1973-1978) found out that library facilities are grossly inadequate and ill organized. The reading habits among students and faculty members are declining due to the non-availability of books and periodicals in sufficient numbers (First Five Year Plan, 1973). SFYP (1980-1985) described that quality of higher education in a country greatly depends on the availability of standard books and journals. There have been acute shortages of standard books on higher education in Bangladesh which persists (Second Five Year Plan, 1980). FFYP (1990-1995) felt the necessity of university development at an earlier basis (Fourth Five Year Plan, 1995). The FFYP (1997-2002) emphasized that libraries will be equipped with books/journals on a continuous basis and for this National University and its library will be strengthened with a view to catering to the needs of 933 degree colleges in the country (Fifth Five Year Plan, 1998). The SFYP (2011-2015) framed an Education Policy in qualitative goal indicating 'Quality enhancement at university education through improvement of pedagogy and educational environment (Sixth Five Year Plan, 2011). Hence, no specific indication was brought under consideration for modernization of university library as it was clearly indicated in the FFYP 1997-2002.

Summary of the FYP

From the above discussion and analysis of the nine FYP's from 1955 to 2011 no specific progress has been found for the development of university libraries in Bangladesh. Allotment of finance for university libraries for the purchase of learning resources and infrastructural development under the sub-sector of education has been observed. Modernization of university libraries was felt but no standard was developed.

Education Commission

The Government of Bangladesh established several Education Commissions (EC) and Committees since independence with a view to modernize the education system with the changing environment. Every education commission was formed with eminent educationalists and intellectuals who investigated every single problem minutely and made recommendations for development to the Government. Besides other important sections, library was considered the heart-beat of a University and vibrantly outlined the condition of libraries and made recommendation for the development of it in each education commission report. Each EC was named according to the chairman of the commission. These are Qudrat-e-Khuda Education Commission, 1972, Mofiz Uddin Education Commission, 1988, Shamsul Haque Education Committee, 1997, Dr. M.A. Bari Commission, 2002, Mohammad Moniruzzaman Mia Commission, 2003, and Kabir Chowdhury Commission, 2010.

Among all these EC reports, Qudrat-e-Khuda Education Commission report, 1974 found that existing arrangement of the university libraries were not satisfactory (Bangladesh Education Commission Report, 1974). The commission also elucidated the university library condition minutely and made recommendation accordingly but unfortunately none of them have been implemented till date.

Bangladesh Education Commission Report (1988) observed that it was necessary to give maximum facilities to the university libraries to import foreign books, periodicals and others usable library materials. It was also necessary to give priority in import rules, custom and vat law and foreign currency control law of the country to the university library and other higher education and research institutions. The commission also recommended that there should be a rental system of books among the college and university libraries in all levels. The commission also emphasized on library training, national library networking and resources sharing to ensure the optimum use of limited resources among college and university libraries for the sake of teachers, students and researchers.

Bangladesh Education Commission Report (1997) proposed to establish a rich library in every university. There should be a library network, inter library loan, and internet among the colleges and universities. The committee suggested that a university

library should be enriched with modern information and communication technology, and necessary programs should be taken for LAN, online services and inter-library cooperation. To assist research the budget of books and journals should be increased. The necessary clauses for establishing library should be included after modification of Private University Act. The committee recommended for forming a “Modern National Library and Information System” in the country.

An expert committee was formed in 2002 for Bangladesh National Education Commission Report 2002 to identify immediate implementable reforms of the education sector. The Committee suggested several interventions in the sector which were considered later by the Education Commission 2003 (Ministry of Education, 2006).

Bangladesh National Education Commission Report (2003) exposed the conditions of both public and private university libraries but none of them had been taken into consideration in the Government ADP due to the national policy regarding library development. The commission recommended that there should be at least 2500 books (200-250 titles) in the library and 10 international journals should be procured regularly on each subject by the private university libraries. The commission also suggested to ensure separate reading room in which 10% of the total student seating capacity, book preservation area as well as office of the librarian, office room for deputy librarian and assistant librarian, processing room, lending/circulation area, computer room and room for toiletries and toilet in the private university libraries. The commission further recommended that 10% for the newly established university library and 5% for the old university library of the total annual university budget should be allotted to purchase books and journals for each private university library.

The Education Policy (2010) recommended to establish a modern library to facilitate higher education in every university. The commission also outlined a ‘Library Policy’ in which emphasis has been given on installation of ICT in libraries. The Policy also suggested that all libraries of the country will be connected through networking so that any student can have access to the resources of other libraries. By phases, digital edition of books and journals will be made available. The Policy realized the

importance of establishing a statutory, dignified and effective library council constituted with the representatives of the ministries of education, culture and local government to find solutions to the problems relating to policy making, planning and coordination and undertake development programs. It also proposed for creating different position for librarians and increasing opportunities of promotion. But in real practice this policy has not been implemented at the national level yet.

Summary of various Education Commissions

The education commission reports revealed that government took several steps for development of the library but did not implement them. Taking into consideration the various FYP and Education Commission Reports, the condition of university libraries in Bangladesh can be summarized as follows:

- There is no definite plan for university library development. Different commissions proposed development plans in different ways;
- There is no common and unique standard for university library development in the country;
- There is a shortage of manpower as well as professional skills of the library personnel, lack of in-service training and development;
- There are problems in library space, proper planning of building, furniture and equipment;
- There is a shortage in collection of books, journals, periodicals, and reference materials;
- There is a lack of sufficient library and information education in Bangladesh;
- There are problems in professional and social status of the librarians;
- There are problems in University Act to define libraries in the university levels;
- There is no guideline for adaptation of ICT and automation;
- There is no direction for forming library consortium and information resource sharing;
- There are no initiatives taken for preparation of union catalogue and national information and documentation system;

- There is in-sufficient research and development works related to the university library development;
- There is serious negligence, indifference, and lack of attention towards library development; and finally;
- The study found the library is less prioritized sector in the university administration.

Role of professional organization in modernization of University Libraries

There was no library association in East Pakistan (at present Bangladesh) till 1956. East Pakistan Library Association was established in 1956 and after the independence of Bangladesh its name was changed to Library Association of Bangladesh (LAB). It is the oldest and the largest national professional body in the country. Bangladesh Association of Librarians, Information Scientists and Documentalists (BALID) was established in 1986. From the beginning of the establishment of LAB and BALID they have been working for the development of library and enhancement of the professionals' dignity. They are partially successful but they were not able to play an appropriate role due to negligence of the government, lack of cooperation of the professionals, resources constraints and social status of the librarian. Other associations also have been working actively for the development of the libraries of Bangladesh. These are: Bangladesh College Libraries Association (established in 1993), Bangladesh Government College Non-Gazetted Librarians Association (established in 1994), Bangladesh Medical Librarian Association (established in 1987), Bangladesh Secretariat Librarians Association (established in 1994) has been mainly concentrating to realize the demands of the librarians working in the libraries in the ministries located within the Bangladesh Secretariat.

LAB and BALID have arranged a number of seminars, symposia and conducted research program to identify present condition of the university libraries and made several proposals for improvement to the government but none of them were implemented.

Government Projects

Higher Education Quality Enhancement Project (HEQEP) is an ongoing Government project of Bangladesh since its independence in 1971. HEQEP is a project of UGC, Ministry of Education, Bangladesh to meet the globalization challenges raising higher education quality to the world standard. The Ministry of Education, with the assistance of the World Bank, has undertaken the HEQEP project. The project has been launched in May 2009 and include in the government's Annual Development Program (ADP). Its duration is five years and would conclude in FY2013/14. The University Grants Commission (UGC) is the implementing agency of HEQEP (HEQEP, 2011).

Under the Academic Innovation Fund (AIF) Windows 3: University-wise innovation, HEQEP is providing fund in various sectors including library and information service development for university libraries in Bangladesh. Its first phase was introduced on 29 December 2010 and got grant in four universities (one private university and three public universities) for two years implementation of the projects viz:

Table 4.2 1st Round AIF Award by UGCBAIF on 29 December 2010 [2011-2012]

Name of University	Name of sub-Project	Window	Phase	Amount in (Lac Taka)
BSMMU	Enrichment of BSMMU central library	W3	1st	400.00
CUET	The accrument of knowledge by setting up a seminar library in the department of humanities, CUET	W3	1st	39.78
KUET	Enhancing the teaching, learning and research capabilities through library system automation	W3	1st	145.34
NSU	Building E- resources access centre and RFID based library management system at NSU library	W3	1st	318.44
*SBAU	Establishment of digital archive on agricultural theses and journals of Bangladesh	W3	1st	149.90

Source: HEQEP (2010)

*Project of SAU Department of Agricultural Extension and Information System for upgrading and continuing digital archive on agricultural theses and journals of SAU, BAU, and BSMRAU with financial help from AIF of HEQEP under UGCB.

At the 2nd phase of AIF three university libraries and Information Science and Library Management Department of RU got grant from HEQEP.

Table 4.3 2nd Round AIF Award by UGCBAIF on 01 April 2012 [2012-2013]

Name of University	Name of sub-Project	Window	Phase	Amount in (Lac Taka)
BUET	Digitalization of Central Library of BUET	W3	2nd	345.54
CVASU	Modernization of Central Library and Establishment of an e-Resource Centre at CVASU	W3	2nd	90.00
RU DISLM	Enhancing Teaching and Learning Quality through Initiating Environment for Digital Library	W1	2nd	61.82
SAU	Establishment of IT Network and Digital Library in Sylhet Agricultural University	W3	2nd	104.00
BAU	ICT-Based Automation of Bangladesh Agricultural University Campus	W3	2nd	449.00

Source: HEQEP (2012) List of Complete Proposals (CPs) Selected Finally for 2nd Round AIF Award by UGCBAIF on 01 April, 2012

UGC Digital Library Consortium

The first ever Digital Library Consortium (DLC) has been formed by the UGC of Bangladesh in June 2012 largely funded by the World Bank's Higher Education Quality Enhancement Project (HEQEP). From 1 July 2012, UGC Digital Library Consortium (UDLC) is offering access to three major online information resources: ACM Digital Library, Emerald and JSTOR (UGC, n.d). A fully operational digital library facility, the UDLC, has been established with 34 public and private universities (The Daily Sun, 2013, p.3). "UGC has taken another initiative to provide Bangladeshi universities with high speed internet and video conferencing facilities, virtual classrooms and digital libraries by creating Bangladesh Research and Education Network (BdREN) and its trust has been approved in 128th meeting of UGC held in 29 November 2012 (HEQEP, 2013)." BdREN is providing access to the latest knowledge and facilities collaborative research across the institutions of higher learning through connectivity to global networks in Eurasia, the USA, Ireland, Continental Europe and the Asia-Pacific region (The Daily Sun, 2013, p.3).

From the discussion it is evident that university library modernization activities and initiatives are not at a satisfactory level. Public university libraries are struggling for sufficient funds and on the other hand private university libraries are facing acute dilemma of infrastructural facilities. It is observed that the impact of ICT has been touched in university libraries in Bangladesh. A few top ranked public and private universities have already automated and digitized their libraries and some are in the pipeline and providing modern facilities to the users but rest of the universities have failed to implement it. Other problems related to the overall infrastructure, adaptation of new technology, proper initiatives, national policy and standardization, basic and auxiliary functions and services, qualified human resources, library public relation and marketing, information literacy and user education, library advocacy and library vendor/publisher relation also exist in the university libraries in Bangladesh.

CHAPTER – 5

Findings of the Study

CHAPTER 5

FINDINGS OF THE STUDY

Data in the form of Tables and Graphs have been collected through two sets of questionnaire: (a) Questionnaire for University Libraries [respondent is Librarian or Head of the Library] (b) Questionnaire for Users. After receiving the data from the respondent, it was inputted into SPSS for analyzing and getting appropriate results to come to a conclusion and show the actual situation. This analysis would provide the factual basis for the recommendations put forward by the researcher and also for the designing of a model plan for university libraries of Bangladesh. Hence, this chapter is divided into two sections:

SECTION – 1

SURVEY OF THE UNIVERSITY LIBRARIES

Twenty university libraries from the two broad categories of universities have been selected purposively and brought under the investigation. There were set 13 categories of variables for the respondent [Librarian or Library Head] to provide various information related to the organizational information, library information, library building, infrastructures and furniture, organizational climate and HR planning, information service pattern, use of modern technology, library budget, library public relation and marketing, library cooperation and resource sharing, library advocacy, major problems, opinion, and background information.

Table 5.1 Distribution of respondents by the type of the university

Type of the University	Frequency	Percentage	Valid Percent	Cumulative Percent
Public	10	50.0	50.0	50.0
Private	10	50.0	50.0	100.0
Total	20	100.0	100.0	

Table – 5.1 reveals the type of the sample university which was considered for the investigation using structured questionnaire. Ten (10) public and ten (10) private universities were purposefully selected and brought under the survey.

Organizational Information

Table 5.2 Distribution of libraries according to the year of establishment, type, number of faculties, students, teacher, and management staff

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	Year of Establishment	1921	1961	1962	1971	1964	2001	2003	2003	2006	2007	1992	1993	1991	1996	2001	2001	2002	2003	2003	2007
2	Type of the University	P	P	P	P	P	P	P	P	P	P	Pvt.	Pvt.	Pvt.	Pvt.	Pvt.	Pvt.	Pvt.	Pvt.	Pvt.	Pvt.
3	Number of the Faculties/ Schools/Departments	10	6	17	5	6	3	3	5	2	3	5	4	7	3	7	7	9	3	4	4
4	Number of the Students	29573	3542	5500	11735	1706	2648	1929	2400	475	1440	4134	3159	3463	7185	3000	3403	9578	3841	2697	6000
5	Number of the Teachers	1899	549	500	587	421	171	144	187	76	80	301	219	153	317	93	341	598	275	140	145
6	Number of the Management Staff	655	436	212	235	235	505	307	291	117	150	314	95	100	203	32	169	154	112	68	85

P= Public University, Pvt. = Private University

Table – 5.2 shows that the basic information of the universities related to year of establishment, type, number of faculties, students, teacher, and management staff. According to the Table, DU which was established in 1921 is the oldest university in the country and JSTU and ASAUB are the newest universities respectively both being established in 2007. BUET has the largest number of faculties i.e. 17 and CVASU has the lowest number of faculties i.e. 2. According to the number of students, DU has the largest student population i.e. 29573 and CVASU has the lowest number of the students i.e. 475. DU has the largest number of teacher viz. 1899 and CVASU has the smallest number of the teachers viz. 76. In respect of management staff DU has the largest employee i.e. 655 where as LU is the lowest number of the employee i.e. 32. From the Table – 5.2 we have made conclusion that DU is the biggest and oldest in all respects in the country. Over the years DU has grown up and become matured enough in respect of facilities and services.

Library Information

Table 5.3 Availability of branches and library rules and regulations

N=20

SL	Indicators	Option	Public University Library	Private University Library	Total	Percentage	
01	Does the university have seminar/departmental libraries other than the central library?	Yes	6	6	12	60%	100%
		No	4	4	8	40%	
02	Does the library have any rules and regulations?	Yes	10	8	18	90%	100%
		No	0	2	2	10%	

Table – 5.3 shows that 60% of university libraries have branches and 90% of the library have library rules and regulation for users whereas 40% of the library have no branches with the central libraries and 10% of libraries have no rules and regulation regarding the use of the library.

Table 5.4 Distribution of libraries according to opening hour

Name of the University Library	Opening time	Closing Time	Duration	Open in a Week
University of Dhaka	08.00 am	09.00 pm	11.0 hour	7 Days
Bangladesh Agricultural University	08.00 am	08.30 pm	11.5 hour	6 Days
Bangladesh University of Engineering and Technology	09.00 am	09.00 pm	12.0 hour	6 Days
Jahangir Nagar University	07.30 am	08.00 pm	12.5 hour	6 Days
Bangabandhu Sheikh Mujib Medical University	08.00 am	10.00 pm	14.0 hour	6 Days
Sher-e-Bangla Agricultural University	09.00 am	08.00 pm	11.0 hour	5 Days
Dhaka University of Engineering and Technology	09.00 am	09.00 pm	12.0 hour	7 Days
Chittagong University of Engineering and Technology	09.00 am	05.00 pm	08.0 hour	5 Days
Chittagong Veterinary and Animal Sciences University	09.00 am	09.00 pm	12.0 hour	6 Days
Jessore Science and Technology University	08.30 am	05.00 pm	08.5 hour	5 Days
University of Science and Technology Chittagong	08.00 am	09.00 pm	13.0 hour	6 Days
Independent University, Bangladesh	08.30 am	09.30 pm	13.0 hour	6 Days
International University of Business Agriculture and Technology	08.30 am	08.30 pm	13.0 hour	7 Days
East West University	08.30 am	10.00 pm	13.5 hour	7 Days
Leading University	08.30 am	03.30 pm	07.0 hour	7 Days
BRAC University	08.30 am	08.30 pm	12.0 hour	6 Days

(Table 5.4 contd.)

Stamford University	09.00 am	08.00 pm	11.0 hour	6 Days
United International University	09.00 am	08.00 pm	11.0 hour	6 Days
University of Liberal Arts, Bangladesh	08.30 am	09.30 pm	12.0 hour	7 Days
ASA University Bangladesh	09.00 am	08.00 pm	11.0 hour	7 Days

Table – 5.4 indicates that BSMMU library remain open for longest periods i.e. 14 hours as well as EWUL maintains second longest opening period among all the sample university libraries. The Table also indicates that 7 university libraries have been open for 7 days. The libraries are DUL, SAUL, IUBATL, EWUL, LUL, ULABL, and ASAUBL.

Table 5.5 Library access system

SL	Indicators	Type of the Library	Open Access	Close Access	Both System	%
01	Library access system	Public University (n=10)	3 (30%)	4 (40%)	3 (30%)	100
		Private University (n=10)	9 (90%)	1 (10%)	0 (0%)	100
	Total	N=20	12 (60%)	5 (25%)	3 (15%)	100

Table – 5.5 illustrate the access system of the university libraries of Bangladesh. The Table indicates that 60% of the libraries have an open access system, where as 25% libraries have a closed access system, and 15% libraries have both systems. 90% of the private university libraries have open access system and 30% public university libraries have open access system. Mostly public universities libraries are based on the closed access system i.e. 40% in contrast 10% private university libraries have closed access system. Both systems exists only in public university libraries i.e. 30%.

Table 5.6 Number of users per day

Name of the University Libraries	Institutional	Non-Ins-titutional	Resea-rcher	Total
University of Dhaka	5000	30	100	5130
Bangladesh Agricultural University	325	25	39	389
Bangladesh University of Engineering and Technology	250	05	-	255
Jahangir Nagar University	300	10	50	360
Bangabandhu Sheikh Mujib Medical University	1500	30	20	1550
Sher-e-Bangla Agricultural University	350	0	10	360
Dhaka University of Engineering and Technology	100	0	20	120
Chittagong University of Engineering and Technology	100	0	10	110
Chittagong Veterinary and Animal Sciences University	50	5	10	65
Jessore Science and Technology University	300	0	10	310
University of Science and Technology Chittagong	550	-	-	550
Independent University, Bangladesh	300	05	10	315
International University of Business Agriculture and Technology	150	02	0	152
East West University	400	14	10	424
Leading University	300	-	-	300
BRAC University	800	5	10	815
Stamford University	800	10	5	815
United International University	300	6	10	316
University of Liberal Arts, Bangladesh	400	0	0	400
ASA University Bangladesh	590	0	0	590

Table – 5.6 shows the number of user visits per day in the sample university libraries. The Table indicates that 5130 users visit DUL every day. This is a good example for the library usage in the country. At the same time only 50 students visits CVASUL which is not a good indication.

Table 5.7 Library resources

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
Books [total number]																					
1	Book	639133	134494	130931	97360*	24770	40000	35000	48046	3963	8000	13570	21788	15600	25000	9500	26000	49000	10947	14000	10770
2	Thesis	1102	13169	3000	-	2551	741	-	23	41	-	1607	450	-	-	300	1000	3250	-	50	390
3	Report	-	400	-	-	-	150	-	-	700	-	-	1191	1680	750	200	-	-	-	1300	850
Journals/Magazines [total title]																					
1	Journal	265	2123	43	65	-	661	-	180	10	1000	167	25	530	114	1142	10	1537	-	1000	934
2	Magazine	-	5	-	6	-	-	-	54	03	600	-	60	1520	18	250	5	245	-	19	504
3	Bound Journal	-	38238	18631	-	5201	-	-	-	338	-	-	-	-	-	-	-	-	-	-	-
4	Newspaper	22	11	16	6	2	10	5	11	12	07	12	15	6	20	07	10	06	10	13	16
Audio Visual Materials [total]																					
1	Audio Cassette	-	40	350	-	-	-	-	-	-	-	145	372	367	137	500	250	1120	559	50	60
2	CD-Rom	-	400	800	200	-	-	01	408	332	500	831	1229	-	1450	100	-	-	-	1000	659
3	DVD	-	-	-	10	-	-	01	20	-	-	-	351	-	-	-	40	-	-	50	-
4	Video Cassettes	-	15	-	-	-	-	-	-	-	-	120	90	-	-	200	-	-	-	50	-
Manuscript and other old documents [total number]																					
1	Manuscripts	30000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Microfiche	6790	1494	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Microfilms	-	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Special Collection	-	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	312
5	Rare Books	-	16	-	-	-	-	-	-	-	-	275	-	-	-	-	-	-	-	50	-
6	Rare Journals	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
Digital and Electronic Collection [total number of sites/vendor]																					
1	E-resources	45	25	43	6	-	-	Yes	29	-	-	-	21000	1000	43	-	11	-	-	7	Yes
2	E-Archives	-	-	-	-	-	-	No	10000	-	-	-	-	-	-	-	-	-	-	-	-
3	Database	-	30	-	-	-	-	Yes	-	-	-	-	40	-	1	-	-	-	-	4	-

(Table 5.7 contd.)

4	E-Report	-	-	-	-	-	-	No	-	-	-	-	-	-	-	-	-	-	-	7	-
5	E-Thesis	-	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
6	E-Book/Digital book	-	-	01	-	-	-	Yes	2	-	-	-	03	1380	03	-	-	-	-	-	-

*UGC Annual Report 2010

Color Indication

Highest Number		Lowest Number		Unavailability	■
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Table – 5.7 illustrates that the library resources (LR) of the sample university libraries (ULs). Resources include Books, journals/magazines, audio-visual materials, manuscripts and old documents and digital and electronic collection. The Table indicates that a public university (PU) has comparatively larger collection than a private university (Pvt.U). Among the PUs, Dhaka University has the largest collection i.e. 6,39,133. On the other hand, among the Pvt.U.s, SU has the largest collection of books i.e. 49,000. Among the items of LR, all the ULs have books, but not all the ULs have sufficient numbers of other LR. The Table shows that only DU has 30,000 manuscripts. DU and BAU has microfiche document i.e. 6790 and 1494 respectively. Only BAU has 105 microfilms but no other ULs has a microfilm collection. BAU has the largest collection of theses i.e. 13,169 on the other hand DUET, CUET, JSTU, USTC, BRACU, SU, UIU have no thesis collection. Only BAU has 59 special collections (SC), ULAB has 400 and ASAUB has 312 SC and no other university has SC. BAU, USTC and ULAB has rare books and no other university has rare book collection. Regarding digital and electronic collection, IUB has the largest collection in the country while other ULs have few vendors with a small number of titles. Among the ULs, digital and electronic collections are not getting popular due to high costs. But its usage is increasing day by day and every university is trying to join in consortium. At present, the most popular is INASP Peri, and the consortium of UGC of Bangladesh.

Table 5.8 Status of electronic journal and archives subscription

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	JSTOR	p	-	p	p	-	-	-	p	p	-	-	p	p	p	-	p	-	p	p	-
2	Emerald	-	-	-	-	-	-	-	p	p	-	-	p	-	-	-	-	-	-	-	-
3	Science Direct	-	-	p	p	-	-	-	p	p	-	-	-	-	-	-	p	-	-	-	-
4	Springer	p	p	-	p	-	-	p	p	-	-	-	p	-	p	-	p	-	-	-	p
5	Eboscohost	p	p	-	p	-	-	-	-	-	-	-	p	-	p	-	p	-	-	-	-
6	IEEE	p	p	p	p	-	-	p	p	-	-	-	p	-	p	-	p	-	-	-	p
7	ACM	-	-	p	p	-	-	p	-	p	-	-	p	-	p	-	-	-	-	g	-
8	WileyIS	p	p	p	-	-	-	-	-	p	-	-	p	-	p	-	p	-	-	-	-
9	Sage	p	-	-	p	-	-	-	p	p	-	-	-	-	-	-	p	-	-	g	-
10	ACS	-	-	p	p	-	-	-	-	g	-	-	p	-	p	-	-	-	-	-	-
11	HBR	-	-	-	-	-	-	-	-	-	-	-	p	-	p	-	-	-	-	p	-
12	CJ	-	-	-	-	-	-	-	-	-	-	-	p	-	-	-	-	-	-	-	-
13	PMUSE	-	p	p	-	-	-	-	-	-	-	-	p	-	p	-	p	-	-	-	-
14	OARE	p	g	p	g	-	-	-	-	g	-	-	g	p	g	-	-	-	-	p	p
15	HINARI	p	g	-	g	p	-	-	-	g	-	-	g	p	g	-	p	-	-	g	G
16	AGORA	p	g	-	g	-	g	-	-	g	-	-	g	p	g	-	p	-	-	g	-
17	OUP	-	p	-	p	-	-	-	-	-	-	-	g	-	g	-	p	-	-	g	G
18	INASP Perii	p	p	-	p	-	-	p	p	p	-	-	p	p	p	-	p	p	-	-	p

p	Purchased	G	Gift	—	Unavailability
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Table – 5.8 indicates the status of electronic journals and archives subscription among the university libraries in Bangladesh. The Table shows that JSTU, USTC, LU, and SU have no electronic subscription either purchased or gift.

Table 5.9 Preference for e-resource subscription

SL	Indicators	Option	Public University Library	Private University Library	Total	Percentage
01	Preference for E-Resource Subscription	Consortium	9	6	15	75%
		Free Trail	1	1	2	10%
		Individual Subscription	0	3	3	15%
	N=20	Total	10	10	20	100%

Table – 5.9 shows that 75% of the sample university library preferred to join in a consortium for electronic journal subscription. 15% preferred for individual subscription while 10% preferred for free trail access to the electronic journals. As a result, in future, there are huge potentials for forming more and more consortiums in the country.

Table 5.10 Existing library division and sections

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
01	Acquisition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
02	Processing	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	✓	✓	✓	-	✓	✓
03	Circulation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
04	Reference	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
05	Periodicals	✓	✓	✓	-	✓	✓	✓	✓	-	✓	✓	✓	-	✓	-	✓	-	-	✓	✓
06	Audiovisual	-	✓	✓	-	✓	-	-	-	-	✓	✓	✓	✓	✓	-	-	-	-	✓	✓
07	Reprographic	✓	✓	✓	-	-	-	-	✓	-	✓	-	✓	-	✓	✓	-	✓	-	✓	✓
08	Documentation	-	✓	✓	-	✓	✓		✓	-	✓	-	-	✓	✓	-	-	-	-	✓	-
09	Textbooks	-	✓	-	✓	✓	✓	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	✓	✓
10	Archives	-	-	-	-	✓	✓	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-
11	IT Division	✓	✓	✓	-	✓	-	✓	-	✓	-	✓	-	-	-	-	✓	-	-	-	-
12	Rare Collection	✓	-	-	-	✓	✓	-	-	-	-	-	-	✓	-	-	-	-	-	✓	-
13	Galleries	-	✓	-	-	✓	-	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
14	Others	-	✓	✓	-	✓	✓	-	-		-	-	✓	-	-	-	-	-	-	-	-

Table – 5.10 shows various divisions and sections of the library which are very essential to administer library activities smoothly. To function library activities basic division like acquisition, processing, circulation, reference, periodicals, audiovisual, reprographic and documentation are essential. IUB has no acquisition division; CVASU, JSTU, IUBAT and UIU have no procession department; LU has no reference section; JU, CVASU, IUBAT, LU, SU and UIU have no periodical department; DU, JU, SAU, DUET, CUET, CVASU, IUBAT, LU, SU, UIU have no audio-visual division in their library. Reprographic department is very essential but JU, BSMMU, SAU, DUET, CVASU, USTC, IUBAT, BRACU and UIU have no reprographic facilities. At present, IT departments with a server room are mandatory for those who are intended to modernize their library. The above Table shows that DU, BAU, BUET, BSMMU, DUET, CVASU, USTC, BRACU have IT division in the library.

Table 5.11 Library space and seat capacity

Name of the University	Total Library Space (Sft)	Student/faculty Seating Capacity
University of Dhaka (DU)	150830	2000
Bangladesh Agricultural University (BAU)	66000	600
Bangladesh University of Engineering and Technology (BUET)	19775	222
Jahangir Nagar University (JU)	60000	200
Bangabandhu Sheikh Mujib Medical University (BSMMU)	22800	750
Sher-e-Bangla Agricultural University (SAU)	6650	55
Dhaka University of Engineering and Technology (DUET)	4665	120
Chittagong University of Engineering and Technology (CUET)	13000	70
Chittagong Veterinary and Animal Sciences University (CVASU)	5000	90
Jessore Science and Technology University (JSTU)	4500	100
University of Science and Technology Chittagong (USTC)	17000	300
Independent University, Bangladesh (IUB)	40000	475
International University of Business Agriculture and Technology (IUBAT)	400	200
East West University (EWU)	11500	250
Leading University (LU)	420	120
BRAC University (BRACU)	9000	200
Stamford University (SU)	8000	300
United International University (UIU)	5000	350
University of Liberal Arts, Bangladesh (ULAB)	4000	400
ASA University Bangladesh (ASAUB)	7000	230

Table 5.11 shows that DU has the biggest space for its library i.e. 1, 50,830 square feet and IUBAT has the smallest space for the library i.e. 400 square feet. DU maintains 29573 students by providing seating capacity for 2000 users, while IUBAT maintains 3463 students by giving 200 user's seating capacity which is not enough for a university library. IUBAT is not providing sufficient space for the students. PvtULs average space and seating capacity is lower than PULs, in which IUB is providing maximum space and seating capacity for the students.

Table 5.12 Automation status of the sample university libraries

Name of the University libraries	Automated	Semi-Automated	Manually Operated
University of Dhaka (DU)	-	✓	-
Bangladesh Agricultural University (BAU)	-	✓	-
Bangladesh University of Engineering and Technology (BUET)	✓	-	-
Jahangir Nagar University (JU)	-	-	✓
Bangabandhu Sheikh Mujib Medical University (BSMMU)	-	✓	-
Sher-e-Bangla Agricultural University (SAU)	-	-	✓
Dhaka University of Engineering and Technology (DUET)	-	✓	-
Chittagong University of Engineering and Technology (CUET)	-	✓	-
Chittagong Veterinary and Animal Sciences University (CVASU)	✓	-	-
Jessore Science and Technology University (JSTU)	-	-	✓
University of Science and Technology Chittagong (USTC)	-	-	✓
Independent University, Bangladesh (IUB)	✓	-	-
International University of Business Agriculture and Technology (IUBAT)	-	-	✓
East West University (EWU)	✓	-	-
Leading University (LU)	-	-	✓
BRAC University (BRACU)	✓	-	-
Stamford University (SU)	-	✓	-
United International University (UIU)	-	✓	-
University of Liberal Arts, Bangladesh (ULAB)	-	✓	-
ASA University Bangladesh (ASAUB)	-	✓	-

‘Automation’ is an indispensable part of modern library’s information systems development, organization, management and services (Munshi, n.d.). Library automation is the application of machines viz. computers and networking technologies to the routine library housekeeping operations such as acquisition, cataloguing, circulation, reference and serial control. When all the basic functions of a university library are performed with computer and related technology they are called automated library and those perform a few of them are called partly/semi-automated library. Table – 5.12 shows the automation status of the university libraries of Bangladesh. According to the Table BUET, CVASU, IUB, EWU, and BRACU have been found as an automated library, whereas DU, BAU, MSMMU, DUET, CUET, SU, UIU, ULAB and ASAUB libraries are semi automated. JU, SAU, JSTU USTC, IUBAT and LU libraries are manually operated. It indicates that automation of university libraries have been started with a limited scale in Bangladesh recently.

Table 5.13 Functions and activities performed with automated system

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
01	Administrative function	-	-	-	✓	-	-	-	-	-	-	-	✓	-	-	-	-	-	-	-	-
02	Acquisition functions	-	-	-	-	-	-	-	-	-	-	-	✓	-	✓	-	✓	-	-	-	-
03	Processing/Technical	✓	✓	✓	-	✓	-	✓	✓	✓	-	-	✓	-	✓	-	✓	✓	✓	✓	✓
04	Circulation/Lending	-	-	✓	-	✓	-	✓	✓	✓	-	-	✓	-	✓	-	✓	✓	✓	✓	✓
05	Reference services	-	-	✓	-	✓	-	-	-	✓	-	-	-	-	✓	-	✓	-	-	-	-
06	Documentation functions	-	-	✓	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	✓	-	-	-
07	Serial control	-	-	✓	-	-	-	-	-	✓	-	-	✓	-	✓	-	✓	-	-	-	-
08	Preparing in-house database	-	-	✓	✓	-	-	-	-	-	-	-	✓	-	✓	-	-	-	-	-	-
09	Other	✓	✓	-	✓	✓	-	✓	-	✓	-	-	✓	-	-	-	✓	-	-	✓	-

Table – 5.13 shows the functions and activities that are performed with automated systems by the sample university libraries. The Table illustrates clearly that no university library has been performing all the activities with an automated system. Among the sampled PULs, BUET and CVASU have been performing most of the basic functions with automated system. Recently these two university libraries have achieved 2nd Round AIF Award (2012-2013) by UGCBAIF under HEQEP project and automation project has been continuing. BSMMU library also achieved 1st Round AIF Award (2011-2012) and automation activities have been going on. SAUL and JSTUL do not perform any activity with automated system. Automated functions of other PULs are not satisfactory. Among the PvtULs IUB, EWU and BRACU libraries have been executing almost all the basic functions with automated system. Besides, USTC, LU and IUBAT library do not perform any activity with automate system. SU, UIU, ULAB and ASAUB library perform a few activities with automated system.

Table 5.14 Distribution of libraries by cataloguing system

Name of the University	Card Catalogue	Computerized Catalogue	Both Type
University of Dhaka (DU)	✓	✓	✓
Bangladesh Agricultural University (BAU)	✓	✓	✓
Bangladesh University of Engineering and Technology (BUET)	✓	✓	✓
Jahangir Nagar University (JU)	✓	-	-
Bangabandhu Sheikh Mujib Medical University (BSMMU)	✓	✓	✓
Sher-e-Bangla Agricultural University (SAU)	✓	-	-
Dhaka University of Engineering and Technology (DUET)	✓	✓	✓
Chittagong University of Engineering and Technology (CUET)	✓	✓	✓
Chittagong Veterinary and Animal Sciences University (CVASU)	✓	✓	✓
Jessore Science and Technology University (JSTU)	✓	-	-
University of Science and Technology Chittagong (USTC)	✓	-	-
Independent University, Bangladesh (IUB)	-	✓	-
International University of Business Agriculture and Technology (IUBAT)	✓	-	-
East West University (EWU)	-	✓	-
Leading University (LU)	✓	-	-
BRAC University (BRACU)	-	✓	-
Stamford University (SU)	-	✓	-
United International University (UIU)	-	✓	-
University of Liberal Arts, Bangladesh (ULAB)	-	✓	-
ASA University Bangladesh (ASAUB)	-	✓	-

Table – 5.14 shows the present cataloguing system of the sample university libraries. The Table illustrates that most of the PULs have card as well as computerized catalogues. In contrast with PULs, almost all the private university libraries follow computerized cataloguing system. In this era of information explosion computerized catalogue has brought immense benefit in a university library. Besides traditional forms many types of computerized catalogues are found with various names as OPAC, Web-Cat., C.Cat. Online Catalogue, Off-line Catalogue, MARC, etc. To locate resources all these catalogues plays the most crucial role in the university library. The Table indicates that university libraries have been shifting their activities from traditional to computerized system.

Table 5.15 Circulation system

Name of the University Libraries	Computerized	Brown System	Newark System
University of Dhaka (DU)	-	✓	-
Bangladesh Agricultural University (BAU)	-	✓	✓
Bangladesh University of Engineering and Technology (BUET)	✓	✓	-
Jahangir Nagar University (JU)	-	✓	-
Bangabandhu Sheikh Mujib Medical University (BSMMU)	✓	-	-
Sher-e-Bangla Agricultural University (SAU)	-	✓	-
Dhaka University of Engineering and Technology (DUET)	✓	-	-
Chittagong University of Engineering and Technology (CUET)	✓	-	-
Chittagong Veterinary and Animal Sciences University (CVASU)	✓	✓	-
Jessore Science and Technology University (JSTU)	-	-	-
University of Science and Technology Chittagong (USTC)	-	✓	-
Independent University, Bangladesh (IUB)	✓	-	-
International University of Business Agriculture and Technology (IUBAT)	-	✓	-
East West University (EWU)	✓	-	✓
Leading University (LU)	-	✓	-
BRAC University (BRACU)	✓	-	-
Stamford University (SU)	✓	✓	-
United International University (UIU)	✓	-	-
University of Liberal Arts, Bangladesh (ULAB)	✓	-	-
ASA University Bangladesh (ASAUB)	✓	-	-

Circulation control is one of the most widely automated library operations, and it is often the first and simplest activity to be automated in a given library (Saffady, 1989, p.269). Computerized circulation system is used to reduce the amount of staff time devoted to repetitive activities that must be done in any properly functioning library. Table – 5.15 illustrates the circulation system of the university libraries. The Table indicates that among the PULs, BUET and CVASU are using computerized system besides the traditional Brown System. EWU is using computerized system besides traditional Newark System. BAU are using both Brown and Newark system for circulation purposes. According to the Table 5.15, five PULs and seven PvtULs are using computerized circulation systems among the sample universities.

Table 5.16 Use of various cataloguing codes and subject headings

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	AACR-1	-	-	-	-	-	-	-	-	-	-	✓	-	✓	-	-	-	-	-	-	-
2	AACR-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	✓	✓	✓	-	✓	✓	✓
3	MARC21	-	✓	-	-	✓	-	-	-	-	-	-	✓	-	✓	-	✓	-	-	-	-
4	LC	-	✓	-	-	-	-	-	-	-	-	-	-	-	28th	-	✓	✓	✓	-	-
5	Sears List	✓	-	13th	-	-	18th	17th	✓	18th	✓	16th	-	-	18th	✓	-	-	-	✓	✓
6	MeSH	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Others	-	-	-	-	-	-	-	-	-	-	-	ST	-	-	-	-	-	-	-	-

ST=Spine Thesaurus

Table – 5.16 shows the use of various cataloguing codes and subject heading followed by the SULs of Bangladesh. Table indicates that USTC and IUBAT are using AACR-1, and other university libraries are following AACR-2 for processing library materials. BAU, BSMMU, IUB, EWU and BRACU are using MARC21 codes for processing library materials and rest of the libraries are not. BAU, EWU, BRACU, SU, and UIU are using LC classification system and rest of the portion using DDC classification system. BAU, JU, BSMMU, IUB, IUBAT, BRACU, SU, and UIU do not use Sears List of Subject Heading. BSMMU is using MeSH subject heading and IUB has been using Spine Thesaurus devised by UNESCO.

Table 5.17 Existing various policies and activities

Indicators	Public University Library (PUL) (n=10)		Private University Library (PvtUL) (n=10)	
	Yes	No	Yes	No
Does the library conduct yearly stock taking based on policy?	3 (30%)	7 (70%)	8 (80%)	2 (20%)
Does the library has weeding policy and doesn't weed out regularly?	7 (70%)	3 (30%)	6 (60%)	4 (40%)
Does the library have an acquisition policy?	9 (90%)	1 (10%)	10 (100%)	0 (0%)
Does the library have a committee?	9 (90%)	1 (10%)	8 (80%)	2 (20%)
Do you have any Public Relation policy for your library?	5 (50%)	5 (50%)	6 (60%)	4 (40%)

Table – 5.17 shows various policies and activities of the SULs. The Table indicates that 70% PULs have no stock taking policy where as 80% PvtULs performed annual stock taking based on policy. 70% PULs and 60% PvtULs have a weeding policy. 10% PULs and 0% PvtULs have no acquisition policy. 10% PULs and 20% PvtULs have no acquisition policy. 50% PULs and 60% PvtULs have a public relation policy. The above Table illustrates that systematic policies exist more strongly in PvtULs than in PULs.

Table 5.18 Status of library building, infrastructure and furniture

Indicators	N	Yes	%	No	%	Total %
Has the library its [own building] or is housed in [parts of building] or a [hired building]	20	6	30.0	14	70.0	100
If yes, was the building based on architectural/structural plan and layout?	20	19	95.0	1	5.0	100
Does the library have proper water supply?	20	18	90.0	2	10.0	100
Does the library have sufficient ventilation system?	20	18	90.0	2	10.0	100
Is there installed air conditioner in the library?	20	15	75.0	5	25.0	100
Does the library have humidity controlling system?	20	11	55.0	9	45.0	100
Does it have sufficient accommodation for reading materials?	20	12	60.0	8	40.0	100
Does it have sufficient accommodation for library staff?	20	13	65.0	7	35.0	100
Does it have sufficient accommodation for reading community?	20	12	60.0	8	40.0	100

N= 20

(Table 5.18 contd.)

Does your library planning reflect security measures?	20	13	65.0	7	35.0	100
Does the library have fire control system?	20	14	70.0	6	30.0	100
Do you claim that your library is an environment friendly?	20	17	85.0	3	15.0	100
Does the library have sufficient furniture and equipment?	20	11	55.0	9	45.0	100
Does the library follow any standard for overall furniture and equipment planning?	20	14	70.0	6	30.0	100
Are there any options for future development?	20	16	80.0	4	20.0	100

A separate building or accommodation and a convenient location are essential for university library. To flourish distinctively within in the university, a library building should be designed and equipped with at least a minimum of infrastructural facilities and technologies. These includes sufficient space for library materials, (books, journals, etc) readers, staff, and other purposes. The Table – 5.18 shows that 30% university library has no separate university library building. Of those who have a separate library building, 95% said as that architectural/structural plan and layout was used during construction of library building. For the question of water supply and ventilation, 90% of the respondents gave positive remarks, whereas 75% of libraries have air conditioning system and 55% library has humidity controlling system. 60% of libraries have sufficient space for reading materials, 65% have accommodation for library staff, 60% of libraries have space for the reading community, and 65% of libraries have provision for security measures. Among the respondents, 70% said they have a fire control system, 85% claimed their library is environment friendly, 55% said their furniture and equipment are of good standard, 70% respondent said they follow standards for furniture design, and 80% said there are provisions for future development. The Table indicates that overall university library conditions are not good.

Table 5.19 Existing organizational climate and HR planning**(Descriptive Statistics)**

N= 20

Ranking	Indicators	No. of Libraries	Minimum	Maximum	Mean	Std. Deviation
1	Institutions maintains a separate HR Department	19	1	5	4.16	1.302
2	Formal HR policies are maintained in the University	20	1	5	4.10	1.210
3	University maintains formal recruitment policies	19	1	5	3.84	1.385
4	University librarian and HR Manager participate in selection	20	1	5	3.75	1.482
5	University publishes advertisement in the popular media for recruitments	19	1	5	3.74	1.447
6	University applies the popular selection devices like initial screening, interview, written examination, medical examination	19	1	5	3.47	1.349
7	University offers formal orientation program to all new employees	19	1	5	3.42	1.539
8	University, training needs analysis (TNA) is conducted systematically	19	1	5	3.42	1.261
9	Further training and education are encouraged in the University	20	1	5	3.40	1.231
10	University maintains adequate budget for training and development of the employees	20	1	5	3.35	1.226
11	Formal performance appraisal system is used in the university like Graphic Rating Scale, Ranking Methods, MBO, BARS, ACR, 360	20	1	5	3.30	1.418
12	The compensation of employees is directly linked to their performance in the University	19	1	5	3.21	1.475
13	University's performance appraisal system is highly effective	19	1	5	3.16	1.425
14	University annually does performance appraisals for promotion, pay rise, increment, for TNA, career development, termination	19	1	5	3.16	1.708
15	University offers competitive salaries and benefits to the employees	20	1	5	3.10	1.447
16	University conducts pay surveys to review the salaries and benefits of the employee regularly	20	1	4	2.90	1.210
17	University emphasizes on non-financial benefits like job interesting , recognition, empowerment and so forth as tools of employee motivation	17	1	5	2.76	1.480
18	Management has positive attitudes towards association of employees	16	1	5	2.56	1.365

Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree

To create a hospitable organizational climate, Human Resources Planning (HRP) is one of the important effective management tools for the present university library management. Without ensuring the organizational climate proper to creating a congenial atmosphere for the employees, no university can achieve its vision, mission and goal. The total success of the university largely depends on human capital. Table 5.19 illustrates the present organizational climate and HRP situation in university libraries in Bangladesh. A five-point Likert Scale has been devised to assess the present scenario of HRP for proposing a model plan for modernization of the university libraries in Bangladesh. The Table reveals that for recruitment purpose a majority of universities publish advertisements in the popular newspaper and follows recruitment polices. For these two cases (rank: 1 and 2), mean scores=4.16 (St. Deviation=1.302) and 4.10 (St. Deviation=1.210) respectively 'Agree' with the statement. Ranking from 3-15, 'adaptation of various selection tools' to 'adequate budget for library development' the range of Mean scores=3.48 to 3.10 shows that the respondent were 'Fairly Agree' and rest of the portion of the respondent 'Disagree' with the indication.

Table 5.20 Information service pattern

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
Current Awareness Type (CAT)																					
1	Current Awareness Services (CAS)	-	✓	✓	-	✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	✓	✓	✓	✓	✓
2	Selective Dissemination of Information (SDI)	-	✓	✓	-	✓	✓	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	✓	✓
3	News clipping services	-	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	-
4	Title Announcement service	-	✓	-	-	✓	✓	✓	✓	-	-	-	✓	-	✓	-	✓	-	✓	✓	-
5	Announcement of research in progress	-	-	-	-	✓	-	-	✓	-	-	-	-	-	-	-	✓	-	-	-	-
6	Notification of forthcoming conference/seminar/meeting/workshop/symposium	✓	-	✓	-	✓	-	-	✓	✓	-	✓	-	✓	✓	-	✓	-	✓	✓	-
Condensation Type																					
1	Abstract Bulleting	-	-	-	-	✓	-	✓	✓	-	✓	-	-	-	-	-	-	-	✓	✓	-
2	Extracts	-	-	-	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	✓	-
3	Technical digest	-	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	✓	-
Location Type																					
1	Indexes periodicals/Journals	-	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	-	✓	-	✓	✓	-	✓	✓
2	Bibliographies	-	-	✓	-	✓	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	-	✓	✓
3	Catalogues	✓	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-
Condensation and Repacking																					
1	Reviews	-	-	✓	-	✓	-	-	-	-	-	✓	-	-	✓	-	-	-	-	✓	-
2	Handbooks	-	-	✓	-	✓	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	✓	-	✓	-
3	Data Services	✓	-	✓	✓	✓	-	✓	✓	-	✓	-	-	-	✓	✓	-	✓	✓	✓	-
Evaluation and Emphasis																					
1	State-of-the-Art-Report	-	-	-	-	-	-	-	-	-	-	-	✓	-	✓	-	-	-	-	✓	-

(Table 5.20 contd.)

2	Trend Report	-	-	-	-	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	✓	-
Reference Type																						
1	Reader's Guidance	✓	-	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	Ready Reference	✓	✓	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
3	Referral Service	✓	✓	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	-	✓	-	-
Back-up Services																						
1	Reprographic Service	✓	-	✓	-	-	✓	-	✓	-	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
2	Translation Services	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-
3	Rendering help in publishing such as preparation of charts, slides, printing, scanning, etc.	✓	-	-	-	✓	✓	-	✓	-	✓	✓	-	-	✓	-	✓	-	-	✓	✓	✓
Maintenance Services																						
1	Training of documentalists, maintenance of system tools and user education	✓	✓	✓	-	✓	-	-	✓	-	✓	✓	✓	-	✓	-	✓	✓	✓	✓	✓	-
2	Advisory services/consultation services in documentation and information work	✓	-	✓	-	✓	-	✓	✓	-	-	✓	✓	-	✓	✓	✓	✓	✓	-	✓	-

Availability Non-availability

Table 5.20 shows various reference service patterns in SULs. There are various kinds of reference services available in university libraries in Bangladesh. Among them the major patterns are: current awareness type, condensation type, location type, condensation and repacking, evaluation and emphasis, reference type, back-up services, and maintenance services. The above Table illustrates the availability and non-availability of major information service patterns (ISP). The Table indicates that the most common ISP available in all types of the libraries where as some newer ISP is not available which requires for modernization of the university libraries in Bangladesh.

Table 5.21 Literature searching options

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	Database searching	✓	✓	✓	✓	✓	-	✓	✓	-	✓	-	✓	-	✓	-	✓	✓	-	✓	✓
2	CD-Rom Searching	✓	✓	-	-	✓	-	-	✓	-	✓	✓	-	✓	✓	-	✓	✓	-	✓	✓
3	Internet Information browsing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
4	Electronic Information Storage & Retrieval	✓	✓	✓	✓	✓	-	-	✓	-	-	-	✓	-	✓	-	✓	✓	✓	✓	-
5	Access to any specialized Network and resources	✓	✓	✓	✓	✓	-	✓	✓	✓	-	-	-	-	✓	-	✓	✓	✓	✓	-
6	Microfiche/ Microfilm Searching	✓	✓	-	-	✓	-	-	✓	-	-	✓	-	-	-	-	-	-	-	✓	-



Availability



Non-availability

Table – 5.21 indicates various literature searching options of SULs. Information browsing through the Internet is common in all types of ULs except in LU. Access to specialized network and resources is not available in SAU, JSTU, USTC, IUB, IUBAT, LU, and ASAUB whereas microfiche/microfilm searching facilities available in DU, BAU, BSMMU, CUET, USTC, and ULAB. This Table also indicates a reliance on traditional literature searching options rather than a modern ones.

Table 5.22 Existing staff strength of the sample university libraries

ITEM	DU	BAU	BUET	JU	BMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
Chief Librarian/Principal Librarian	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Librarian [Full time] or [Part time]	2	1	1	1	1p	-	1	1	-	-	1	1	1	-	-	1	-	-	-	1
Additional Librarian	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deputy/Associate/Joint Librarian	27	5	2	1	1	1	1	-	1	-	-	3	-	1	-	-	1	1	1	-
Senior Assistant Librarian	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	3	-	-	-	-
Assistant Librarian	11	1	-	3	3	1	2	2	-	1	2	-	1	4	1	4	1	-	1	1
Jr. Assistant librarian/ Library Officer	40	1	4	2	1	-	-	-	1	1	-	4	-	10	-	1	2	1	5	2
Library Assistant	-	3	9	3	2	6	2	1	-	-	6	1	1	1	1	2	4	-	1	-
Library Attendant	-	1	-	-	3	1	4	3	2	-	1	1	-	5	2	-	9	3	3	-
Library Administrator/Section Officer	-	8	1	-	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others Supporting Staff	63	23	30	-	8	10	15	5	1	3	-	5	1	-	-	-	10	1	-	4
IT Specialist/ system administrator	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Others (please specify):	105	29	-	-	2	2	-	-	1	-	3	-	-	1	-	-	-	2	-	-
Total	248	56	48	10	32	24	25	12	6	5	14	15	5	23	4	13	27	8	11	8

HR is the most important asset of the university libraries. Table – 5.22 indicates the HR strength of the selected university libraries. It shows that the comparatively older university libraries have more library personnel than the newer ones. In this case, DU has the biggest number of personnel i.e. 248 persons where as LU has the lowest number of personnel i.e. 4 persons in the library.

Table 5.23 Opinion of the respondents regarding existing staff pattern

SL	Indicators	Option	Public University Library	Private University Library	Total	Percentage
01	Do you thing that the above staff pattern and size are sufficient?	Yes	3	5	8	40%
		No	7	5	12	60%
	N=20	Total	10	10	20	100%

Table – 5.23 shows that 40% of the libraries (both public and private) are satisfied with the existing staff and 60% libraries are not satisfied with the existing staff.

Table – 5.24 shows the equipment and technology used by the SULs. The above Table illustrates that BSMMU has the biggest number of computers i.e. 100, whereas USTC, IUBAT have no computers in the library. There is no dedicated IP in SAU, USTC, and IUBAT library. There is no printer in USTC or IUBAT. Fax machines are only in SAU, DUET, JSTU, EWU and ASAUB. Microfilm/microfiche readers are only in BAU, and the rest of the university libraries have no such kind of devices. Only IUB has television inside the library. DU, CUET, IUB and UIU has audio player for listening in the language corner. Video players have only in BAU, CUET, and UIU libraries. IUB, BAU, BSMMU library have spiral machines. MSMMU and EWU library have lamination machine for making ID card for the students. BUET, IUB, CUET, EWU, SU, ULAB, ASAUB have barcode machine for circulation and barcode identification. Only ASAUB library has a digital camera. There is no scanner in DU, JU, CVASU, USTC, LU or UIU libraries. DU, BAU, BSMMU, UIU library have notepad/laptop computer. DU and BSMMU have multimedia projector for library purposes. BSMMU, USTC, IUB, BRACU, SU, ULAB library have closed circuit camera. BRACU, IUBAT, BSMMU library have RFID tagging and security gate for protecting library materials.

Table 5.24 List of modern technology and equipment

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	Computer with multimedia	80	45	46	7	100	6	8	25	40	2	-	30	-	17	1	46	13	21	11	6
2	Internet Connection	70	45	46	4	100	-	8	20	40	2	-	26	02	2	1	46	13	21	9	6
3	Total Number of Printers	15	6	8	5	4	23	2	3	1	2	-	2	-	5	1	7	2	2	3	1
4	Fax Machine	-	-	-	-	-	3	3	-	-	1	-	-	-	1	-	-	-	-	-	1
5	Photocopy Machine	-	4	5	-	1	-	-	2	-	-	-	1	-	2	-	1	2	-	2	-
6	Microfilm/Microfiche Reader	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Television	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
8	Air-Conditioning System	-	C	15	-	36	6	-	3	-	-	-	C	04	25	2	19	10	8	5	C
9	Audio Player	2	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	1	-
10	CD/DVD Writer	50	2	PC	5		-	1	2	-	-	-	1	-	5	-	46	4	1	2	-
11	Video Player	-	3	-	-		-	-	10	-	-	-	1	-	-	-	-	-	1	-	-
12	Spiral Machine	-	1	-	-	1	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
13	Laminating Machine	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
14	Telephone	-	2	9	-	4	1	3	5	2	2	-	6	03	8	1	9	7	2	4	2
15	Book trolley	-	1	4	-	-	1	3	2	-	-	-	2	-	3	-	3	3	1	1	1
16	Bar code reader	-	-	4	-	-	-	-	3	-	-	-	4	-	2	-	4	2	-	3	1
17	Digital Camera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
18	Scanner	-	1	1	-	1	1	1	1	-	1	-	1	01	4	-	2	1	-	1	1
19	Notepad or Laptop	7	1	-	-	4	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-
20	Multimedia Projector	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
21	Close Circuit Camera	-	-	-	-	✓	-	-	-	-	-	✓	-	-	-	-	16	✓	-	✓	-
22	RFID tagging with security gate	-	-	-	-	✓	-	-	-	-	-	-	-	✓	-	-	1	-	-	-	-

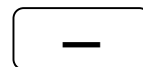
C=Central, PC=Personal Computer

Table 5.25 Distribution of libraries by availability of database, archives and repositories

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	Does your library maintain a separate Server?	✓	✓	✓	-	✓	-	✓	✓	✓	-	-	✓	✓	✓	-	✓	-	✓	✓	✓
2	Does your library have a webpage?	-	✓	✓	-	✓	-	✓	✓	-	-	✓	✓	✓	✓	-	✓	-	✓	✓	✓
3	User-centered design feature like Web 2.0'?	-	-	-	-	✓	-	-	✓	-	-	-	-	-	✓	-	✓	-	-	✓	-
4	Do you have any database?	✓	✓	✓	✓	✓	-	-	✓	✓	-	-	✓	✓	✓	-	✓	✓	✓	✓	✓
5	Does the library have digital archives and repositories?	-	-	-	-	✓	-	✓	✓	-	-	-	✓	-	✓	-	✓	✓	-	-	-
6	Do you follow international /national copyright law while you create archives and repositories?	✓	✓	✓	-	✓	-	✓	✓	-	✓	-	✓	✓	✓	-	✓	✓	✓	-	✓
7	Do you have automated serial control system?	-	-	✓	-	✓	-	-	✓	-	-	-	-	-	✓	-	✓	-	✓	✓	✓
8	Does every member of the library have Bar Code identifier?	✓	-	✓	-	✓	-	-	-	-	-	-	✓	-	✓	-	✓	-	✓	✓	✓



Yes



No

Table – 5.25 shows the existence of database, archives and repositories in SULs. JU, JSTU, USTC, LU and SU library has no separate server. DU, JU, SAU, CVASU, JSTU, LU and SU library have no separate Webpages. SAU, DUET, JSTU, USTC, and LU library have no database of library materials. BSMMU, DUET, CUET, IUB, EWU, BRACU and SU library have digital archives and repositories. BUET, BSMMU, CUET, EWU, BRACU, UIU, ULAB and ASAUB library have automated serial control system. DU, BUET, BSMMU, IUB, EWU, BRACU, UIU, ULAB and ASAUB library have barcode identifier membership cards for users.

Table 5.26 Library software

Name of the University & Library	Software Name	Nature	P/F
University of Dhaka (DU)	DULIS	Customized	Purchased
Bangladesh Agricultural University (BAU)	Koha DSpace	Open Source	Free
Bangladesh University of Engineering and Technology (BUET)	BUET-LIB	Customized	-
Jahangir Nagar University (JU)	WINISIS	Open Source	Free
Bangabandhu Sheikh Mujib Medical University (BSMMU)	Koha*	Open Source	Free
Sher-e-Bangla Agricultural University (SAU)	-	-	-
Dhaka University of Engineering and Technology (DUET)	DUETLIS	Customized	-
Chittagong University of Engineering and Technology (CUET)	CUET library system	Customized	-
Chittagong Veterinary and Animal Sciences University (CVASU)	Koha DSpace	Open Source	Free
Jessore Science and Technology University (JSTU)	MS-Excel	-	-
University of Science and Technology Chittagong (USTC)	-	-	-
Independent University, Bangladesh (IUB)	Koha DSpace	Open Source	Free
International University of Business Agriculture and Technology (IUBAT)	CDS/ISIS	Open Source	Fee
East West University (EWU)	Koha GreenStone	Open Source	Fee
Leading University (LU)	-	-	-
BRAC University (BRACU)	Koha DSpace	Open Source	Free
Stamford University (SU)	SULIS	customized	-
United International University (UIU)	Koha	Open Source	Free
University of Liberal Arts, Bangladesh (ULAB)	ULABLIS	Customized	-
ASA University Bangladesh (ASAUB)	Mirror	Software Packages	Purchased

**Note: BSMMU installed Koha Software after the questionnaire received back*

Table – 5.26 reveals the software used by the university libraries of Bangladesh. Among the university libraries, the result of the survey shows that the most of the university libraries are keen to use free software rather than purchase software packages. Before the arrival of free and popular software like ‘Koha’, most of the university libraries used customized software. At the present, when reliable software like DSpace, Koha, GreenStone are in the market free of cost, most the libraries have rushed into using this free software. This will create a new avenue of cooperation among university libraries in Bangladesh.

Table 5.27 Library budget of the sample university libraries [last five years]

[FY: July – June]

Name of the University & Library	2007-2008	2008-2009	%	2009-2010	%	2010-2011	%	2011-2012	%
University of Dhaka (DU)	44089000	43719000	- 0.84	49442000	+13.09	52466000	+6.11	54019000	+2.96
Bangladesh Agricultural University (BAU)	-	17611828	-	9007000	- 48.86	-	-	-	-
Bangladesh University of Engineering and Technology (BUET)	9000000	11500000	+27.78	11000000	- 4.35	10500000	- 4.54	23000000	+4.34
Jahangir Nagar University (JU)	2720000	2850000	+4.77	2910000	+2.10	2974000	+2.19	3189000	+7.22
Bangabandhu Sheikh Mujib Medical University (BSMMU)	800000	1000000	+25.00	1300000	+30.00	23000000	+1669.23	24000000	+20.00
Sher-e-Bangla Agricultural University (SAU)	200000	450000	+56.00	400000	-11.00	1700000	+325.00	100000	-41.00
Dhaka University of Engineering and Technology (DUET)	1025700	1790000	+74.51	1654000	- 7.59	1228700	- 25.71	1200000	- 2.33
Chittagong University of Engineering and Technology (CUET)	1350000	1350000	0.00	1250000	-7.40	1250000	0.0	1250000	0.0
Chittagong Veterinary and Animal Sciences University (CVASU)	-	139226	0.00	301009	+116.20	545641	+81.27	4813915	+782.00
Jessore Science and Technology University (JSTU)	-	200000	0.00	6300000	+3.05	1500000	-76.19	2500000	+66.66
University of Science and Technology Chittagong (USTC)	350000	400000	+14.00	550000	+38.00	500000	-9.00	600000	+20.00
Independent University, Bangladesh (IUB)	8100000	10040000	+23.95	9388000	- 6.49	8600000	-8.39	11930000	+38.72
International University of Business Agriculture and Technology (IUBAT)	450000	500000	+11.11	530000	+6.00	560000	+5.66	1000000	+78.57
East West University (EWU)	32,00,000.00	35,00,000.00	+9.37	41,00,000.00	+17.14	51,00,000.00	+24.39	74,40,000.00	+45.88
Leading University (LU)	800000	800000	0.00	1000000	+25.00	1000000	0.0	1000000	0.0
BRAC University (BRACU)	8751536	12962800	+48.12	16283000	+25.61	18847000	+15.74	-	-
Stamford University (SU)	650000	700000	+8.00	860000	+23.00	800000	-7.00	880000	+10.00
United International University (UIU)	1600000	2100000	+31.25	2000000	- 4.76	2200000	+10.00	2500000	+13.63
University of Liberal Arts, Bangladesh (ULAB)	2580000	2291500	-11.18	1991000	-13.11	1394000	-29.98	3365000	+141.39
ASA University Bangladesh (ASAUB)	2542260	2174000	-14.48	2321212	+6.77	2652350	+14.00	3075500	+16.00

Budget heads: Library expansion, furniture and equipment, IT, database creation, software development, new personnel recruitment, staff development/promotion, journal/magazines purchase, electronic journal & archives, books, contingencies, stationeries and others [excluding staff salaries].

Source: Present Study

Continuous library development depends upon how much money has been allocated by the authority every year. Respondents were asked about the above budget head in their respective university library and the result has been presented in the Table – 5.27. Financial year-wise annual budget of the respective library has been shown and found that few universities did not mention annual budget either that was confidential or library was not aware about the budget.

IT-based budget has not yet been prepared in public university libraries. On the other hand, a need-based budget has been prepared in private university libraries. All private university libraries have a very reasonable budget and it indicates that in near future the library's budget will increase gradually. On the other hand, public university library's budget is very poor in terms of human resources, reading materials, and psychical environment of the library. This amount should be increased by the government for the greater benefits of faculty, students and staff members. For continuous development 5%-10% of the total university budget should be spent for library. In BAUL, among the total annual budget of the university, the proportion of library allocation was 2.08% in 2010 and 0.37% in 2011 which was very insufficient to the balance development. This picture is true for all other university libraries in Bangladesh.

Table 5.28 Status of library public relation and marketing

How do you inform your information product and services to the users?	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
Through display board	✓	✓	✓	✓	✓	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	-	-	-
Web Portal	-	-	✓	-	✓	-	-	✓	-	-	-	✓	-	✓	-	✓	-	-	-	-
Automatic E-mail Alert	-	-	-	-	✓	-	-	-	-	-	-	-	-	✓	-	✓	✓	-	-	-
Using Telephone	✓	-	✓	-	✓	-	-	✓	-	-	-	-	✓	✓	-	✓	✓	✓	-	✓
Using Social Networking	-	-	✓	✓	-	-	-	-	✓	✓	-	✓	-	-	✓	✓	-	-	-	-
E-mail	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
Web Notice Board	-	-	-	-	✓	-	-	✓	✓	-	✓	-	✓	✓	-	✓	-	-	✓	-
Mobile short message	-	-	-	-	-	✓	-	-	-	✓	-	-	-	-	-	✓	-	-	-	-
Printed Documents	✓	✓	✓	-	✓	✓	-	-	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓
Mailing Group	✓	✓	✓	-	✓	-	-	-	✓	✓	-	-	-	✓	-	✓	-	✓	✓	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	-

✓ **Yes** — **No**

Table – 5.28 shows the SULs' public relation and marketing strategy. The Table indicates that only BRACU library is using all kinds of strategy for advertisement of information and library products. BSMMU and EWU libraries have no options for social networking, mobile short message option. Other than BRAC, BSMMU and EWU, no other university library has all kinds of options for marketing available library and information products to the users.

Table 5.29 Distribution of the libraries by the availability of common marketing strategy

ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
Does the library arrange seminar, user training and orientation program?	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	-	✓	-	✓	-	✓	✓	-
Do the library personnel deliver speech at the orientation to fresher's?	✓	-	✓	✓	✓	-	-	✓	✓	✓	✓	-	✓	✓	✓	✓	-	✓	✓	✓
Does the library arrange library week and quiz competition regarding library?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Does the library publish any newsletter?	-	-	-	-	-	-	-	-	-	-	✓	-	-	✓	✓	-	-	-	-	-
Does the library have any leaflet or brochure for users and visitor?	-	-	-	-	✓	-	✓	✓	-	-	✓	✓	-	✓	✓	-	-	✓	✓	-
Does the library have any Information literacy program?	-	-	✓	-	-	-	✓	✓	-	-	✓	✓	-	✓	-	✓	-	-	✓	-
Does the library arrange reading competition and reader's circles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-	✓	-
Does the library shows videos and documentaries to the students	-	✓	-	-	✓	-	-	-	-	-	✓	-	-	-	-	-	✓	-	✓	-
Does the library have any discussion group?	-	-	-	-	✓	-	-	-	-	-	✓	-	-	-	✓	-	-	-	✓	-

✓

Yes

—

No

There are many marketing strategies in libraries by which libraries advertise their library and information products. Without marketing, no library can disseminate information to the user effectively. The effectiveness of a library largely depends on maximum use of the library. Hence, university libraries formally and informally adapt some tricks for disseminating information to the users in Bangladesh. The Table 5.29 shows the ways SULs advertise their products to the users which bears no satisfactory results.

Table 5.30 Status of library co-operation and resource sharing

ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
Does your library participate in any National Resource Sharing and Networking?	✓	✓	✓	✓	✓	-	✓	✓	-	-	-	✓	-	✓	-	✓	✓	✓	-	-
Does your library participate in Regional Cooperation?	-	✓	✓	-	✓	-	-	✓	-	-	-	-	-	-	-	-	✓	✓	-	-
Does your library participate in International Cooperation?	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	✓	-	✓	-	✓	-	-
Does your library participate in any social network?	-	-	✓	-	-	-	-	✓	-	-	-	✓	-	✓	-	✓	-	✓	-	-
Does your library participate in any consortia?	✓	✓	✓	✓	✓	-	✓	✓	✓	-	-	✓	-	✓	-	✓	-	✓	-	-

✓ **Yes** — **No**

In the present information explosion, it is not possible to have exhaustive collection in all fields of knowledge, not even for the largest libraries of the world. Even keeping up with the ever rising flow of new publications in fields of particular interest is beyond the capacity of most libraries. So, cooperation and resource sharing is needed among libraries. Table – 5.30 shows the existing library cooperation and resources sharing scenario among the university libraries in Bangladesh, which is not satisfactory. CVASU, JSTU, USTC, IUBAT, LU, ULAB and ASAUB library have no cooperative activities. Regarding regional and international cooperation, the situation is worst. Some ULs have been participating in social networking. Regarding consortium, most of the SULs have been participating in INASP Peri consortium initiatives of UK which provides locally.

Table 5.31 Name of the networking and resources sharing group

SL	ITEM	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
1	BANSLINK	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	BASLIBNET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	BDSIC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	INRD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	HeLLIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	DEVINSA	-	✓	-	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	-	-	-
7	INASP-Perii	✓	✓	✓	✓	-	-	✓	✓	✓	-	-	✓	-	-	-	✓	✓	-	-	-
8	DSpace Community	-	✓	-	-	-	-	-	-	✓	-	-	✓	-	✓	-	✓	-	-	-	-
9	Koha Community	-	✓	-	-	✓	-	-	-	✓	-	-	✓	-	✓	-	✓	-	✓	-	-
10	Greenstone Community	-	-	-	-	✓	-	-	-	-	-	-	-	-	✓	-	-	-	-	-	-



Availability



Non-availability

In post independence Bangladesh, different initiatives of library networking and resources sharing have been taken by the national, international, and regional communities. BANSLINK, BASLIBNET, BDSIC, INRD, HeLLIS and DEVINSA are some common of them. Without BAU and JU (in BANSLINK and DEVINSA) no one among the SULs is the member of the various networks. Thus, Table 5.31 indicates the existing networking and resources sharing situation in Bangladesh.

Table 5.32 Area of resource sharing

SL	Library various Resources Sharing:	DU	BAU	BUET	JU	BSMMU	SAU	DUET	CUET	CVASU	JSTU	USTC	IUB	IUBAT	EWU	LU	BRACU	SU	UIU	ULAB	ASAUB
01	Inter Library Lending Services	✓	-	-	-	✓	-	-	-	-	-	-	-	✓	-	-	-	-	-	-	✓
02	Technical Support	-	-	-	-	✓	-	-	-	-	-	-	✓	-	✓	-	-	-	-	-	✓
03	Manpower Sharing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04	Inter Library Loan	✓	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
05	Exchange of Learning Resources	-	-	-	-	✓	-	-	-	-	-	-	-	-	✓	-	-	-	-	-	-
06	Joint Research and Development	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	-
07	Cooperative Manpower Development	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
08	To subscribe e-journals/ archives	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	✓	-	✓	-	✓	✓	✓	-	-
09	To get access to the electronic database	-	✓	✓	-	✓	-	-	✓	✓	-	-	-	-	✓	-	✓	-	-	-	✓
10	To get access to the OPAC	✓	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	✓
11	To get access in the Union Catalogue	-	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Other	-	-	-	-	✓	-	PJ	-	-	-	-	-	-	-	-	-	-	-	-	-

PJ=Sharing of Printed Journals



Yes



No

The Table – 5.32 shows the areas in which cooperative activities are usually executed. The above picture is not satisfactory as more cooperation in various sectors, especially in university libraries in Bangladesh is desired.

Table 5.33 Existing practice of library advocacy of sample university libraries

Indicators	(Descriptive Statistics)					N= 20
	No. of Libraries	Minimum	Maximum	Mean	Std. Deviation	
Library Committee always seeks suggestion rather than impose any decision	20	1	5	3.25 ⁷	1.410	
Library administration create pressure to the University administration on various issues	20	1	5	3.05 ⁹	1.099	
Librarian has sole power to select and purchase books on various subjects	20	1	5	3.15 ⁸	1.565	
Librarian put demand for recruitment and hiring external experts for library development	20	1	5	3.50 ⁶	1.433	
Librarian is a member of the University's different executive committees	19	1	5	3.53 ⁵	1.389	
University librarian follows a definite advocacy policy for logically approach to the university administration to achieve a common goal for overall library development	19	2	5	4.00 ²	.943	
Librarian has power on library budgeting and strategic decision making	20	1	5	3.50 ⁵	1.469	
We have some plan to promote the status of this profession within the University	20	1	5	3.55 ⁴	1.146	
Librarian continuously makes communication with University key persons regarding library and its personnel development	20	2	5	4.25 ¹	.851	
Library professionals are involved in various pressures group and association within the country	20	1	5	3.70 ³	1.218	

Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree
¹⁻⁹ ranking the mean scores according to the scale

Librarians and heads of the library of the sample university libraries were asked to give their pedagogical opinion about 'library advocacy' practice to support a wider range of the library development. Ten major library related issues were identified, and a five-point 'Likert Scale' was used to measure the most common practice usually used in libraries irrespective of public and private universities. The Table 5.33 reveals that 'communication with University key persons regarding library and its personnel development' ranked as 1st with mean score 4.25 and standard deviation .851. 'librarian follows a definite advocacy policy for logically approach to the

university administration to achieve a common goal for overall library development' ranked as 2nd with (mean score=4.00) and (standard deviation=.943). Other issues concerning the library advocacy (with mean score=>3.00) more or less practiced in university libraries for lobbying with the top management for library overall development.

Table 5.34 Major problems of modernization of university libraries in Bangladesh

(Descriptive Statistics) N= 20

Ranking	Nature of problems	No. of Libraries	Minimum	Maximum	Mean	Std. Deviation
1	Inadequacy of ICT facilities	20	4	5	4.85	.37
2	Lack of National Policy for university libraries in Bangladesh	20	1	5	4.40	.940
3	Lack of vision, mission and objectives	20	2	5	4.30	.801
4	Lack of proper training and development	20	2	5	4.10	.852
5	Lack of the initiative of the university authority	20	3	5	4.05	.826
6	Lack of full time professional librarian	20	2	5	3.95	.887
7	Lack of research and development activities	20	2	5	3.95	.945
8	Lack of qualified professional staff	20	2	5	3.90	.718
9	Lack of sufficient budget	20	1	5	3.90	1.119
10	Lack of sufficient standard for the university libraries	20	2	5	3.90	1.021
11	Lack of proper library education in the country	20	2	5	3.85	.875
12	Lack of sufficient space	19	1	5	3.79	1.032
13	Lack of knowledge about latest tools and technologies in library field	20	1	5	3.70	1.031
14	Lack of initiative of library personnel [absenteeism in job field]	20	2	5	3.65	.813
15	Lack of library separate building and architectural plan	19	1	5	3.63	1.342
16	Lack of initiative from the professional bodies	20	1	5	3.60	1.046
17	Lack of library committee	20	1	5	3.45	1.191

Scale: 1 = not important; 2 = somewhat important; 3 = Important; 4 = very important; 5 = extremely important

Administrators of twenty sample university library were asked to grade the problem they usually faced in library modernization and development. Seventeen major problems were identified and a five-point Likert Scale was used to measure the

importance of the problems for ranking. Table 5.34 reveals that lack of 'Inadequacy of ICT facilities' very important problem ranked as 1st with (mean score=4.85) and standard deviation (.37). Library authority reported lack of National Policy, lack of vision, mission and objectives of university authority, lack of proper training and development, lack of the initiative of the university authority are another three very important problems ranking 2nd, 3rd, 4th and 5th with mean score= 4.40, 4.30, 4.10, and 4.05 respectively. Other problems also important problems which indicates a mean score= >3.00.

Table 5.35 Opinion of the librarian/library head regarding modernization of university libraries in Bangladesh

(Descriptive Statistics) N= 20

Indicators	N	Minimum	Maximum	Mean	Std. Deviation
Librarian and library staff should always be professional	20	2	5	4.55	.826
Library should have proper planning for smooth operation	20	1	5	4.55	.945
More technological facilities should be provided in the library	20	1	5	4.55	.945
Library should have its own vision mission and objectives	20	1	5	4.50	1.000
Library should follow the standard for its various functions	19	1	5	4.47	.964
Library professionals should be provided Competitive salaries within the university	20	1	5	4.45	.999
Librarian's should have academic status like developed countries	19	1	5	4.42	.961
10-20% of the university budget should be spent for library development	20	1	5	4.40	.940
University library should have books on various disciplines	19	1	5	4.26	1.046
There should be a national policy to run university library systematically	20	1	5	4.25	1.251
There should be same type of organogram among the university libraries	19	1	5	4.16	1.259
To protect learning resources lib. staffs have a great responsibility	20	1	5	4.00	1.076
Library should have open access system	20	1	5	4.00	1.170
Charges should not be introduced for basic services [i.e. membership...]	19	1	5	3.74	1.284
Library should have a recreational corner with a facilities of TV, Computer, etc.	19	1	5	3.68	1.416
Library should open 24 hours in a day or Maximum hours of the day	20	1	5	3.50	1.051
Satisfaction level regarding the functioning of the library is very high	13	1	5	3.46	1.050
Duration of book loan period should be increased [i.e. for entire semester]	20	1	5	3.20	1.240

Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree

The head of the sample university libraries were asked to give the opinion on eighteen indicators for modernization and development of their libraries. The study used a five-point Likert Scale to record the response of the respondent regarding modernization issues. Table 5.35 indicates that the respondents are 'strongly agree' on four indicators with mean score from 4.50 to 4.55. Librarian and library staff should always be professional, proper planning for smooth operation, more technological facilities should be provided in the library ranked 1st, 2nd and 3rd with same mean score 4.55. Library should have its own vision mission and objectives ranked 4th with mean score=4.50. The respondents were 'Agree' with next other 9 important indicators with mean scores ranging from 4.47 to 4.00. On rest of the indicators the respondents were 'Fairly agree' which mean scores ranging from 3.74 to 3.20.

SECTION – 2

SURVEY OF THE USERS

This chapter contains a brief analysis of data gathered by the questionnaire based interview of the users. This analysis will provide factual data for recommendations of a model plan for modernization of university libraries in Bangladesh. A structured question was distributed containing 12 variables to find out the present scenarios of the university libraries of Bangladesh. These are background information, library collection, library building, architecture, and infrastructural facilities, library catalogue and database, library software and searching facilities, library equipments and it facilities, library service and facilities, library marketing and public relation, attitude of library professionals, advocacy from the part of the users, library overall impression and opinion.

A total of 500 questionnaires were distributed among the user group and finally 419 questionnaires were received back.

Table 5.36 Status of respondents

Total Number of Questionnaires	Received Back	Missing	Percentage
500	419 (83.8%)	81 (16.2%)	100%

The Table – 5.36 indicates that 83.8% of the total questionnaires have returned back which shows a good response from the respondents. Strength of any research largely depends on the good response from the respondents. Considering the fact, the present study has been conducted with a good response into the problems.

Table 5.37 Distribution of questionnaires by university category

Category of University	Distributed	Received	%	Missing	%	Total (%)
Public	270	244	90.37%	26	9.62%	100
Private	230	175	76.08%	55	23.91%	100
Total	500	419	83.8%	81	16.2%	100

Although a sincere effort was made to ensure a logical representation of the both types of the university libraries, it could not be achieved because of various problems, foremost of which was time constraints, and non-cooperation of the busy users. From the PULs, 90.37% questionnaire returned back while 76.08% questionnaires were returned back from the PvtULs.

Table 5.38 Distribution of the respondents according to questionnaire receipt

Category of University	Frequency	Percentage	Valid Percent	Cumulative Percent
Public	244	58.2	58.2	58.2
Private	175	41.8	41.8	100.0
Total	419	100.0	100.0	

Table 5.38 shows the percentage of the questionnaire received back from the stakeholders of the university libraries. The Table indicates that respondents of the public university respondents were 58.2% and private university 41.8% respectively.

Table 5.39 Distribution of the respondents by gender

Category of Users	Frequency	Percentage	Valid Percent	Cumulative Percent
Male	301	71.8	71.8	71.8
Female	118	28.2	28.2	100.0
Total	419	100.0	100.0	

Table – 5.39 shows number of female respondents of the survey has been disproportionately lower than the males. It indicates that the percentage of the female students is not equal of the male students and also shows they are not regular users of the library. After classes, they are supposed to stay in residential halls rather than using library for longer period. However, the female respondents of the survey showed a great interest and their confidence level also was quite high which will contribute for proposing a development plan at end of this work.

Table 5.40 Distribution of the respondents according to age group

Age Group	Frequency	Percentage	Valid Percent	Cumulative Percent
Under 20 years	35	8.4	8.4	8.4
20-25	184	43.9	43.9	52.3
26-30	90	21.5	21.5	73.7
31-35	56	13.4	13.4	87.1
36-40	25	6.0	6.0	93.1
41-45	11	2.6	2.6	95.7
46-50	15	3.6	3.6	99.3
Over 50 years	3	.7	.7	100.0
Total	419	100.0	100.0	

Table – 5.40 shows that users aged group 20-25 represents the majority of the respondents, followed by the 26-30 aged groups. Together they formed about more than half of the total respondents. As the subsequent analysis would show, this comparatively younger age of the respondents has a great influence upon the choice of options in many cases. As the large portion of the university students represents under this age group, the study would definitely forge at a great extent. The main beneficiaries of the university libraries are student. So, their opinion and expectation will be vital findings to conduct the study.

Table 5.41 Distribution of the users by categories

Category of the Users		Frequency		Percentage		Valid Percent	Cumulative Percent
Student	Undergraduate	174	293	41.5	69.9	69.9	69.9
	Graduate	119		28.4			
Faculty		61		14.6		14.6	84.5
Staff		22		5.3		5.3	89.7
Researcher		43		10.3		10.3	100.0
Total		419		100.0		100.0	

Table – 5.41 shows the four categories of the users in which students are 69.9% among the total user groups. Second majority group is 'Faculty' 14.6% and third majority group is 'Researchers'. As students are the major stakeholders of the university, their opinion will reflect throughout the study. This contribution in conducting the study will highly be evaluated.

Table 5.42 Purpose of visit

Purpose of the Visit	Frequency	Percentage	Valid Percent	Cumulative Percent
Individual study	132	31.5	31.5	31.5
Group study	77	18.4	18.4	49.9
Reference work	83	19.8	19.8	69.7
Internet use	31	7.4	7.4	77.1
Preparing assignment	16	3.8	3.8	80.9
Borrowing books	80	19.1	19.1	100.0
Total	419	100.0	100.0	

Users visit a university library for many purposes. This varies and depends on user's categories and expectation. The Table – 5.42 indicates that 31.5% users visit library for individual study which represents the largest group among the respondents. Second majority group i.e. 19.8% says that they visit library for reference work. Borrowing books and group study placed third and fourth majority i.e. 19.1% and 18.4% respectively. 7.4% users go to the library for Internet use while 3.8% user go for preparing assignment.

Table 5.43 Frequency of visit

Interval of the Visit	Frequency	Percentage	Valid Percent	Cumulative Percent
Once in a week	74	17.7	17.7	17.7
2 to 3 times in a week	117	27.9	27.9	45.6
4 to 5 times in a week	95	22.7	22.7	68.3
More than 5 times in a week	133	31.7	31.7	100.0
Total	419	100.0	100.0	

Table – 5.43 shows the frequency of visit of the users. 31.7% of the total respondents said that they visit their university library more than 5 times in a week. They are the majority group. They have good contact with the library. They require better services from the library. 22.7% users visit library 4 to 5 times in a week while 27.9% and 17.7% users visit library 2 to 3 times and once in a week respectively.

Table 5.44 Users' perception regarding availability of library resources

N=419

Ranking	Category/Item	N	Mean	Std. Deviation
1	Newspaper	414	4.00	1.238
2	Text book	418	3.82	.980
3	Reference Book	417	3.61	1.186
4	Journal/Magazines/Periodicals	415	3.57	1.110
5	Thesis and report	403	3.21	1.268
6	Digital Collection	409	2.80	1.374
7	Online Journals	404	2.79	1.455
8	CD-Rom	395	2.54	1.436
9	E-Book	394	2.49	1.416
10	Audio Visual	387	2.48	1.368

Scale: 5=Excellent; 4=Good; 3=Fair; 2=Poor; 1=Very poor

The users of the both categories of the university library were asked to measure the status of library collections and resources available in the library. Ten book and non-book materials were identified, and a five-point Likert Scale was used to measure the maximum availability of the resources which satisfies the user of their needs. Table – 5.44 reveals that newspaper as a 'good' collections that satisfies the users largely and text book as a 'Fair' collection and ranked as 1st and 2nd with mean score 4.00 and 3.82, and standard deviation of 1.238 and .980 respectively. Reference books stand in third position with a mean score 3.61 and standard deviation 1.186 which means the collection is 'Fair'. Another two 'Fair' collection are journal/magazines /periodicals and thesis & report with the mean scores 3.57 and 3.21, and standard deviation are 1.110 and 1.268. Digital collection, online journals, CD-Rom collection, E-book, and audio visual collection are placed 6, 7, 8, 9 and 10 and has fallen in the 'Poor' collection category.

Table 5.45 Library building, architecture, and infrastructural facilities

N=419

Indicators	N	Mean	Std. Deviation
Location of the library is very convenient to the students and faculties	419	3.81	1.237
Building exterior view is excellent [i.e. color, design and architectural view]	413	3.73	1.096
Library internal environment is pleasant [i.e. AC is installed]	418	3.53	1.275
Other facilities are available [i.e. sufficient ventilation (Exhaust Fan), humidity and dust controlling system, entrance of daylight, and sound control etc.]	418	3.42	1.334
Library furniture like chair, Table and book shelves are standard	411	3.29	1.282
Group study facilities	414	3.28	1.244
Sufficient space for safekeeping area	416	3.23	1.191
Sufficient space for reading	418	3.22	1.266
Library provides pure drinking water for users	417	3.17	1.452
Library provides wash room and water supply properly	417	3.09	1.410
Silent reading facilities with individual reading booth/cabinet	417	3.01	1.306
Close Circuit Cameras are installed to protect library materials	415	2.82	1.535

Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree

University libraries should be designed to support the role of the university. In addition to ensuring the specific requirement for the development of the university, special attention should be given towards library building planning, architectural modeling, and infrastructural facilities. To find out the existing scenario of the university libraries of Bangladesh 12 indicators have been placed towards the users for accurate response so that their opinion can be visualized. To achieve objectives a five-point Likert Scale was applied to assess the response made by the users. The Table – 5.45 illustrates that the mean scores of the all indicators are below 4.00 which depicts that the respondents are not ‘Strongly Agree’ with the basic and infrastructural facilities in the libraries. Simultaneously, respondents are ‘Fairly Agree’ in most of the cases which divulges the facilities are available to the particular university library not in all types of the libraries. For the options of the Close Circuit Cameras (CCC) respondents are ‘Disagree’ with the indicator for unavailability of CCC among the university libraries to protect valuable learning resources.

Table 5.46 Availability of library catalogue and databases

N=419

Indicators	N	Yes	%	No	%	Missing	%	Total %
The library has a catalogue	418	400	95.5	18	4.3	1	.2	100
Library Database	419	300	76.1	100	23.9			100
CD-Rom Database	418	152	36.3	266	63.5	1	.2	100
Digital Archives and database	418	148	35.3	270	64.4	1	.2	100
Digital Archives [internal]	419	172	41.1	247	58.9	-		100
Access to other library resources through networking and resource sharing	419	176	42.0	243	58.0	-		100
Digital library items	419	173	41.3	246	58.7	-		100
Institutional repositories	419	180	43.0	239	57.0	-		100
Institutional Bibliography	419	170	40.6	249	59.4	-		100
Library resources and collection of other agencies [i.e. British Council, UN, UNICEF]	418	200	47.7	217	51.8	1	.2	100
Library website	419	245	58.5	174	41.5	-		100

Table 5.46 illustrates the availability of the library catalogue and databases among the SULs. The Table reveals that 95.5% of libraries have catalogues, 76.1% of libraries have library databases, 35.3% have digital archives and databases, 41.1% have digital archives [internal], 42.0% have access to other library resources through networking and resource sharing, 41.3% have digital library items, 43.0% institutional repositories, 40.6% have institutional bibliography, 47.7% have library resources and collection of other agencies [i.e. British Council, UN, UNICEF].

Table 5.47 Availability of library software and searching facilities

N=419

Indicators	N	Yes	%	No	%	Missing	%	Total %
Library Software	419	216	51.6	244	58.2	-		100
Archival Software	419	154	36.8	265	63.2	-		100
Database software	419	175	41.8	244	58.2	-		100
Institutional repository software	419	172	41.1	247	58.9	-		100
MyAthens [Note : Athens is an Access Management System]	419	135	32.2	284	67.8	-		100
VuFind [Note: VuFind is a library resource portal]	419	139	33.2	279	66.6	-		100
Joomla [Joomla the dynamic portal engine and content management system]	419	106	25.3	313	74.7	-		100

Four hundred and nineteen users of different categories were asked about the availability of library software and searching facilities in their respective university libraries. Table 5.47 reveals that regarding availability of library software 51.6% said 'Yes'. Other options like archival software (36.8%), database software (41.8%), and institutional repository software (41.1%) respondents ensured their availability. On the other hand, about the searching facilities using MyAthens, VuFind and Joomla [content management software] 32.2%, 33.3% and 25.3% respondents said 'Yes' respectively. The Table shows that the use of modern tools and techniques among the university libraries are not satisfactory.

Table 5.48 Availability of library equipment and IT facilities

N=419

Indicators	N	Yes	%	No	%	Missing	%	Total %
Sufficient computer in the library	419	208	49.6	211	50.4	-		100
Library entrance and exist system	419	246	58.7	173	41.3	-		100
Online Internet connectivity	419	291	69.5	128	30.5	-		100
Audio Visual equipment	419	177	42.2	242	57.8	-		100
RFID tagging and security system [Note: book security device]	419	139	33.2	280	66.8	-		100

Table 5.48 reveals the status of IT facilities in the library. According to the Table 50.4% respondents confirmed insufficiency of computer in their library. 58.7% respondents said the existence of automated library entrance and exists controlling system. 69.7% respondents ensured the availability of internet and 57.8% ensured non-availability of audio visual equipment. 66.8% said non-availability of RFID tagging and security system in the library.

Table 5.49 Library service and facilities

N=419

Indicators	N	Yes	%	No	%	Missing	%	Total %
Library materials borrowing facility	419	345	82.3	74	17.7	-		100
Book reservation from remote location [i.e. from home]	419	184	43.9	234	55.8	-		100
Book renewal from remote location [i.e. from home]	419	179	42.7	240	57.3	-		100
Photocopying facilities	419	279	66.6	140	33.4	-		100
Scanning facilities	419	162	38.7	255	60.9	-		100
CD-Rom Writing facilities	417	147	35.1	270	64.4	2	.5	100
Spiral binding facilities	416	144	34.4	272	64.9	3	.7	100
Printing	416	184	43.9	232	55.4	3	.7	100
Current Awareness Services (CAS) [services on recent materials, news, etc]	416	209	49.9	207	49.4	3	.7	100
Selective Dissemination of Information (SDI) [based on specific request]	416	184	43.9	232	55.4	3	.7	100
Newspaper clipping service	419	264	63.0	155	37	-		100
Online requisition services	419	184	43.9	235	56.1	-		100
Internet browsing services with full text downloading facilities	419	216	51.6	203	48.4	-		100

There is a general observation that libraries provide some basic services and facilities for the users. In identifying the major information services and facilities, users were asked about the kind of services they get in the library. The most popular areas of services are shown in the Table – 5.49. According to the Table 5.49, 82.3% respondents said the availability of library materials borrowing facility, 43.9% and 42.7% said book reservation and renewal were possible from remote location respectively, 66.6% said photocopying facilities, 38.7% said scanning facilities, 35.1% said CD-Rom writing facilities, 34.4% said spiral binding facilities, 43.9% printing facilities, 49.9% current awareness services (CAS), 43.9% selective dissemination of information (SDI), 63.0% newspaper clipping service, 43.9% online requisition services, 51.6% internet browsing services with full text downloading facilities. Rest of the respondent remarked unavailability of the services. Table 5.55 reveals that there were some missing data i.e. .5% to .7% respectively.

Table 5.50 Library marketing and public relation

N=419

Indicators	N	Yes	%	No	%	Missing	%	Total %
Does the library arrange seminar, training of the stakeholders and orientation program?	419	183	43.7	236	56.3	-		100
Does the Library personnel deliver speech at the orientation to freshers?	419	195	46.5	224	53.5	-		100
Does the authority arrange library week and quiz competition regarding library?	419	123	29.4	296	70.6	-		100
Does the library publish advertisement through social networking? [like: facebook, twitter, etc]	419	118	28.2	301	71.8	-		100
Does the library publish any newsletter?	419	151	36.0	268	64	-		100
Does the library have any leaflet or brochure for users as well as visitors?	419	167	39.9	252	60.1	-		100
Does the library have any Information literacy program for fresher?	419	190	45.3	229	54.7	-		100
Does the library have reader's circle or reading group	419	176	42.0	243	58.0	-		100

University libraries performed marketing activities of their library product in an unorganized ways in Bangladesh. Thus, respondents of the various kinds were asked about the fact. The Table 5.50 reveals that 43.7% respondents said 'Yes' about that 'library arranges seminar, training of the stakeholders and orientation program' out of 419 respondents. 46.5% said library personnel delivered speech at the orientation to fresher's, 29.4% said authority arrange library week and quiz competition regarding library, 28.2% said library publish advertisement through social networking, 36.0% said library publish newsletter, 39.9 said library have leaflet or brochure for users as well as visitors, 45.3% said library have information literacy program for fresher, 42.0% said library have reader's circle or reading group.

Table 5.51 Attitude of the library professionals

N=419

	N	Mean	Std. Deviation
Behavior of the supporting staffs are very good	419	4.34	3.079
Librarian is very much cordial to increase service quality	418	4.17	2.752
Library personnel helps to get materials easily	419	4.12	1.008
Behavior of the circulation desk officer is amicable	414	4.01	.996
Library staff overall cooperation is satisfactory	419	3.99	1.096
Cooperation in reference section is very good	419	3.95	1.039
Library staffs are very much professional	418	3.89	1.106

Weight: 5=Strongly agree; 4= Agree; 3=Neither agree, nor disagree; 2=Disagree; 1=Strongly disagree

Respondents of various categories were asked about the attitudes of the library professionals towards the library users to assess the professionals, cooperative and helping attitudes of the library personnel. A five-point Likert Scale was used to determine a common notion about the facts. The Table - 5.51 reveals that behavior of the supporting staffs ranked 1st with mean scores=4.34 and standard deviation 3.079. Librarian's cordial cooperation ranked as 2nd with mean scores=4.17 and standard deviation 2.752, means they are very much agree with the statement. Library personnel's help to get materials (mean scores=4.12), behavior of the circulation desk officer (means scores=4.01) ranked 3rd and 4th respectively. Regarding library staff's overall cooperation (mean scores=3.99), cooperation in reference section (mean scores=3.95), library staff's professionalism (mean scores=3.89) stands at the neither agree, nor disagree stages among the respondents.

Table 5.52 Advocacy from the part of the users

								N=419
Indicators	N	Yes	%	No	%	Missing	%	Total %
User can complain for anything to the library authority	419	344	82.1	75	17.9	-		100
User has opportunity for selecting library resources [books, journals, etc]	419	309	73.7	110	26.3	-		100
User can change service pattern by putting their opinion	417	221	52.7	196	46.8	2	.5	100

Users' often claimed about their little role for the development of the library services and activities. Respondents were asked about the procedures to know the actual practice among the university libraries. Table – 5.52 indicates that most of the users told they have authority for complaining anything to the library administration (82.1%), they have opportunity for selecting books, journals, etc (73.7%), user can change service pattern by putting their opinion (52.7%).

Table 5.53 Overall impressions on the library

				N=419
Indicators	N	Mean	Std. Deviation	
Like to search resources among open shelves	419	4.00	1.040	
Whenever visit the library, like to see recent books on display board	408	3.71	1.170	
Close access collection (rare & reference) have been carefully selected	401	3.58	1.046	
Overall our library operation and activities is satisfactory	419	3.46	1.285	
Considering all the facilities (mentioned above), provided by the library satisfaction level is very high	378	3.43	1.239	
The present staff size of the university library is sufficient	415	3.27	1.295	
Library is operating with modern tools and technology	415	3.15	1.363	
The library does not possess recent books	418	3.07	1.442	
The library does not weed old books of research value	414	2.78	1.257	

Scale: Strongly Agree = 5, Agree= 4, Undecided = 3, Disagree = 2, Disagree strongly = 1

To know the library overall impression users were asked on different indicators related to the library use and services. A five-point Likert Scale was used to determine the user's notions about the university library. Table – 5.53 reports that respondents love to search resources among open shelves (mean scores=4.00), users love to browse among recent books on display (mean scores=3.71), users said close access collection has been carefully selected (mean scores=3.58). Respondents were undecided on various issues like overall library operation and activities is satisfactory (mean scores=3.46), considering all the activities you are satisfied (mean scores=3.43), present staff size of our university library is sufficient (mean scores=3.27), our library is operating with modern tools and technology (mean scores=3.15), the library does not possess recent books (mean scores=3.07). They were disagree with statement 'the library does not stock old books of research value' with mean scores=2.78.

Table 5.54 User's opinion for library modernization

N=419

Indicators	N	Mean	Std. Deviation
More technological facilities should be provided in the library	419	4.38	1.022
Library should have its own vision mission and objectives	415	4.38	.980
Library should follow the standard for its various functions	417	4.38	.907
A certain portion of the university budget should be spent for library development	419	4.34	1.098
Library should have proper planning for smooth operation	419	4.32	1.056
To protect learning resources users have a great responsibility	418	4.30	1.082
There should be a national policy to run university library systematically	418	4.28	1.153
University library should have books on various disciplines	418	4.23	1.073
Library professionals should be provided competitive salaries as other departments within the university	418	4.20	1.070
Library should be open shelf system	417	4.18	1.084
Library personnel should have status like faculties	414	4.18	1.053
Librarian and library staff should always be professional	415	4.16	1.137
Duration of book loan period should be increased [i.e. for entire semester]	418	3.98	1.167
Library should open 24 hours in a day or Maximum hours of the day	419	3.78	1.412
Library should have a recreational corner with a facilities of TV, Computer, etc.	416	3.60	1.414

Weights: [Strongly Agree = 5, Agree= 4, Undecided = 3, Disagree = 2, Disagree strongly = 1]

Respondents were asked to give their opinion for modernization of the present conditions of the university libraries in Bangladesh with pre-defined fifteen indicators. A five-point Likert Scale was used to know their opinion and ranking the order. Table – 5.54 reveals that provision of more technological facilities, vision mission and objectives of the library, various standard for its various functions ranked 1st with mean scores= 4.38 and standard deviation 1.022, .980, .907 respectively. For these three indicators, users are strongly agreed with the statements. Library budget (mean score=4.38), proper planning (mean scores=4.32), users' responsibility (mean scores=4.30), implementation of national policy (mean scores=4.28), books on various disciplines (mean scores=4.23), provision for competitive salary within the organization (mean scores=4.20), open shelve system and academic status of the librarian (mean scores=4.18), professional staff (mean scores=4.16) ranked as 2nd to 12th according to the ascending order respectively. Increasing of book loan period (mean scores=3.98), extended opening hours of the library (mean scores=3.78), providing of the recreational facilities in the library (mean scores=3.60) ranked as 13th, 14th and 15th. From ranked 13th to 15th respondents were undecided with the statements.

CHAPTER – 6

Summary of the Findings

(A) Institutional

(B) Users

CHAPTER 6

SUMMARY OF THE FINDINGS

Literature reviews on international context in the Chapter two reveals that university libraries all over the world are continuously changing due to various diverse forces. From the reviews on national context, Bangladesh university libraries also feel the magnitude of change and have started to reform their activities. Under the various initiatives from the part of the government as well as the private sector there has been a meager progress towards modernization since its independence in 1971.

The present Ph.D research attempts to assess the real picture of the present condition of the university libraries of Bangladesh by setting a set of standards and making recommendations for logical change which could fit with our socio-economic condition. As it is evident from the foregoing chapters, university libraries of Bangladesh have been suffering from lack of proper and systematic initiative from part of the government as well as private sectors. The questionnaires served under the study succeeded in gathering valuable information about the university libraries' present situation. Major findings from the University Library survey done under this study have been furnished in Chapter 5. This chapter (Chapter 6) aims to furnish the important findings of the questionnaire survey.

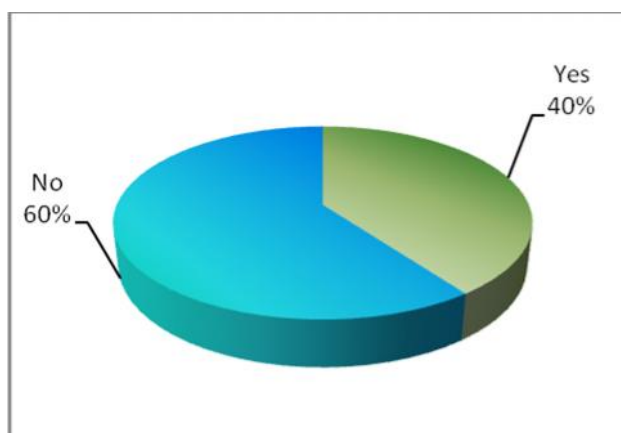
One of the important findings of the study was that, **university libraries of Bangladesh need to modernize all the functions to support the present requirement of higher studies.** However, as the previous chapter shows, organization and management of university libraries in Bangladesh have been different in nature. Libraries have been struggling due to a want of adequate infrastructure, skilled manpower, modern technology, cooperation among the libraries, library marketing and communication and user education, etc.

In this chapter the summary of the findings presented in the following styles:

- (A) Summary of the Findings (Institutional)
- (B) Summary of the Findings (Users)

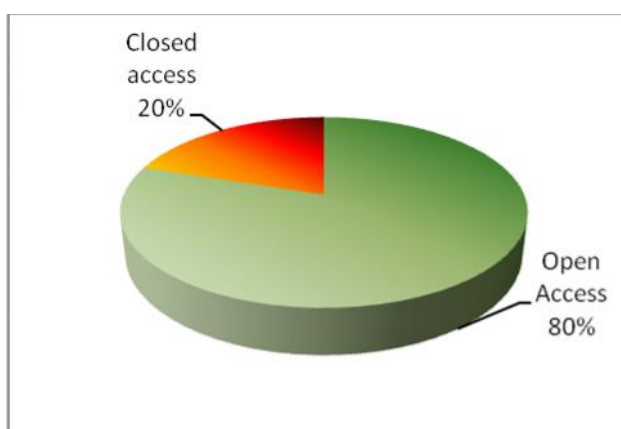
(A) Summary of the Findings (Institutional)

Figure 6.1: Pie Chart showing insufficiency of the staff size and pattern



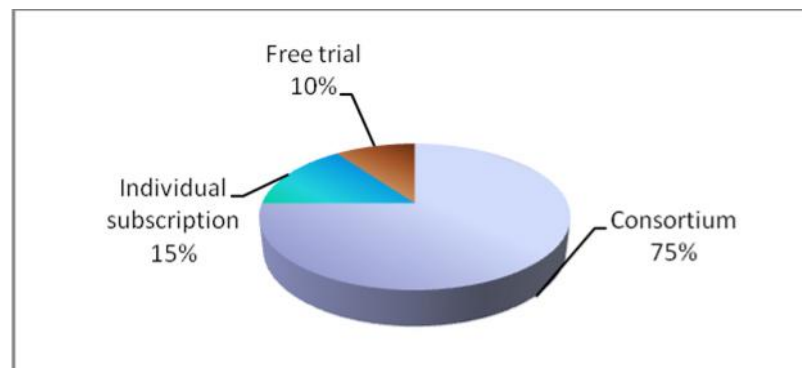
In spite of these needs, it is also observed that there are no significant differences between public and private university libraries with respect to library resources, including digital and electronic collections, hierarchy of library personnel, library time, departmentalization, automation, policies related to the acquisition, weeding of library materials, stock taking, etc. The findings reveal that most of the library heads were discontented with the existing staff and library organogram of the university. The above Chart gives a clear picture.

Figure 6.2: Pie Chart showing library access system



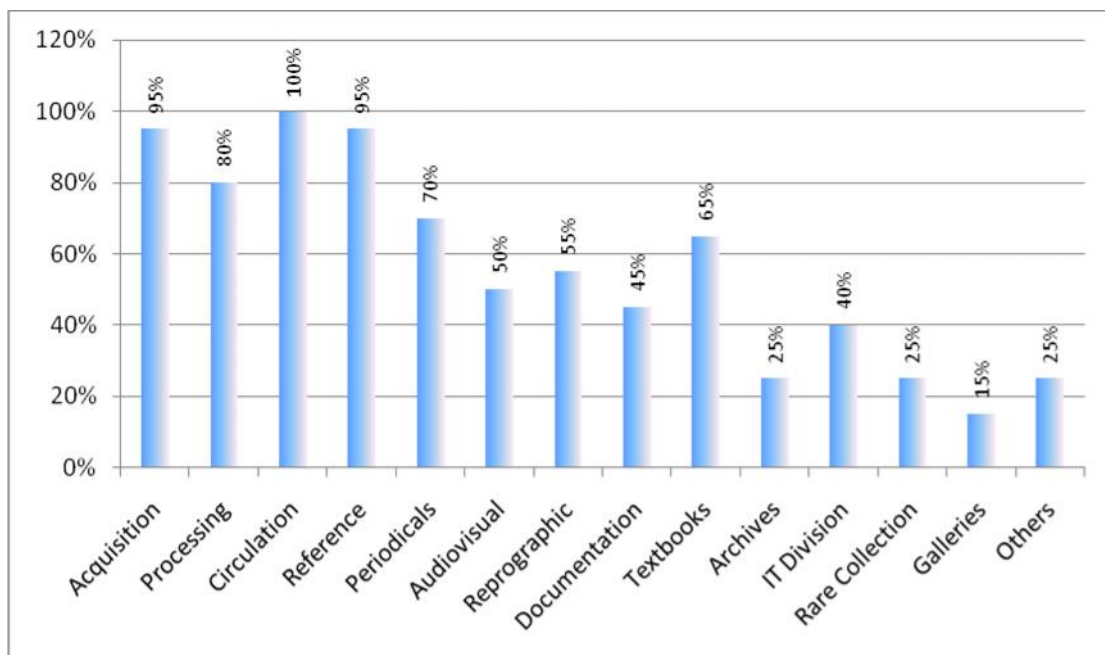
Library open **access system** is preferable to closed access system. Open access into the library encourages student in many ways. As a result, students spend more time in the library. The above Chart shows existence of closed access system in the university libraries of Bangladesh till date.

Figure 6.3: Pie Chart showing preference of e-resource subscription



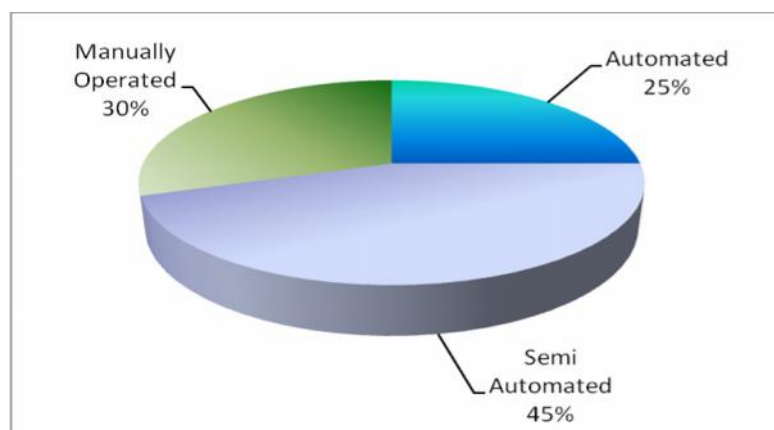
The study has revealed that old universities have a good **collection of learning resources** in comparison with new universities. It also reveals that the purchase of learning resources is a complex task due to import policy, foreign currency handling barrier and traditional mailing system in Bangladesh. Recently, subscription to e-resources, e-archives and e-journals has started significantly by the individual efforts in university libraries. For this reason, every year a huge amount of money has been expended due to the consortium. Now, they are feeling that subscription of e-resources through a consortium is more economic than individual subscription. The above Chart indicates the increasing tendency of forming consortium in Bangladesh.

Figure 6.4: Column Chart showing the scenario of departmentalization in university libraries



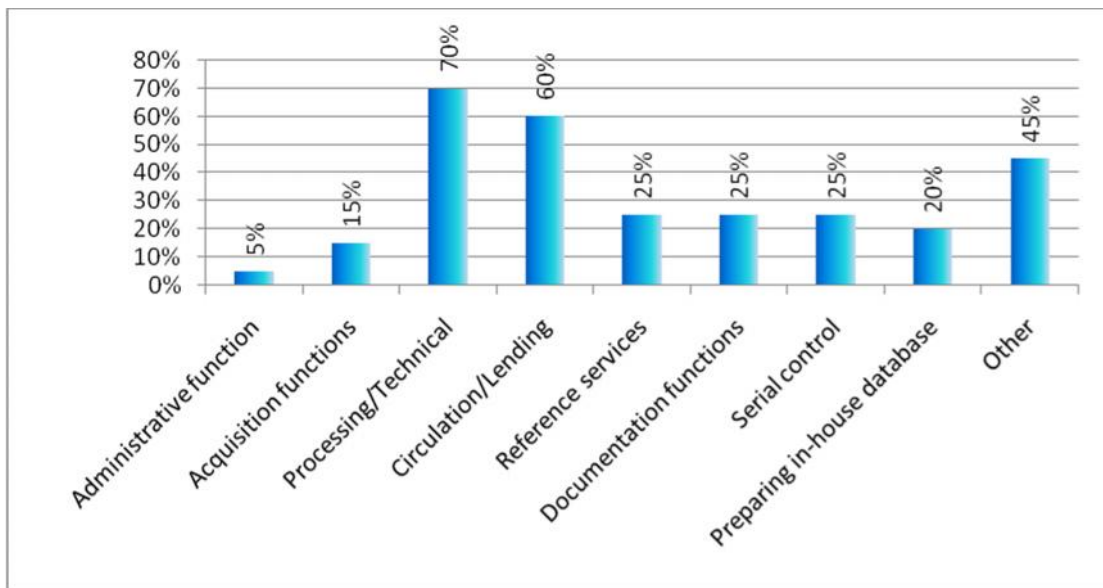
The study shows that, proper **departmentalization** has not been done in university libraries in Bangladesh. Only circulation department is observed in all libraries. Another two departments like acquisition (95%) and reference (95%) are found almost all of the libraries. Smooth functioning has been hampering greatly in libraries for lacking of departmentalization. The above Chart shows the situation.

Figure 6.5: Pie Chart showing the automation status of university libraries



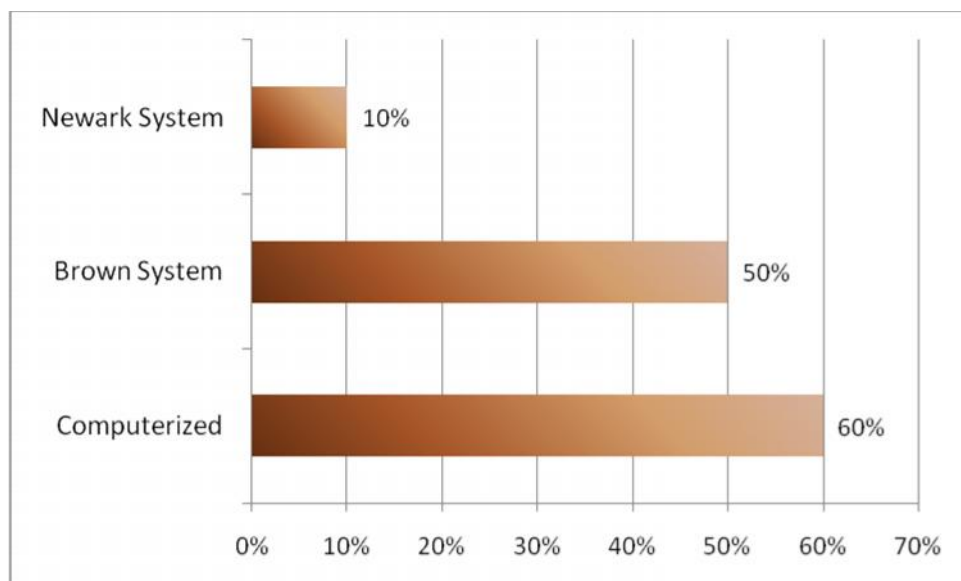
The study also reveals that 25 percent of the libraries surveyed are automated. Most of these libraries (45 percent) were found to be semi-automated. The libraries working with computers and some related technologies are at the initial stage of automation process. It is observed that while university libraries of the developed world have already transformed their activities into a modern technology based system and become fully automated, most of the university libraries of Bangladesh are at the initial stages of automation.

Figure 6.6: Column Chart showing functions and activities performed with automated system



Libraries have been performing a few tasks with automated systems. The above Chart shows the areas where automation is mostly applied. Figure 6.6 reveals that most of the university libraries i.e. 70% perform processing activities and 60% perform circulation with automated systems. Other activities which are performed with automated system i.e. computer and related technologies are not satisfactory.

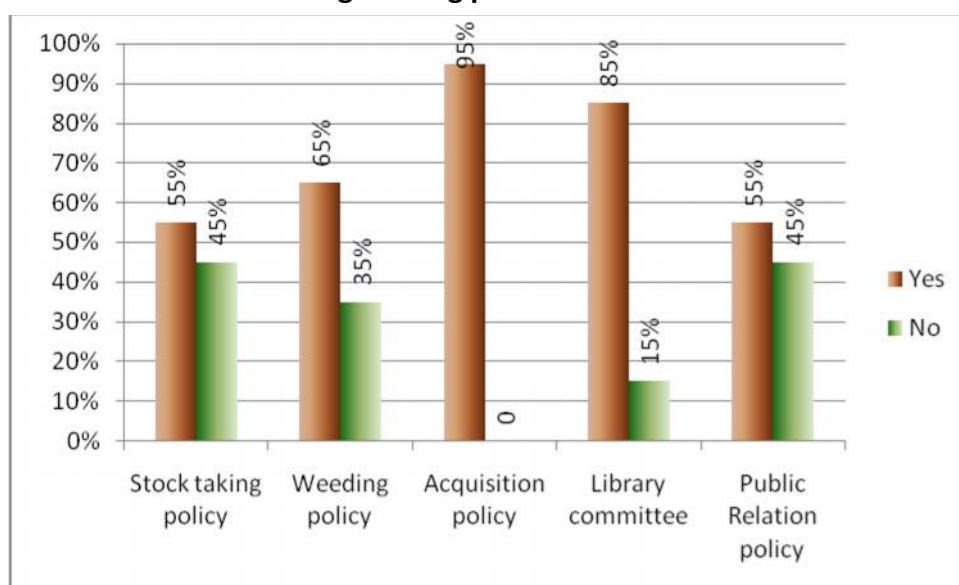
Figure 6.7: Bar Chart showing circulation system



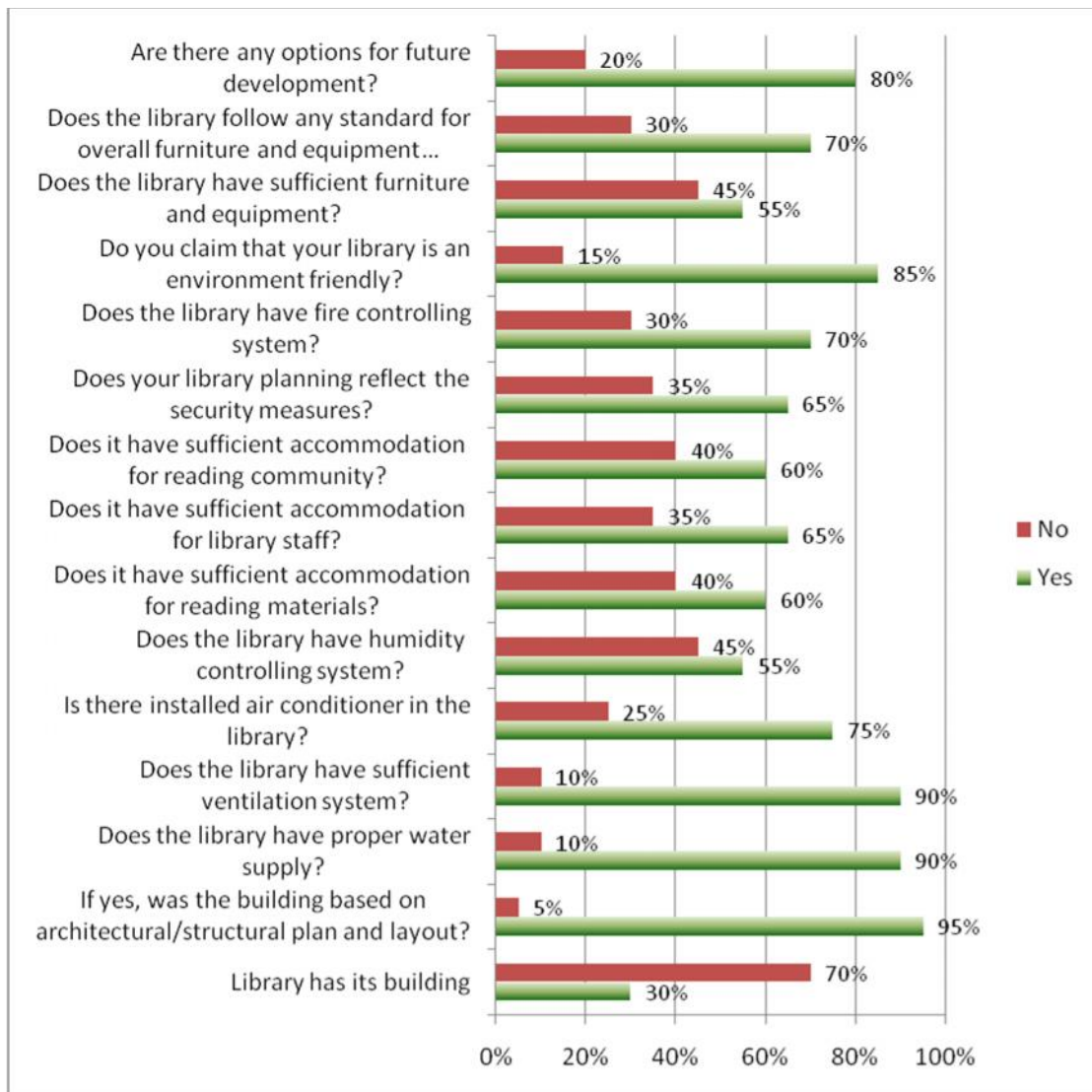
In this era of information explosion, the management of information has become even more complex than before. In such a situation, library automation is a highly

priority and, without it, the modernization of university libraries is not possible. The Figure 6.7 shows that 60% of libraries both from public and private universities are using computerized, 50% Brown, and 10% Newark circulation system. The study also reveals that 70% libraries are using computerized catalogues, 65% card catalogues and 35% are using both types. It also found that 85% libraries are following AACR-2 and 25% libraries following MARC21 in processing and inputting data into the computer.

Figure 6.8: Column Chart showing existing policies

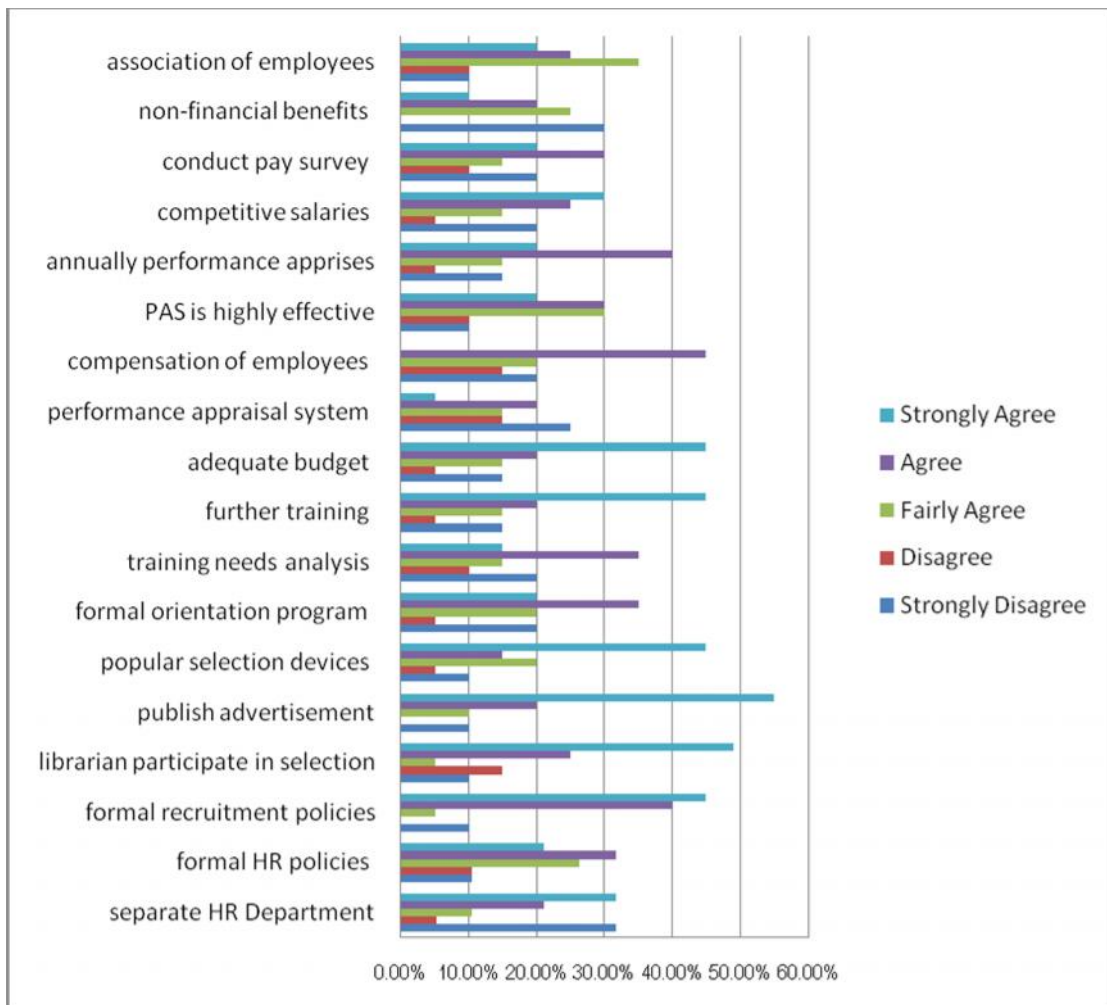


On the issues of **library policies and standards** it was observed that libraries have been performing various functions and activities without policies and standards. A few universities (15%) have no library committee. 45% of libraries lack a stock-taking policy and 45% and 35% lack public relation and weeding policy.

Figure 6.9: Bar Chart showing library building, infrastructure and furniture facilities

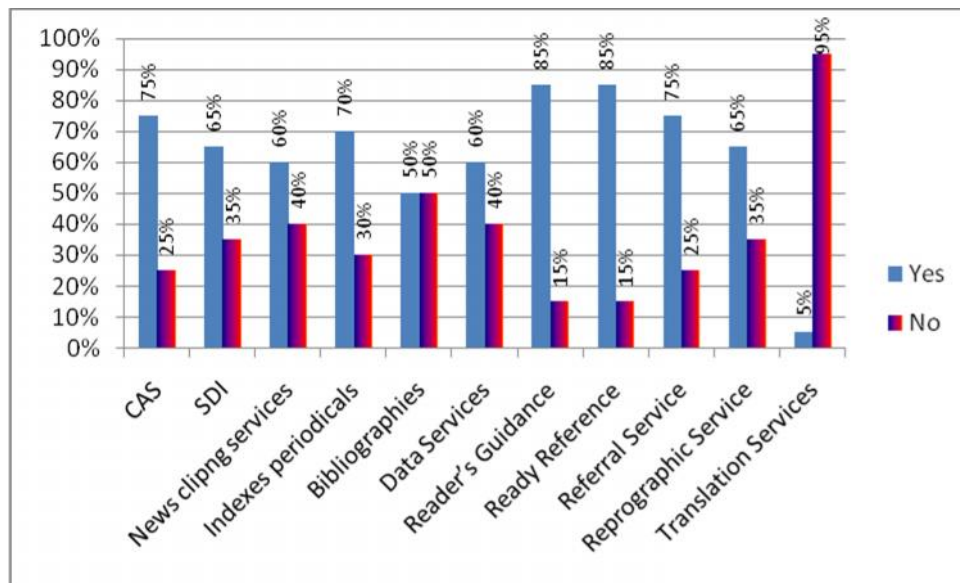
The study revealed that **library building, infrastructure and furniture facilities** were not sufficient in the university libraries in Bangladesh. There are three work flows in the library: the readers, the staff and the books. All these work flows have been executed inside the library building. So, the library building should be designed considering all the things related to the library operation. Sufficient space for all activities should be provided. The building will also be expandable in future. The study showed that libraries have been struggling for the want of separate library building, space for library resources and students, staff accommodation, security measures, and in furniture planning. It was also observed that most of the cases there are no significant difference between public and private universities in terms of library building, infrastructures and furniture.

Figure 6.10: Bar Chart showing overall organizational climate and HR planning in university libraries



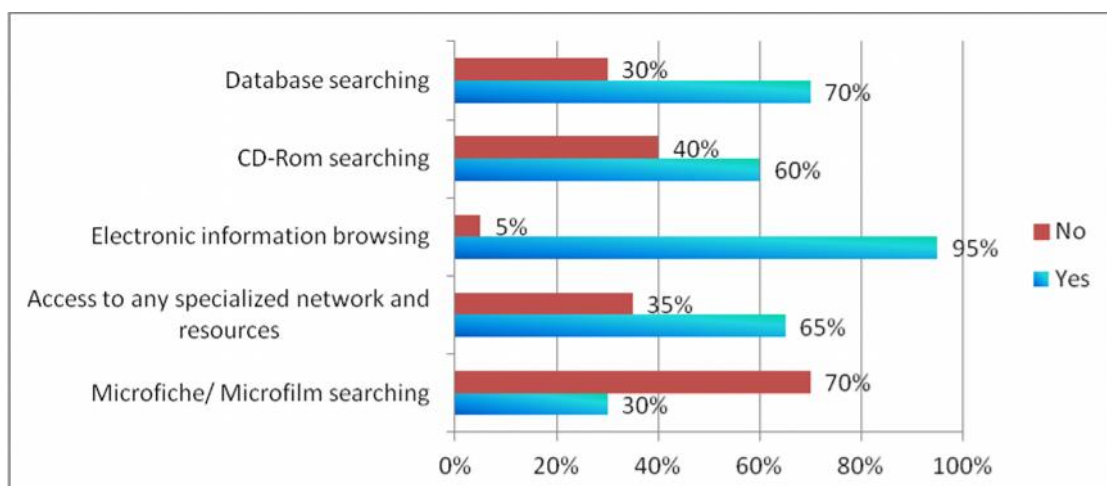
Significant findings have been gathered on the issues of **organizational climate and HR planning**. University libraries have not been able to implement scientific HR management systems yet. The overall organizational climate was not congenial to the library personnel. A comprehensive analysis using five-point Likert Scale indicates that there were many sections where libraries have not achieved desired efficiency. These sections are: separate HR Department, implementation of formal HR policies, conducting pay survey, providing non-financial benefits, forming association of employees, highly effective PSA, competitive compensation of employees, application of popular selection devices, and conduction of formal orientation program to the new employees. The above Chart shows the result.

Figure 6.11: Column Chart showing information service pattern



Another important finding of the study was un-satisfactory **information services** among the university libraries in Bangladesh. The study shows that basic information services have not been provided in the university libraries. During the study it was found that there were utmost needs of several of information services among the stakeholders of the libraries due to increasing nature of higher studies in the country. Over the year education pattern and structure have been changed greatly but library service has not increased accordingly. Libraries are unable to provide required services due to the infrastructural facilities, technological facilities, and allocation of sufficient budget in the library. The above Chart shows the availability and non-availability of basic service in university libraries of Bangladesh.

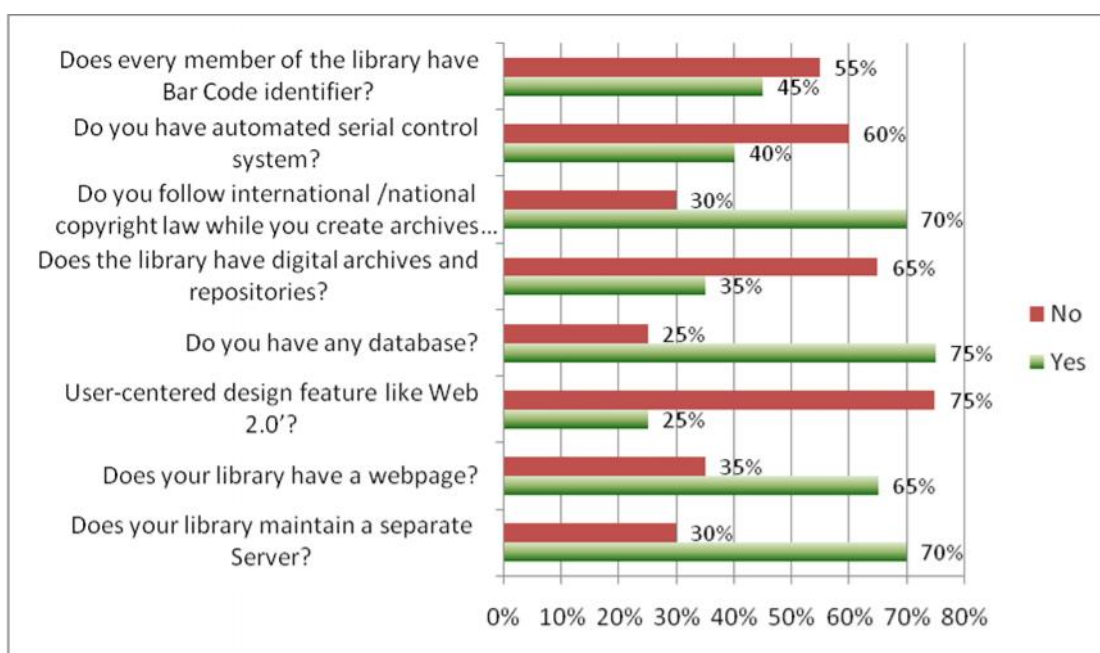
Figure 6.12: Bar Chart showing literature searching option



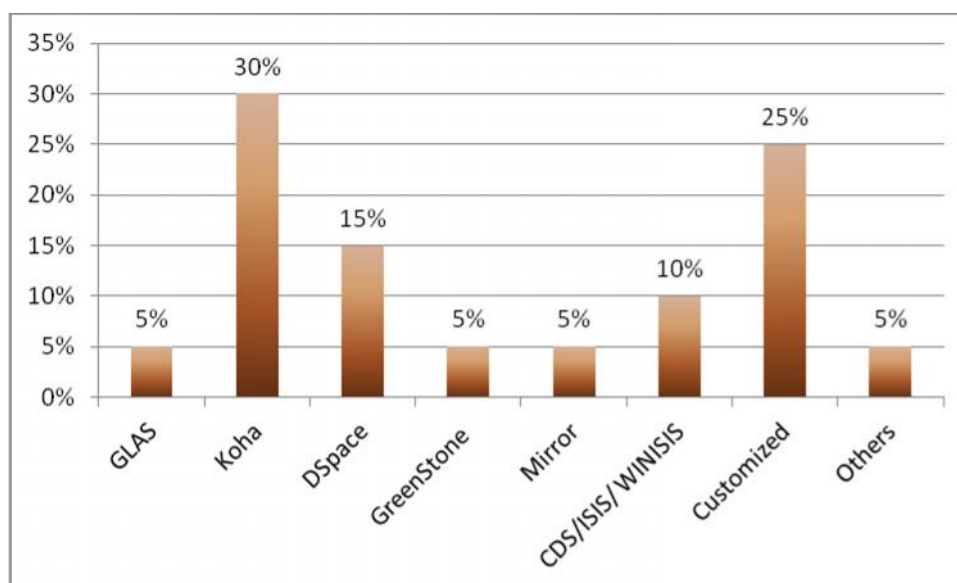
The study revealed that there are insufficient numbers of **literature searching option** among the university libraries in Bangladesh. The above Chart shows 95% libraries provide electronic information browsing facilities while other searching facilities are insignificant.

Use of **modern technology and equipment** were found insufficient in university libraries of Bangladesh. Most of the university libraries have computers, internet connectivity and printers, etc. During the survey period it is interesting to mention that USTC and IUBAT have no computer and other related technologies. Photocopy machines, bar code readers, digital cameras, scanners, multimedia projectors, CCC and RFID tagging with security gate were available insignificant numbers.

Figure 6.13: Bar Chart showing availability of database, archives and repositories



Availability of **database, archives, repositories and ICT facilities** were found insufficient. 35% of libraries have no webpage and 75% of libraries do not follow user-centered design features like Web 2.0. 60% of libraries have no automated serial control system. 65% of libraries have no digital archives or repositories. 55% of libraries have no bar-code membership cards for library purpose. The above Chart describes the picture.

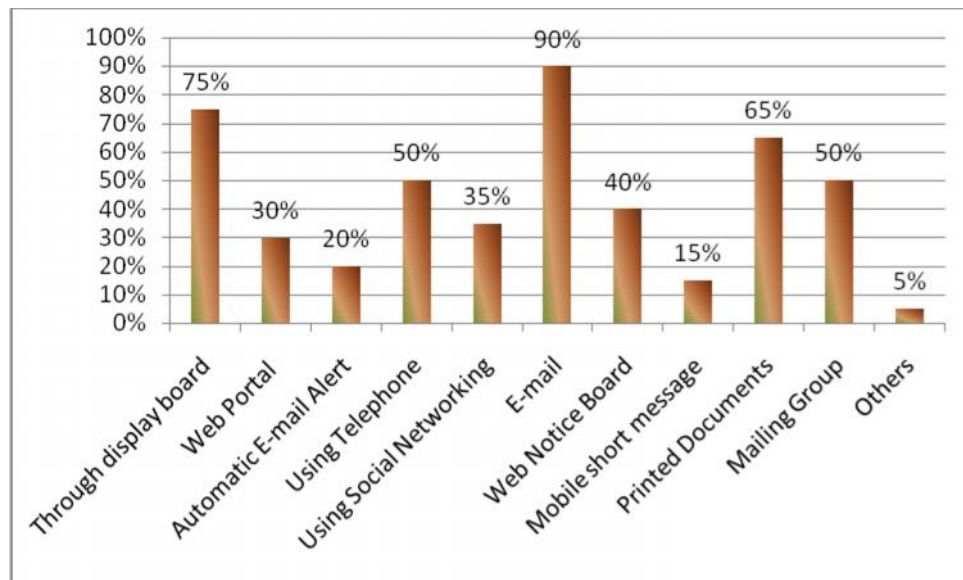
Figure 6.14: Column Chart showing use of open source software

One of the important findings of the study was that the extensive **use of open source software** in the university libraries of Bangladesh. Figure 13 revealed that 75% of sampled libraries maintain bibliographic databases. None have yet been able to cover the total collection of their own library. The study reveals that 40% of university libraries use open source software, while 40% of libraries use customized software, 10% libraries use software packages, and 10% use other category of software. Due to the availability of Internet and communication technologies university libraries are extensively using open source and free software rather than using customized or purchased software packages. Open source software is user friendly and may be customized with minimum effort. The above Chart shows the increasing tendency of open source software in Bangladesh.

Significant findings have also been gathered on the issue of **library budget allocation** of the universities. During the questionnaire survey to know the status of library development, librarians of the sampled university were asked about the annual budget of the library. The study shows that the budget allocation for library expansion, furniture and equipment, IT, database creation, software development, new personnel recruitment, staff development/promotion, journal/magazines purchase, electronic journal & archives, books, contingencies, stationeries and

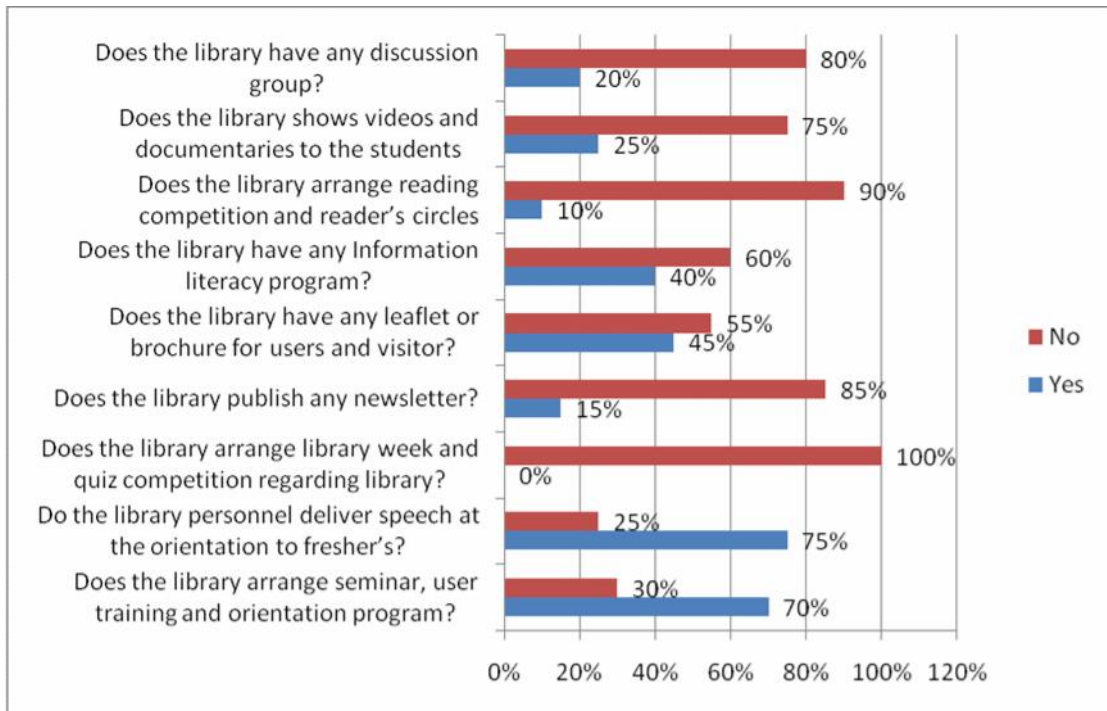
others were very much insufficient. It was also found that there is no standard for annual budget allocation for libraries.

Figure 6.15: Column Chart showing common mode of marketing of information product and services to the users



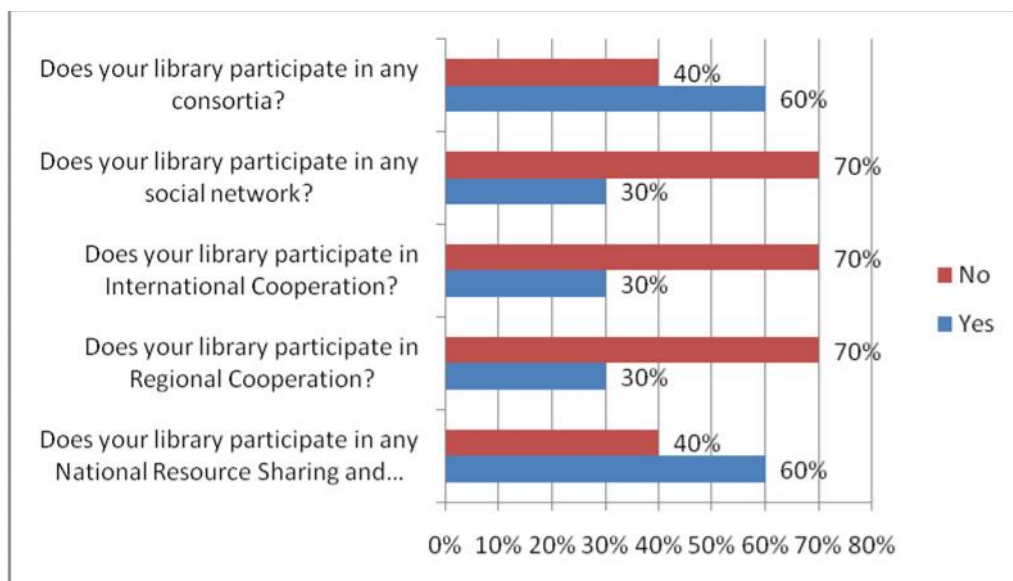
Appropriate **public relation and marketing of information products and services** were other focuses of the study. An increasing tendency of using of various marketing tools techniques in libraries has been observed in the university libraries of the advanced world. Marketing techniques-surveys, publicity, extension services, etc. play a vital role for identification of user-needs and in acquisition and dissemination of information. The study reveals that university libraries of Bangladesh have been adopting marketing and public relation techniques but mostly in an unorganized ways.

Figure 6.16: Bar Chart showing availability of common marketing strategy



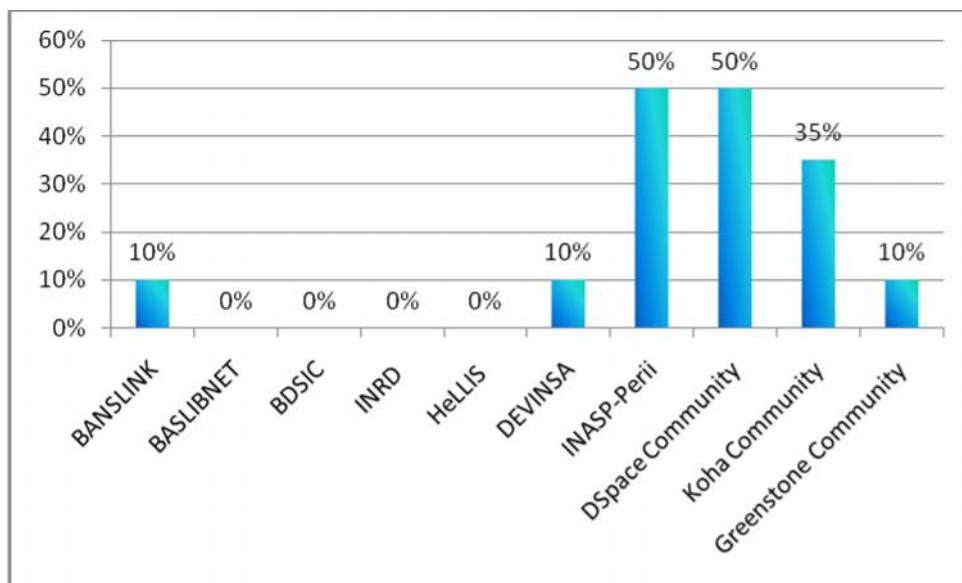
Application of marketing techniques is very important in improving the capabilities of libraries information services towards attaining satisfaction of users. The study shows that university libraries hardly felt marketing needs. The above Chart indicates the scenario of the marketing strategy adopted by the university libraries of Bangladesh.

Figure 6.17: Bar Chart showing the status of library networking and resources sharing of university libraries



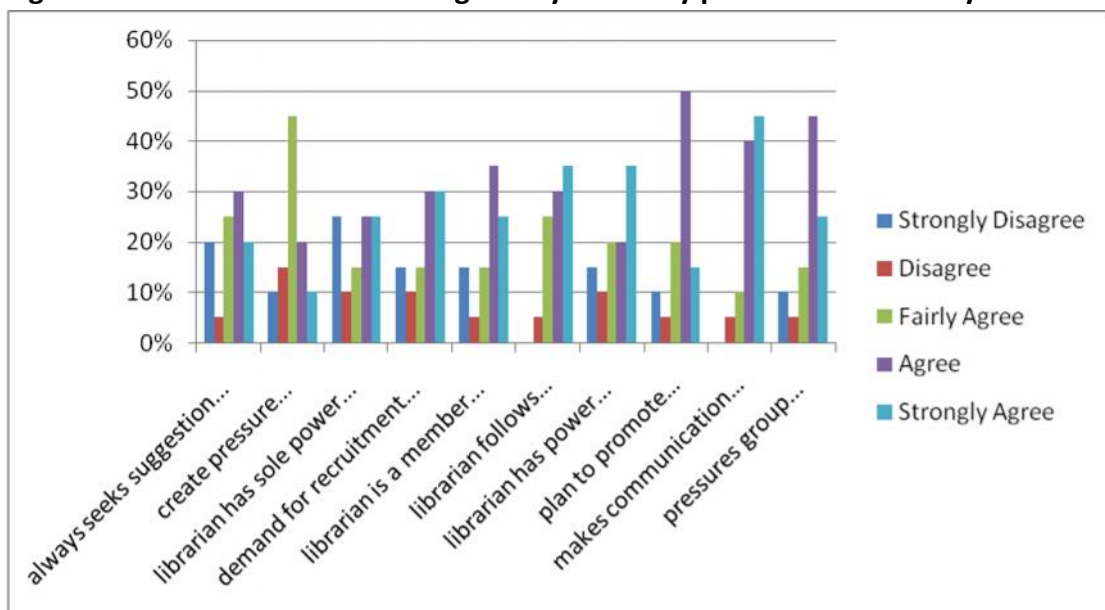
In the Bangladesh context, providing the right information to the right inquirer at the right time are almost impossible due to a lack of adequate funds, information resources, technological facilities and skilled manpower in university libraries. To overcome this problem, participation in existing network and resources sharing group is must. One of the important findings of the study was the **insufficient number of networking community and unpredictable participation status** of the university libraries.

Figure 6.18: Column Chart showing status of network and resource sharing



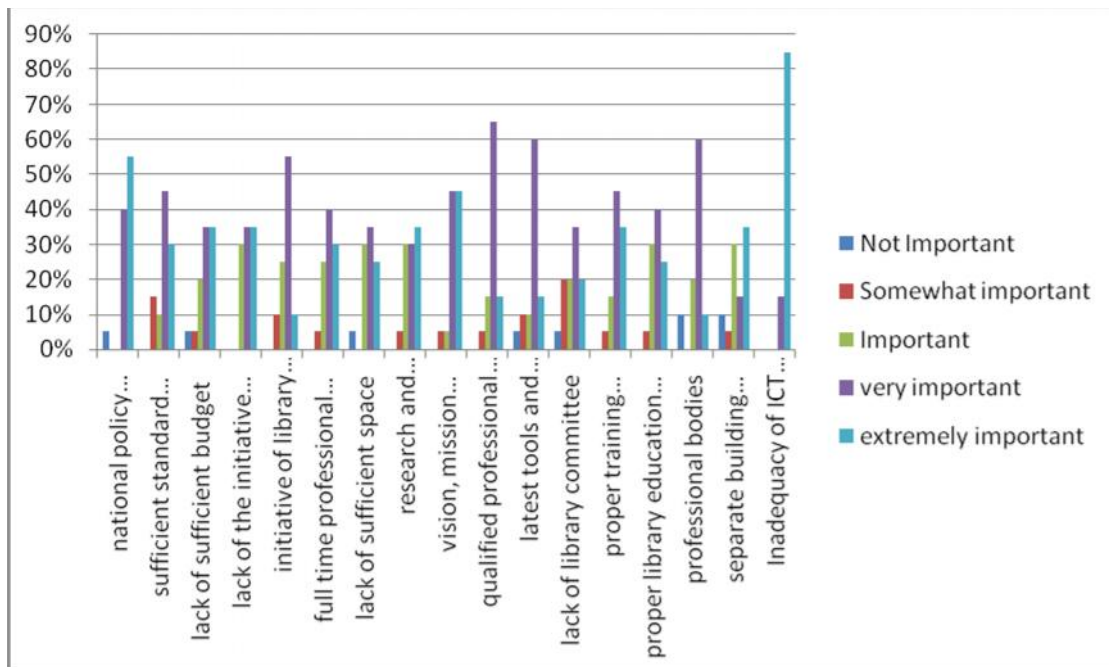
The percentage of network participation is shown in the above Chart.

Figure 6.19: Column Chart showing library advocacy practice in university libraries



Library modernization and development is a comprehensive task which can be achieved by a joint effort of UGC, university authority and library administration. Everyone has a definite role to execute throughout the process. So, without proper coordination among these three groups, modernization process cannot be successful. Appointment of a lobbyist for keeping continuous liaison with the higher authority can be a strategy for making understand of needs and demand of the library. The university librarian can play the role of lobbyist and should have qualities to pursue the situation. He should have minimum authority to create an acceptable situation in the university administration. The librarian should apply various policies and techniques to achieve the target. **Library advocacy** is one of the most important techniques by which university libraries can get an equitable share for library development. During the study, library advocacy practice was found insufficient among the university libraries in Bangladesh. The above Chart describes librarian’s authority and advocacy practice in Bangladesh.

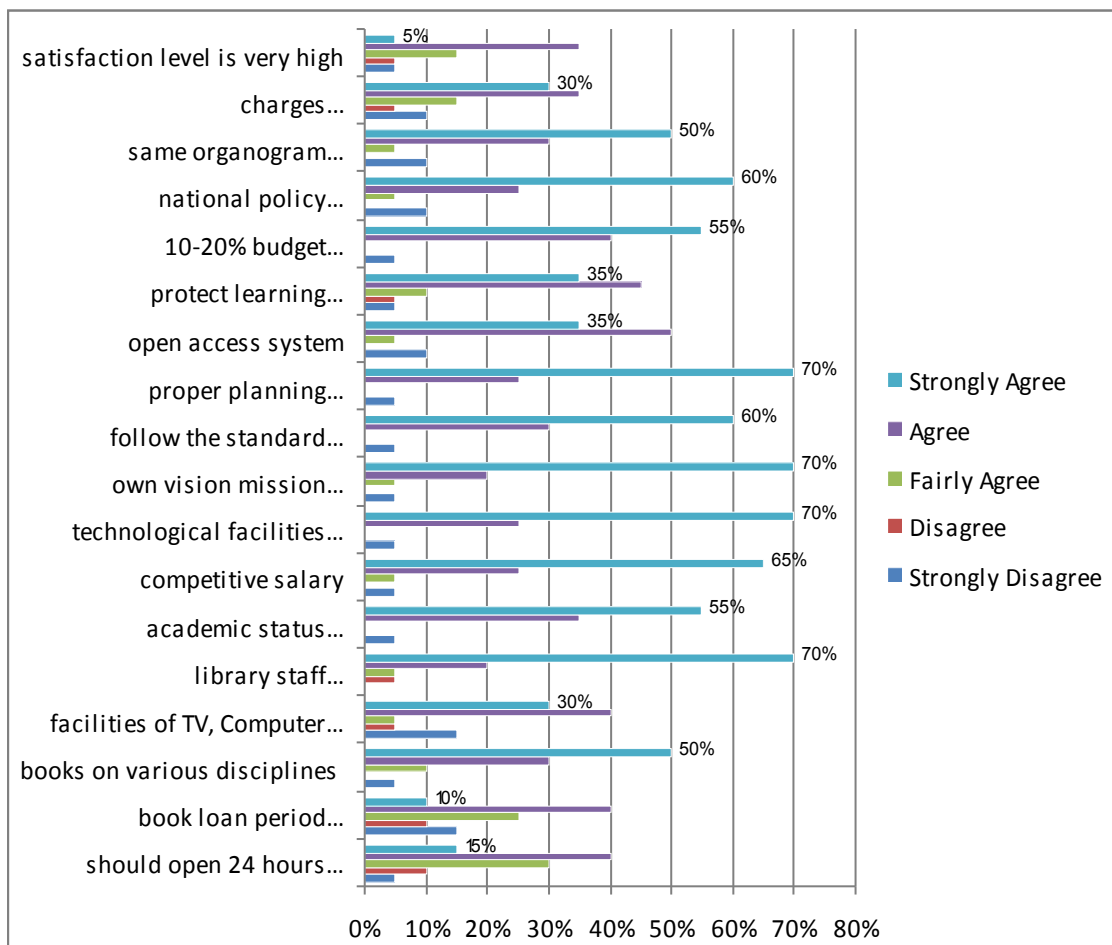
Figure 6.20: Column Chart showing major problems of modernization of university libraries in Bangladesh



From the perspectives of the Librarian/Library Head, there were found some major problem for which university library modernization hindered greatly and they categorized as extremely important, very important, important, somewhat important and not important. “Inadequacy of ICT facilities” were found extremely

important problem (85%). “Lack of qualified professional staff” ranked as very important problem (65%). “Lack of knowledge about latest tools and technologies in library field” and “lack of initiative from the professional bodies” were found another two very important problems (both 60%). The above Chart shows other problems of library modernization:

Figure 6.21: Bar Chart showing opinion of the librarian/library head regarding modernization of university libraries in Bangladesh



The study revealed that Librarian/Library Head have put their own opinions on how modernize university libraries in Bangladesh. Of the 20 sample university libraries interviewed, 70% were strongly agree with the statement: “library should have proper planning for smooth operation”, “library should have its own vision mission and objectives”, “more technological facilities should be provided in the library”, “librarian and library staff should always be professional.” 60% respondents were strongly agree with the statement: “library should follow the standard for its various

functions”, “there should be a national policy to run university library systematically.” The above Chart shows the opinion of the Librarian/Library Head on different issues related to the library modernization in Bangladesh.

From the opinion of the professionals it is safe to conclude that there are many problems with in university libraries in Bangladesh and needing to be modernized. Their opinion on various issues will provide an important element in proposing model plan in the next chapter.

(B) Summary of the Findings (Users)

The most important resources of a university library are learning resources. The study revealed that there were shortages of learning resources among university libraries of Bangladesh. Though there is no specific ratio of text books per students or text book per faculties that a library should kept, but a good number of text books should be kept to meet user's demand. There should be at least five copies of each text book for student borrowing and two more copies should be kept in the reserved section. The reference section should be built with encyclopedias, almanac, yearbook, dictionaries, and book on other disciplines besides subject related books. From the users' opinion it is evident that users' are not satisfied with the learning resources, except the newspapers (46.3%).

Figure 6.22: Column Chart showing user's perception regarding availability of library resources

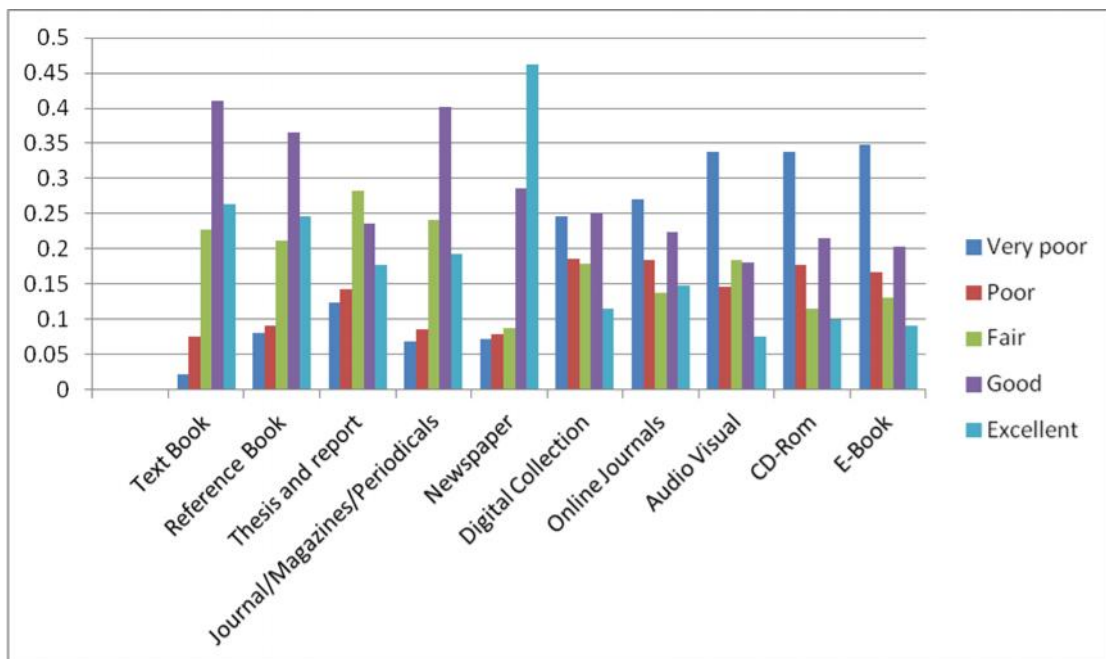
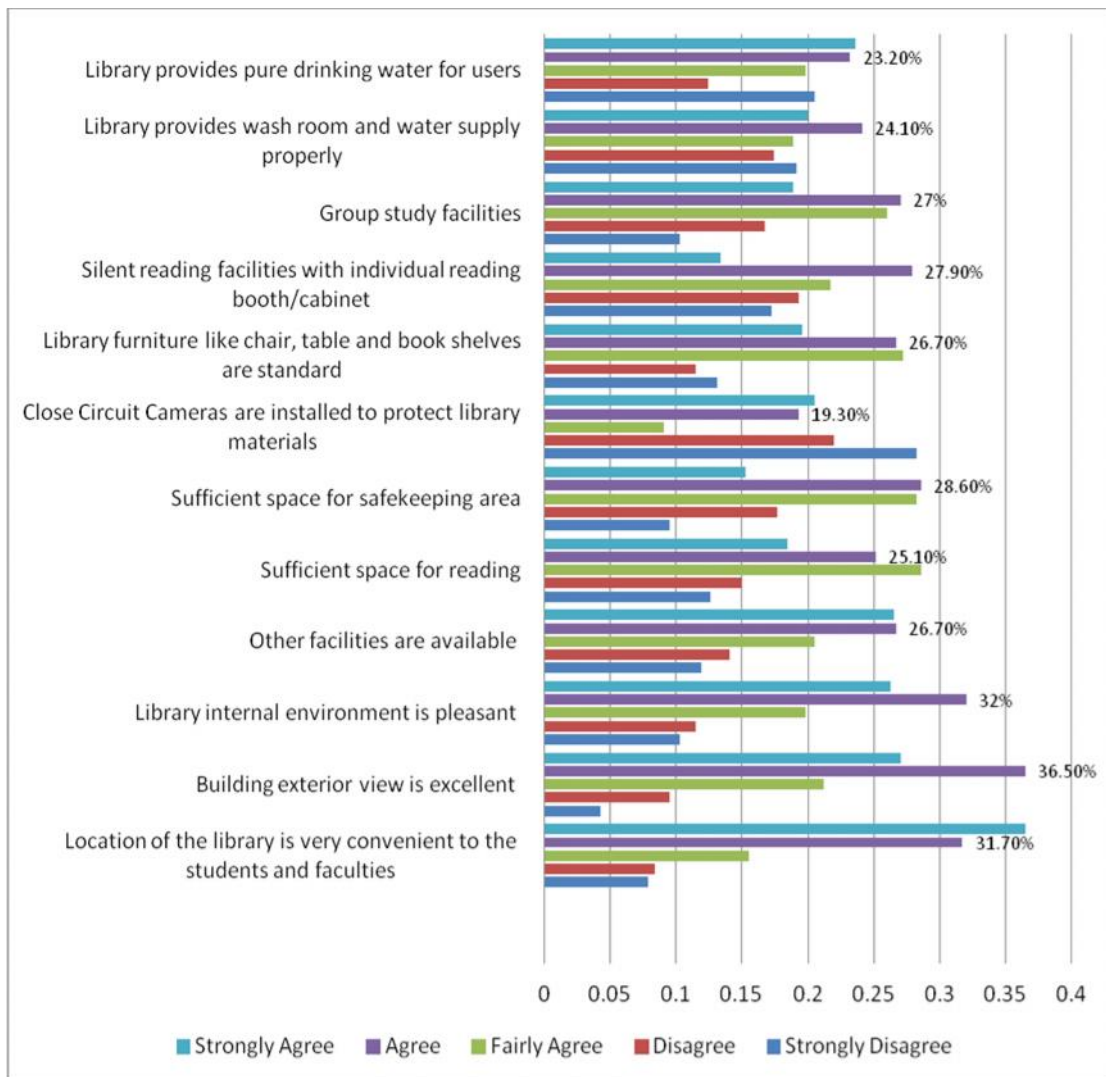
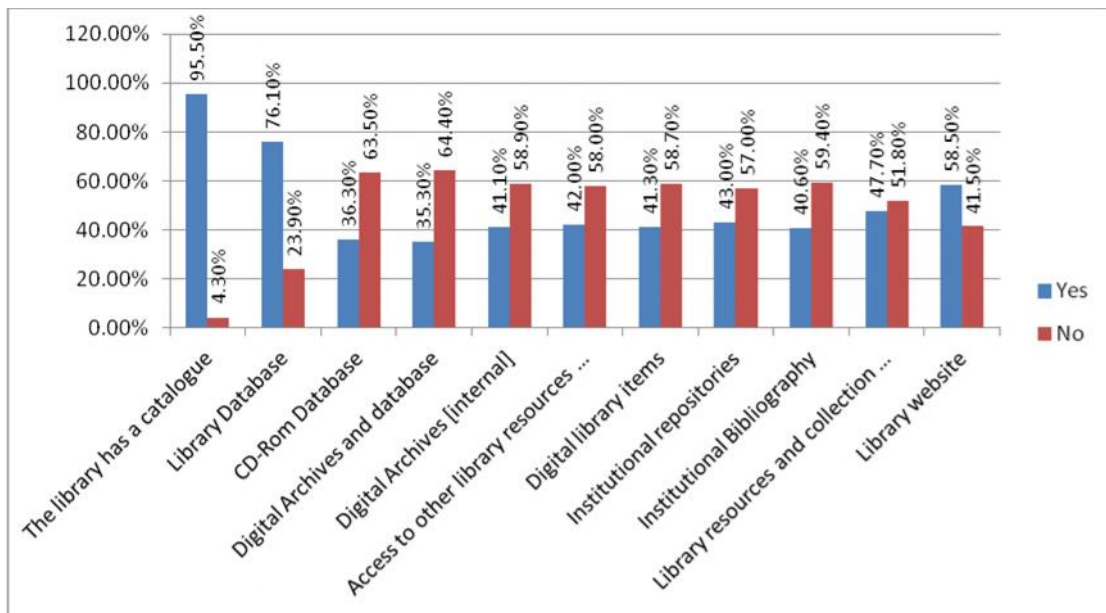


Figure 6.23: Bar Chart showing library building, architecture, and infrastructural facilities



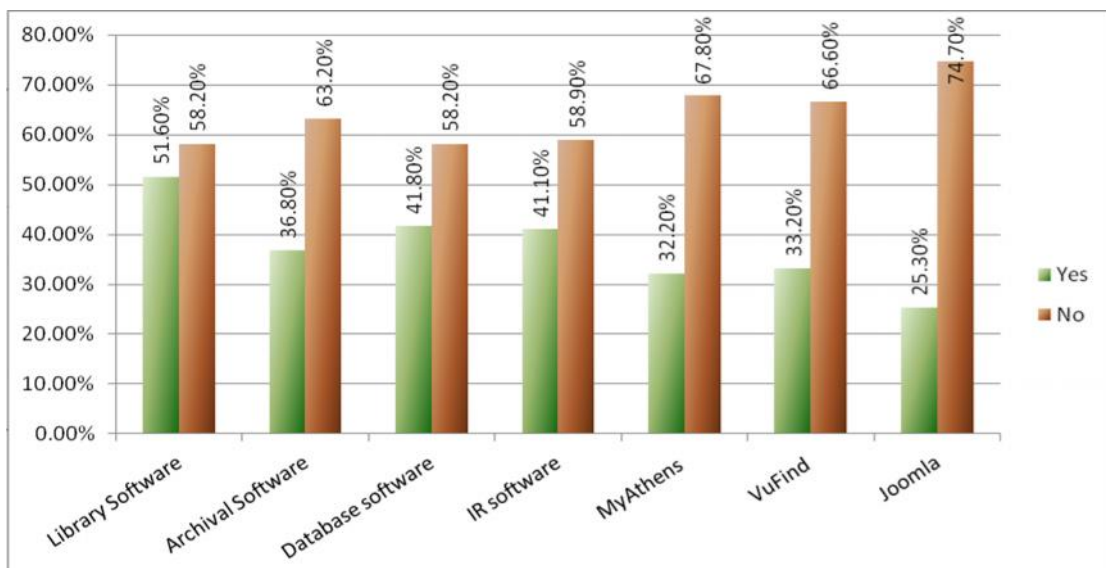
One of the most important findings from the users’ perspectives was that library building, architectural design, and infrastructural facilities are inappropriate. Users’ opinion revealed that most of the library buildings, architectural design and infrastructural facilities were not do enough to meet the users’ expectation. The library building should be built proving some basic scopes and facilities. Building should be environmentally suitable for the users so that they can stay for longer time inside the library. Of the 419 respondents, 36.5% respondents ‘agree’ with the statement: “the building exterior view is excellent (i.e. color, design and architectural view)” other than this, no statement were crossed 40% supports from the respondents which leads towards an unsatisfactory conclusion. The above Chart shows the actual scenario of the university libraries.

Figure 6.24: Column Chart showing availability of library catalogue and databases



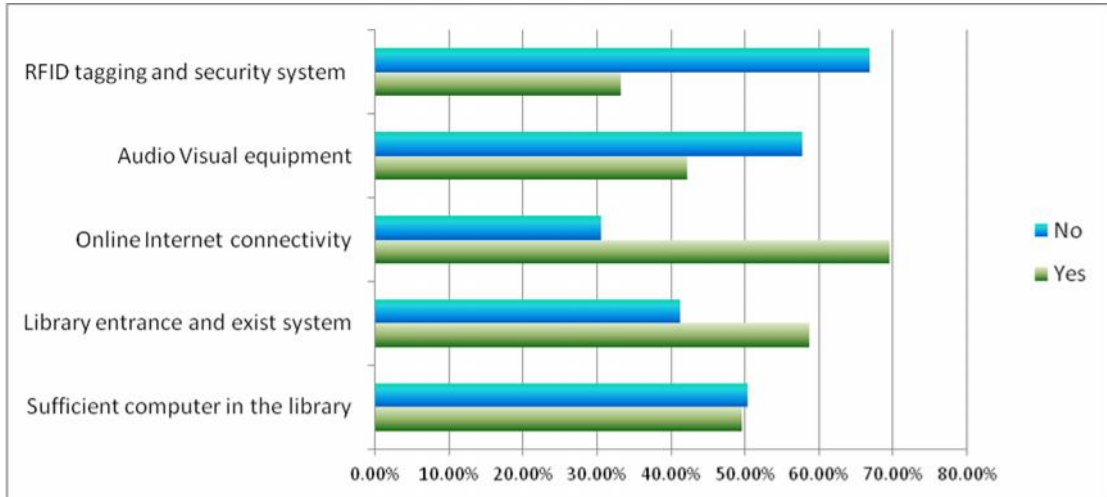
Significant findings have also been gathered from the user’s opinion that other than the “catalogue” (95.50%) no item from the above Chart were fulfilled the user’s expectation. A modern university library should have a database of various kinds and archives for providing utmost services to the users but the university libraries have failed to provide these. In this era of information and communication technology, by creating digital archives and institutional repositories a library should be equipped with digital as well as other resources. But the findings revealed that no such option has adequate in the university libraries in Bangladesh except a few cases.

Figure 6.25: Column Chart showing availability of library software and searching facilities



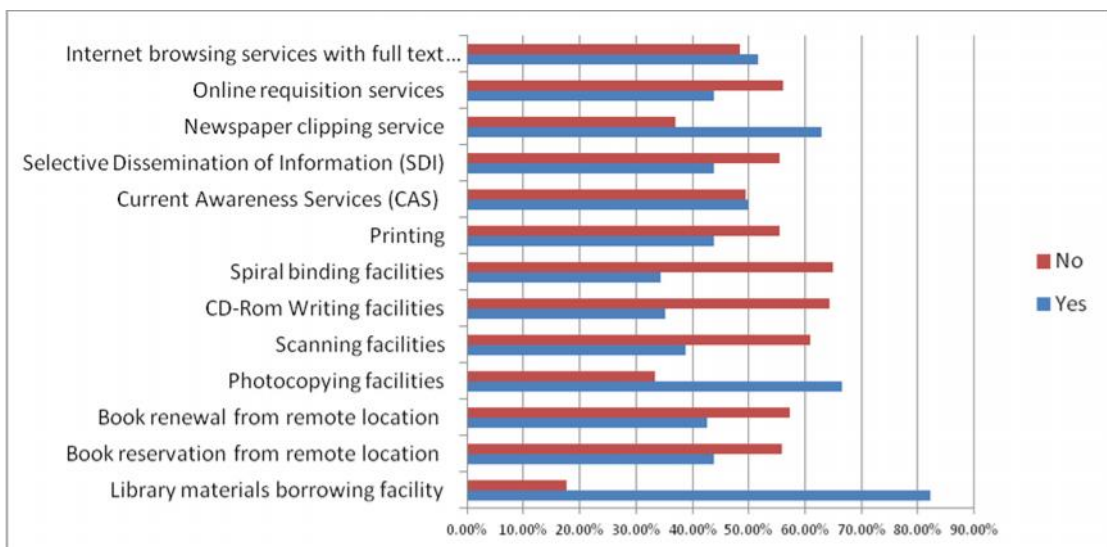
libraries of Bangladesh should introduce ILS as soon as possible. The above Chart shows the picture of usage of library software in the university libraries.

Figure 6.26: Bar Chart showing availability of library equipment and IT facilities



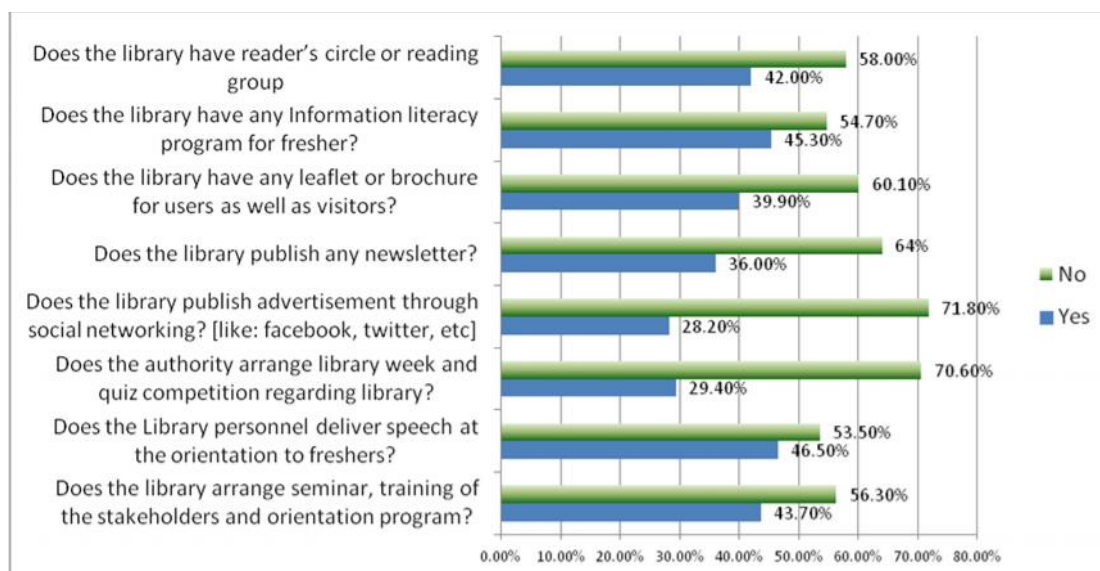
Of the 419 respondents, 49.6% said there were sufficient numbers of computers in the library, 69.5% said the same about availability of internet connectivity, 58.7% about the availability of library entrance and exit system, 42.2% about the availability of audio visual equipment, 32.2% said the availability of RFID tagging and security gate in the library. The findings show that university libraries are not providing sufficient advanced IT facilities.

Figure 6.27: Bar Chart showing library service and facilities



Library services are one of the core functions of the university library. There are various services available in advanced world, but not all these are pertinent to the many other developing countries. University libraries should be provided with some basic services viz. a. reader's services which are relevant to the circulation and reference services, b. auxiliary and supplementary services which includes conservation of library materials; photographic and other copying services; a variety of audiovisual services; special facilities and services for advanced students, researchers and scholars; lectures, concerts and dramatic performances central collection; browsing areas; abstracting and translating services; printed book catalogues; co-operative projects; mounting special exhibition, operating printing and publishing services and bookstores; conducting library service lectures, workshop, etc. Keeping all these in mind, users were asked to give their opinions on some general service and facilities were available in university libraries. A frustrating result was found from their answer that university libraries have been providing only circulation service with full satisfaction. The above Chart shows the situation on services and facilities.

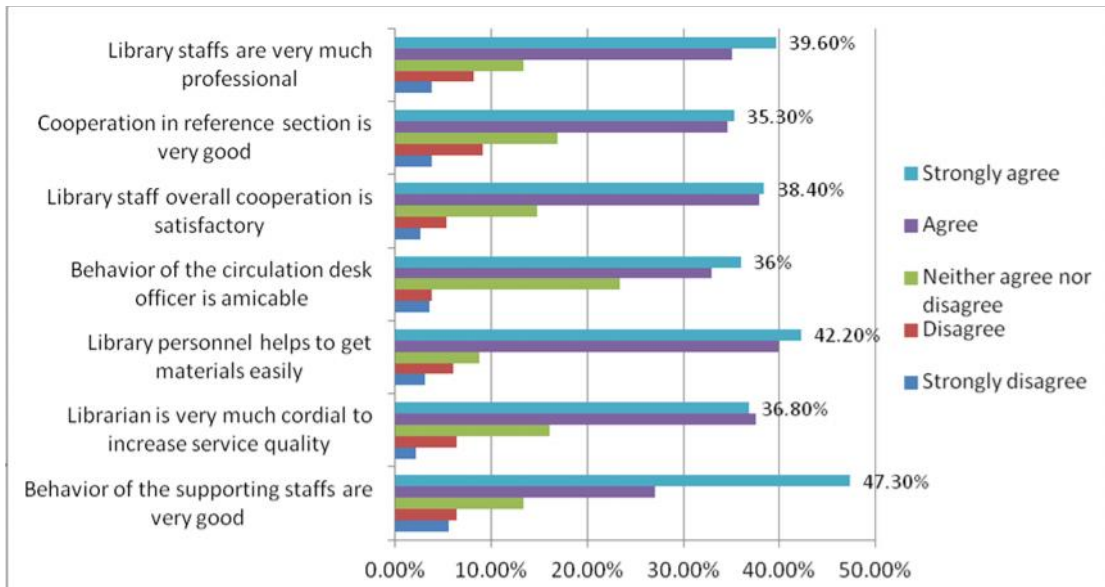
Figure 6.28: Bar Chart showing library marketing and public relation



Marketing and keeping good relation with the library users are the best ways by which librarians become closer with the users in order to know their desire and satisfaction with the services. Users get familiarly with the new service or information product through marketing activities of the library. As a result, modern

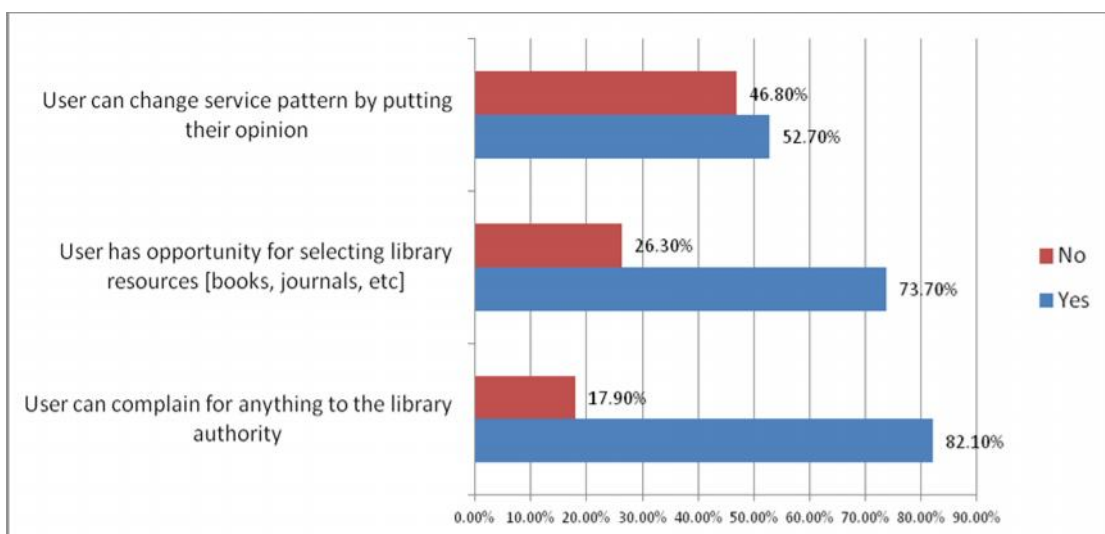
university library requires marketing activities. The above Chart shows the user’s opinions which are very much similar with the institutional response.

Figure 6.29: Bar Chart showing attitude of the library professionals



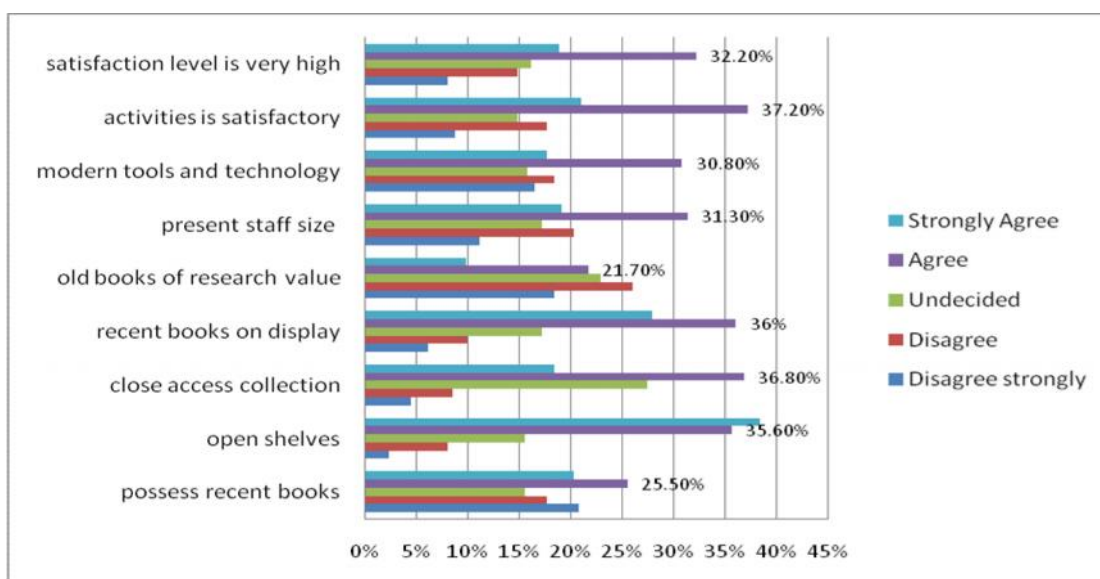
Effectiveness and usability of the university libraries largely depend on attitude of the library professional. Library professionals should be in coordination with performing their duties as well as attentive towards the needs of the users. They should always be professional towards their services. On the ground of the “attitude of the library professional” the study revealed satisfactory result from the users.

Figure 6.30: Bar Chart showing status of advocacy from the part of the users



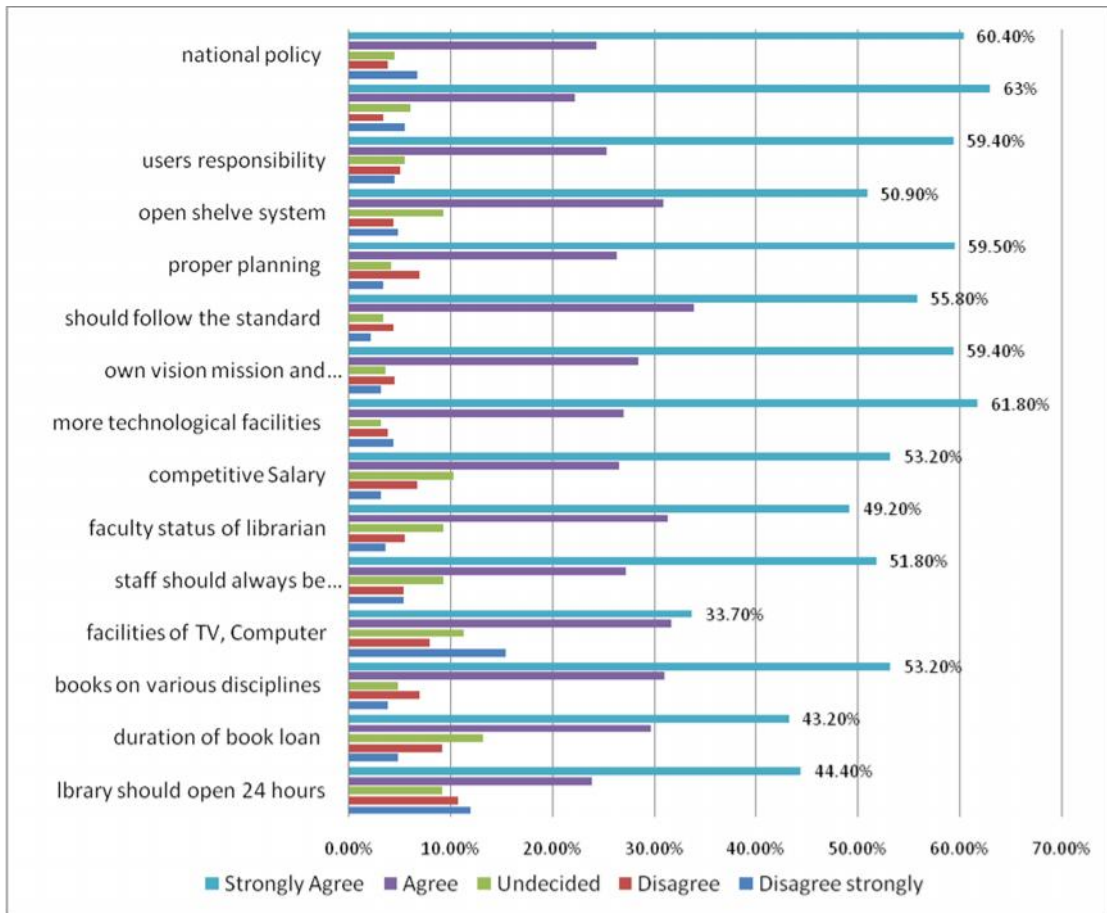
Advocacy is an important tool by which users may fulfill their demands by putting suggestions about the library's overall decision making in the university. If any decision does not meet the user's expectations this will not help the library's development programme. Each of the indicators in the above Chart shows a good response from the users.

Figure 6.31: Bar Chart showing overall impression on library



The most important finding from the users' opinion was that they were moderately satisfied with the library overall situation though there were many constraints. This result was somewhat in conflict with the overall findings of the data analysis chapter. But the researcher was not surprised with the result. This was considered as a general tendency of the respondents who were contented with even the resources. Like other developing countries of the world, Bangladesh has many constraints related to mass education, social development, economic growth and per capita income of the people though service sectors like universities are trying to fulfill the expectation of the general public. This result was completely considered with the result of the "attitude of the library professionals". As library professionals were very committed toward their profession, they were able to satisfy users' needs with the limited resources of the university and library. As a consequence, this is not a conflicting result but the appealing result will lead toward to build a modern university library in Bangladesh. The above Chart shows the overall impression of the users.

Figure 6.32: Bar Chart showing user's opinion for library modernization



During the interview of the various categories of the users like students, teachers, researcher and administrators of the sampled university libraries were asked with set of pre-defined questionnaire to express their opinions or changing the existing scenario of the university libraries of Bangladesh. A five-point Likert Scale was used to assess their opinion. The assessment result was presented with SPSS and got a good suggestion from the users in which mean scores were more than 4.0 for most of the cases. As the above Chart shows the important suggestion that should be ensured for library modernization are more technological facilities, a better national policy, standards, certainty of the university budget, users' responsibility, having books on various disciplines, open shelf system, professional library staff, competitive salary, academic status of the librarian. Therefore, it is safe to say that, these suggestions need to be taken into account while preparing a model plan for university libraries in Bangladesh.

CHAPTER – 7

- (A) Comparative Studies Between
Public and Private University Libraries
under Study**

- (B) Problems Identified in the Process of
Modernization of the University
Libraries in Bangladesh**

CHAPTER 7

Section – A

COMPARATIVE ANALYSIS BETWEEN PUBLIC AND PRIVATE UNIVERSITY LIBRARIES UNDER STUDY

In Chapter three, there were found various types of university libraries under two generic heading i.e. public and private universities in Bangladesh. Originally these university libraries are different in their vision, mission, aims, objectives and administration. Therefore, a comparative analysis is necessary to find out significance of differences between public and private university libraries on various parameters and variable which were used during the survey. The aim of this Chapter is to gather knowledge on differences; whether the differences are significant or not in various factors for proposing a model plan for university library modernization in Bangladesh.

To compare between public and private university libraries Independent-sample t-test and Chi-Square test were carried out using following Hypothesis:

Independent-sample t-test

$H_0: \mu_1 = \mu_2$ & $H_1: \mu_1 \neq \mu_2$ where $p < \alpha$ H_0 Rejected & $p > \alpha$ H_0 Accepted

The table values of F at $\alpha = 0.05$ where 95% CI for μ_1 Public university library - μ_2 Private University library

Chi-Square Test

Chi-Square (goodness-of-fit) test compares the observed and expected frequencies in each category (public and private university libraries) to test either that all categories contain the same proportion of values i.e. $\sigma^2 = (o-e)^2/e$. σ^2 Chi-square is the sum of the squared difference between observed (o) and the expected (e) data (or the deviation d), divided by the expected data in all possible categories.

The factors of comparisons are as follows:

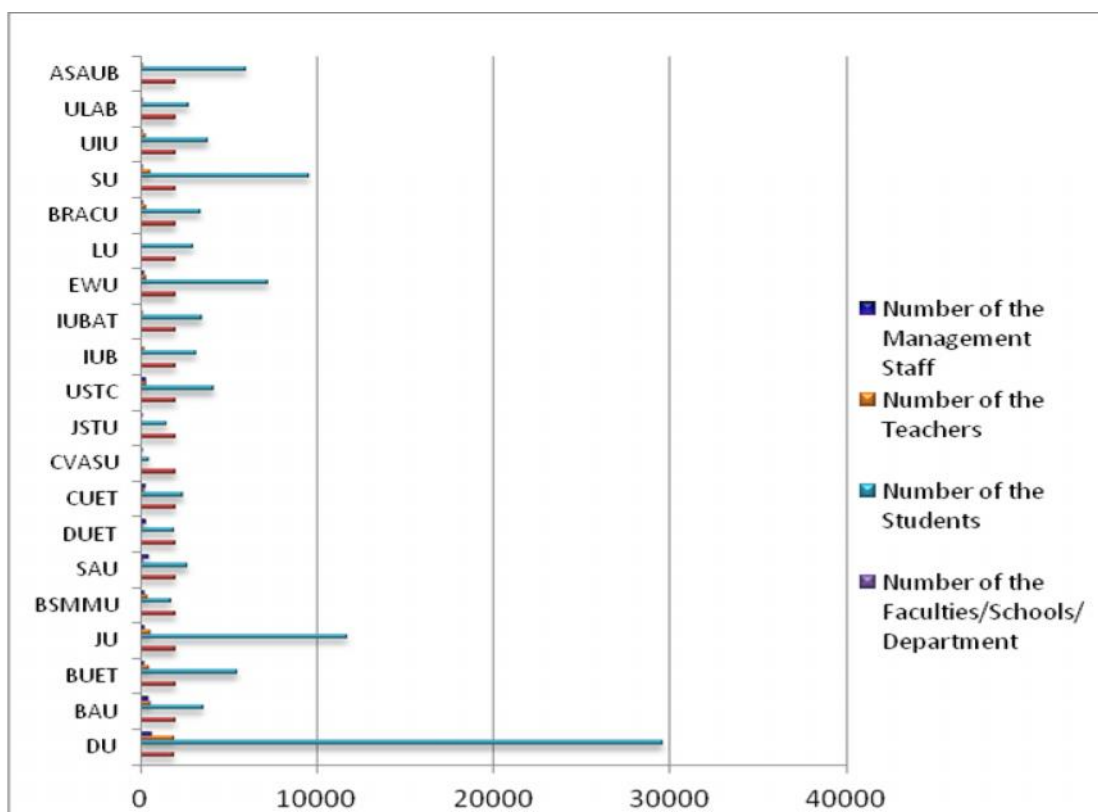
01. Organizational Information
02. Library Information
03. Library Building, Infrastructures and Furniture

04. Organizational Climate and HR Planning
05. Information Service Pattern
06. Use of Modern Technology
07. Library Budget
08. Library Public Relation and Marketing
09. Library Cooperation and Resource Sharing
10. Library Advocacy
11. Major Problems
12. Opinion of Library Head/Librarians

Organizational Information

Organizational information is an important factor of comparison to find out the basic things regarding the library's cores objectives and goal. Name of the universities and libraries are different, this suggest that their vision, mission, goals and objectives. For example Jessore Science and Technology University (JSTU) and Chittagong Veterinary and Animal Sciences University (CVSU) have their distinctive vision, mission and objectives. JSTU is a S & T related university and its courses were designed in the light of S & T, whereas CVASU is related to agriculture and animal husbandry and its courses were developed in relating to the objectives of the university. The year of establishment of the university libraries is very important for comparison. A university library is a growing organism and becomes mature over years. Private universities & libraries started their journeys in 1992 after the enactment of the Private University Act 1992. In contrast, public universities and libraries started their journey in 1921. During the study it was found that the infrastructural facilities of the public universities are much better than the private university libraries. Public universities have more faculties whereas private universities have few departments and an emphasis is given mainly on business education. As a result, their collection and other activities are related to the business field. An average, the number of students, faculty members, and administrative staff of the public universities are larger than the private university.

Figure 7.1 Bar chart shows the management staff, students, teacher and departments of the sample universities.



Library Information

The **Name of the library** usually is similar to the name of the university in most of the public and private universities except few cases like 'Ayesha Abed Library' of BRACU. Sometimes the collections of famous persons, agencies or events are named as a corner, for example 'Abdul Karim Shatya Bisharod' collection or Japanese Language collection, Muktijoddha, and National Culture and Heritage etc. In some cases of the private university library, sometimes the name of the library was designated with the person like 'Ayesha Abed Library'. **Year of establishment** of both type of libraries were found consistently same and established with the same year of the university foundation. **Designation and qualification and total number of the library personnel** were found to be poor in both university libraries. In general libraries are staffed by non-professionals and sometimes with a faculty and registrar of the university. A few universities were found that there was no qualified and professional librarian. As a result, almost all the respondents from institutional survey expressed dissatisfaction with the staff size, structure and qualifications.

Working and service hour of the sample university libraries were found to be different. Every university follows its own rules and regulations rather than common rules. Eight to eight and half an hour is minimum working hour for officials in Bangladesh. During the survey it was found that some public and private university libraries have been continuing service 14.5 hours rather than 8 hours service in day. It was also found that those universities which give residential facilities, also provide service from 07:30am to 10:00pm every day and keep library open every day in the week. Longer hour service requires more personnel as well as an extra work load for them. Usually, they maintain longer hours by shifting duties. It was observed during the survey that an average the public university's student enrolment was higher than that of the private universities. As a result, the number of users in public university was higher than Pvt.ULs. Two **access systems** are available in Bangladesh. Among them, most of the public universities follow closed **access system** and 90% of the PvtULs follow open access system. Almost all the public university libraries were observed to be both **centralized** as well as **decentralized** in nature whereas PvtULs were found mostly centralized.

According to Ranganathan's fifth law of library science, 'library is a growing organism.' During the study it was found that those PULs libraries that were set up at least 20 years ago, had better **resources** than the PvtULs. Those ULs that were newly established, either from the public or private, had collections and resources that were relatively small in number. Along with books, other resources like journals/magazines, audio visual materials, manuscripts, old documents collection of PULs have larger than that of PvtULs. In the case of **digital and electronic collection** it is seen that the collection of PvtULs was significantly larger than the PULs. With respect to the **e-sources, journals, and archives subscription** PvtULs are more advanced than the PULs. Most of the public and a few renowned private university libraries have been subscribing JSTOR and Emerald under the UGC Digital Library Consortium of Bangladesh since 2012. In terms of **preference of selection of e-resources** most of the libraries intended to form consortium.

Departmentalization in library enhances the performance and ensures the completion of tasks on time. In this regards, a library should have **various divisions**. During the survey it was found that PULs were more departmentalized than the PvtULs. Deployment of the library personnel was found to be maximum in PULs, whereas PULs were very few with more workload. Total **library space** comparing to the PvtULs were found higher in PULs as it was established in wider space by the government. It reveals that PvtULs were maintained in a congestion places with a limited space. As a result, the proportion of the **seat allocation** for students, faculty and researcher in PvtULs are lower than the PULs.

Library automation status of the PvtULs was observed significantly higher than of the PULs. Most of the PvtULs and PULs are semi-automated. Almost all the PULs use traditional **card catalogues** besides traditional card catalogue, whereas PvtULs use **computerized catalogues**. During the cataloguing, DDC **classification system** is followed by everyone and for the case of **catalogue code**, AACR-2 is followed for manual as well as in computerized cataloging. Use of **subject headings** for the determination of subjects and primary descriptors of the subject, LC, MeSH, Sears and Spine Thesaurus are followed by the ULs. Regarding **circulation system**, similar proportion of the surveyed PULs and PvtULs were found computerized and more than half portion of them were found Brown Circulation system.

As PvtULs are more responsive to authority, **annual stock taking** is performed each year to verify the stock and to account for lost books while PULs do this less. To accommodate new copies and new editions of the text and reference books, libraries should have some policy by which unused and old edition can be removed. PvtULs carry out **weeding policy** under which older and unused books are removed time to time. This is completely missing from PULs. Most the PvtULs were have a good **acquisition policy**, as they purchase books throughout the year on as needed basis, whereas PULs purchase books once a year and sometimes budget shifts to other head instead of purchasing books. PULs have **library committee** headed by VC or a senior professor whereas PvtULs are headed by some person who is very close to the chairman of the university.

Library Building, Infrastructures and Furniture

To assess the library building, infrastructure and furniture situation chi-square test were conducted. Chi-Square (goodness-of-fit) test compares the observed and expected frequencies in each category (public and private university libraries) to test either that all categories contain the same proportion of values i.e. $\sigma^2 = (o-e)^2/e$. Degree of freedom (df) was determined from the categories and to determine relative standard to serve as the basis for accepting or rejecting the test used $p > 0.05$ the p value is the probability that the deviation of the observed from the expected is due to chance alone (no other forces acting). In this case, using $p > 0.05$ would expect any deviation to be due to chance alone 5% of the time or less.

Table 7.1 Descriptive statistics of the indicators assessing the status of library building, infrastructures and furniture

N=20

Indicators	N	Mean	Std. Deviation	Chi-Square ^(a)	Df	Asymp.sig
Has the library its [own building] or housed in [parts of building] or a [hired building]?	20	1.70	.470	3.200	1	.074**
If yes, was the building based on architectural/structural plan and layout?	20	1.05	.224	16.200	1	.000*
Does the library have proper water supply?	20	1.10	.308	12.800	1	.000*
Does the library have sufficient ventilation system?	20	1.10	.308	12.800	1	.000*
Is there air conditioner in the library?	20	1.25	.444	5.000	1	.025*
Does the library have humidity controlling system?	20	1.45	.510	.200	1	.655**
Does it has sufficient accommodation for reading materials?	20	1.40	.503	.800	1	.371**
Does it have sufficient accommodation for library staff?	20	1.35	.489	1.800	1	.180**
Does it have sufficient accommodation for users?	20	1.40	.503	.800	1	.371**
Does your library planning reflect the security measures?	20	1.35	.489	1.800	1	.180**
Does the library have fire controlling system?	20	1.30	.470	3.200	1	.074**
Do you claim that your library is an environment friendly?	20	1.15	.366	9.800	1	.002*
Does the library have sufficient furniture and equipment?	20	1.30	.470	3.200	1	.074**
Does the library follow any standard for overall furniture and equipment planning?	20	1.30	.470	3.200	1	.074**
Are there any options for future development?	20	1.20	.410	7.200	1	.007*

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.0.

* $p < .05$, ** $p > .05$

Using the appropriate degrees of 'freedom' showed in the Table – 7.1 the closest p (probability) value associated with the chi-square and degrees of freedom observed. Among the various indicators for the case of * (single star indication), the p value is

about .05, which means that there is a 5% probability that any deviation from expected results is due to chance only. Based on our standard $p > 0.05$, this is not within the range of acceptable deviation. In terms of the hypothesis, the observed chi-square is significantly different from expected. The observed numbers are not consistent with those expected under Mendel's law. From the chi-square test it will be concluded that for case of library building, infrastructures and furniture planning and standard between the public and private university libraries are significantly different for * (star marked) cases where as ** (double star marked) indicates there is no significant differences.

Organizational Climate and HR Planning

The overall status of the organizational climate and HR Planning of the public and the private university libraries was assessed by eighteen indicators. The Table 7.2 shows the sample size (N), mean (M) standard deviation (SD), and standard error of the mean of all the indicators.

Table 7.2 Descriptive statistics of the indicators assessing the status of organizational climate and HR planning

N= Public 10 & Private 10

Indicators	Type of the University	N	Mean	Std. Deviation	Std. Error Mean
Institutions maintains a separate HR Department	Public	10	2.70	1.889	.597
	Private	9	3.67	1.414	.471
Formal HR policies are maintained in the University	Public	10	3.20	1.135	.359
	Private	9	3.67	1.414	.471
University maintains formal recruitment policies	Public	10	4.20	1.229	.389
	Private	10	4.00	1.247	.394
University librarian and HR Manager participate in selection	Public	9	3.33	1.581	.527
	Private	10	4.10	1.287	.407
University publishes advertisement in the popular media for recruitments	Public	10	4.10	1.370	.433
	Private	9	4.22	1.302	.434
University applies the popular selection devices like initial screening, interview, written examination, medical examination	Public	9	4.00	1.414	.471
	Private	10	3.70	1.418	.448
University offers formal orientation program to all new employees	Public	10	3.20	1.687	.533
	Private	10	3.40	1.174	.371
University, training needs analysis (TNA) is conducted systematically	Public	10	3.00	1.563	.494
	Private	9	3.33	1.323	.441
Further training and education are encouraged in University	Public	10	3.40	1.578	.499
	Private	10	4.10	1.370	.433
University maintains adequate budget for training and development of the employees	Public	10	2.50	1.354	.428
	Private	10	3.70	1.337	.423
Formal performance appraisal system is used in University like Graphic Rating Scale, Ranking Methods, MBO, BARS, ACR, 360	Public	9	2.11	1.167	.389
	Private	7	3.14	1.464	.553
The compensation of employees is directly linked to their performance in the University	Public	10	2.50	1.269	.401
	Private	10	3.30	1.059	.335

(Table 7.2 contd.)

University's performance appraisal system is highly effective	Public	10	3.10	1.197	.379
	Private	10	3.70	1.252	.396
University annually does performance appraisals for promotion, pay rise, increment, for TNA, career development, termination	Public	9	3.11	1.537	.512
	Private	10	3.80	1.135	.359
University offers competitive salaries and benefits to the employees	Public	9	2.78	1.641	.547
	Private	10	4.00	1.247	.394
University conducts pay surveys to review the salaries and benefits of the employee regularly	Public	9	2.44	1.424	.475
	Private	10	3.90	1.197	.379
University emphasizes on non-financial benefits like job interesting, recognition, empowerment and so forth as tools of employee motivation	Public	9	2.22	1.563	.521
	Private	8	3.38	1.188	.420
Management has positive attitudes towards association of employees	Public	10	3.10	1.101	.348
	Private	10	3.60	1.350	.427

With respect to the means of the indicators, a difference between the public and private university libraries was found. To be sure whether these differences were statistically significant, independent-samples t-test was carried out for every item using following Hypothesis:

$H_0: \mu_1 = \mu_2$ & $H_1: \mu_1 \neq \mu_2$ where $p < \alpha$ H_0 Rejected & $p > \alpha$ H_0 Accepted

The table values of F at $\alpha = 0.05$ where 95% CI for μ_1 Public university library - μ_2 Private University library

From the Levene's test for equality of variances, it was found that the variance were not equal at $p < .05$. Accordingly, independent-sample t-test was performed which is shown in **Annex Table-1**. From the result, it was evident that the difference between the overall status of organizational climate and HRM practices of the public and private university libraries was not significant at all the cases p value is always greater than 5%. Thus H_0 was accepted and it can be concluded that there is no significant differences for overall organizational climate and HR practice between the two types of the university libraries of Bangladesh. Only for the cases of Separate HR department in private university libraries ($t = 1.251$ and $p = .081$, $p < .10$) statistically significant than that of the public university libraries.

Information Service

Basic information services i.e. borrowing, information, CAS, SDI, photocopying, reference and some other documentation services were identified in both PvtULs and PULs. It was also observed during the survey that some of the information services were unknown to the respondents because perhaps they were not aware of the system or the library authority were not willing to provide the service due to a lack of sufficient manpower. PULs were found unwilling to provide **state-of-art** services to the users in contrary PvtULs has been providing **customized** as well as

state-of-art services to the users. Libraries were identified in terms of providing various literature searching facilities. The following table shows the relative standard to serve as the basis for accepting or rejecting the hypothesis formulated at the beginning of this chapter.

To assess the literature searching facilities in university libraries chi-square test were conducted. Chi-Square (goodness-of-fit) test compares the observed and expected frequencies in each category (public and private university libraries) to test either that all categories contain the same proportion of values i.e. $\sigma^2 = (o-e)^2/e$. Degree of freedom (df) was determined from the categories and to determine relative standard to serve as the basis for accepting or rejecting the test used $p > 0.05$ the p value is the probability that the deviation of the observed from the expected is due to chance alone (no other forces acting). In this case, using $p > 0.05$ would expect any deviation to be due to chance alone 5% of the time or less.

Table 7.3 Descriptive statistics of the indicators assessing the status of literature searching Facilities

N=20

Indicators	N	Mean	Std. Deviation	Chi-Square ^(a)	Df	Asymp.sig
Database searching	20	1.30	.470	3.200	1	.074**
CD-Rom Searching	20	1.40	.503	.800	1	.371**
Internet Information browsing	20	1.05	.224	16.200	1	.000*
Electronic Information Storage & Retrieval	20	1.40	.503	.800	1	.371**
Access to any specialized Network and resources	20	1.35	.489	1.800	1	.180**
Microfiche/ Microfilm Searching	20	1.75	.444	5.000	1	.025*

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.0.

* $p < .05$, ** $p > .05$

Using the appropriate degrees of 'freedom' showed in the Table – 7.3 the closest p (probability) value associated with the chi-square and degrees of freedom observed. Among the various indicators for the case of * (single star indication), the p value is about .05, which means that there is a 5% probability that any deviation from expected results is not due to chance only. Based on our standard $p > 0.05$, this is not within the range of acceptable deviation. In terms of the hypothesis, the observed chi-square is significantly different from expected. The observed numbers are not

consistent with those expected under Mendel's law. From the chi-square test it will be concluded that for case of literature searching options between the public and private university libraries are significantly different for * (star marked) cases where as ** (double star marked) indicates there is no significant differences.

Use of Modern Technology

Use of *modern equipments and technologies* was found to be almost the same in both types of ULs. The study reveals that most of the public and private university libraries like DU, BUET, BAU, BSSMMU, IUB, BRACU, NSU, UIU, and ULAB have set up a separate computer section with a good number of computers for searching OPAC and browsing e-resources on the web. For example BSMMUL has 100 computers, DUL has 80 computers, CVASUL has 40 computers and IUB has 30 computers. This picture shows that the use of computer and related technology has been increasing in university libraries day by day. The study also reveals that 70% public and private university libraries have separate *computer system server*. It shows that 30% university libraries maintain computer network through central server system of the university.

Use of ICT in library and information fields has increased tremendously in developed countries. This trend is also observed in developing countries like Bangladesh. The study revealed that 50% of PULs have no *library webpage*; in contrast 80% of PvtULs reported that they have separate library webpage. In recent times, separate library webpages have been used as an important tool for marketing of library products as well as social communication. Library surveys regarding the effectiveness of the library are conducted through library webpage now-a-days. The study also reveals that 70% public and private university libraries do not follow **Web 2.0** or higher feature for creating library webpage. As a result, interpretability and remote resource sharing (of the content of Z39.50) among the ULs have been hampering greatly.

Study on *library database* reveals that 70% of PULs and 80% of PvtULs have library databases whether customized or open sourced. From the comparison it may be concluded that ULs who have no databases are lagging behind in terms of using

modern technologies in the library. The study also exposes that 65% out of the 20 sample ULs have no **institutional repository and archives**. Those who have archives and institutional repositories 70% of them have been following international copyright law (ICL) for digitization of other properties. Those who are not following ICL, have not started digitization of the copyrighted materials. They are mainly archiving their own resources.

Comparative study on usage of **library software** between two types of the sample university libraries shows that a common trend has started among the ULs in using **open-source software** like Koha, DSpace, GreenStone, etc. Though these software are free they have made a great appeal to everyone for its user friendliness, cost saving, and interpretability feature. The ULs that were using self-made or customized software have started shifting towards open-source software. Basic **searching options** like author, title and keywords are available in libraries who have database. **Content Management System (CMS)** is an important search engine or tools for retrieving and accumulating e-materials on the web. It was observed during the survey that only a few universities have been using CMS. The study also reveals that 60% public and private university libraries have no **automated serial controlling system**, which shows the unorganized nature of the serial management system in the libraries. It was revealed that 40% of ULs have a **bar code** identifier for both users and materials in the library. Without a bar code on the materials no library can perform automation in the library. Lower use of bar code raises many questions about the university library's total automation procedure of the country. During the survey it is found that no university under the survey has installed library security system like **RFID** tagging with security gate. Some of the universities are making relentless efforts to install the system using funding and logistics of the HEQEP projects of UGC, Bangladesh.

Note that during the survey no university either from public or private university library was found with RFID and security gate system in university libraries in Bangladesh. But in the recent time NSU, BRAC, and SUST have completed installation of RFID in their libraries for security purpose.

Library Budget

Library standards of the advanced countries make it mandatory to spend 5%-10% the money of the total university budget of a year for library development purposes. This is not an ambitious goal for them. The scenario in developing countries like Bangladesh is not praiseworthy. There is no **standard** for any kinds or any shape by which the authority of the university administration may set some ceiling to spend some portion of annual budget for their university library development. As a result, budget made by library heads spent on other purposes. To compare with budget procedure, strength, sources, and sector for expenditure among the public and private university libraries in Bangladesh a study was done during the survey. During the study, the researcher found various surprises matters in both types of the university libraries. In public universities, library expenditure is under the sub-sector of education related expenditures while in private universities, there is no specific budget heads. This is just an annual allotment of money to purchase books and other related materials from the owners. Though there is a budget head, most public university librarians do not know how much money has been allotted for a particular financial year. If sometimes they know, they have no power to spend without concern of the authority. University purchase tender is usually announced once or twice in year to purchase books and other learning resources. Sometimes purchase formalities remain stopped for long time for administrative complexity. As a result, library collection building and overall development have been hampering tremendously.

It is common notion that the library budget would always be increasing. The study reveals that if some money is allotted for a particular year, the next year this amount of money may be less or more and there is no consistency. Comparison within the sample (public and private university library) provides anxiety in the amount which has been spent for the library development in the country is very poor and not up to the mark.

Library Public Relation and Marketing

Modern marketing policy is applied not only to the profit making organizations, but also to non-profit sector and social service organizations like libraries. Marketing in the library sector involves the performance of planning, organizing, dissemination and controlling of information services on a proactive and user oriented way that ensures user satisfaction while achieving the objectives of the parent organization (Block, 2002). Marketing for university libraries is very important to inform its users about the existing services as well as about the forthcoming events of the library. Without marketing, a large portion of the users keep remains aware of the library services and facilities. For this reason, a lot of initiative has to be taken by the library authority time to time. Introduction of marketing tools in university libraries is one of the major factors of library modernization.

Comparison between public and private university libraries on public relation and marketing activities reveals that PULs are much poorer than the PvtULs. PvtULs always try to reach towards the stakeholders on the other hand PULs have no liabilities to do that. As there are various ways to disseminate information, PvtULs apply all the possible ways such as delivering speech at orientation, library week observation, quiz competition, publishing newsletter, making reader's circle and publishing advertisement using **modern technology** and social communication tools, where as PULs remain content with their **traditional** methods. PvtULs have been using various popular media of **social networking** to campaign or to form opinion about the service qualities, whereas PULs are using traditional media. The study reveals that 80% of PULs arrange seminars, user training and orientation programs for the fresh students, whereas 60% PvtULs follow the same strategy. 70% of PULs reported that library personnel deliver speech at the orientation program on the contrary 80% PvtULs reported the same. No one either from public or private university libraries arranges **library week** and **quiz competition** regarding the library. 30% of PvtULs publish **library newsletter** regularly whereas no one from PULs publish newsletters. 50% ULs publish brochure for users and visitors. Out of 20 sample population 40% ULs have introduced an **information literacy** program in the library. 20% of the PvtULs have **reader circle** whereas no respondents from PULs.

Out of the 20 respondents, 20 % ULs have video and documentary show facilities. 25% out of the 20 ULs have existence of discussion group and they have no special strategy for marketing of information.

Library Cooperation and Resource Sharing

Library cooperation and resource sharing are very common in today's modern library and information centers. No library can claim that they have adequate resources. In this era of global economy, frequent devaluation of money and inflation, rise of the perishable commodities, higher conversion rate compels library's budget shrinking throughout the world. Bangladesh is also not an exception to this. Comparative study on cooperative status between public and private university libraries reveals that 70% of the PULs and 50% of the PvtULs participate in national resource sharing and networking. The study also shows that 60% ULs participate in regional and in international cooperation. Out of 20 sample universities, 30% ULs participate in social network group and 60% ULs participate in consortia from both groups of public and private university libraries.

Most of the university libraries are connected with INASP peri (local based international consortia). In addition, many public and private university libraries are the member of Koha, DSpace and GreenStone community in an international platform. The purpose of these consortia and networks are for sharing or subscribing e-journal, inter-library loan and to get access in to the OPAC.

Library Advocacy

The overall status of the library advocacy i.e. the influencing power of the library staff to the decision making authority on various issues of the public and the private university libraries was assessed by ten indicators. The Table 7.4 shows the sample size (N), mean (M) standard deviation (SD), and standard error of the mean of all the indicators.

Table 7.4 Descriptive statistics of the indicators assessing the status of library advocacy

N= Public 10 & Private 10

Indicators	Type of the University	N	Mean	Std. Deviation	Std. Error Mean
Library Committee always seeks suggestion rather than impose any decision	Public	10	2.70	1.418	.448
	Private	10	3.80	1.229	.389
Library administration create pressure to the University administration on various issues	Public	10	2.80	1.229	.389
	Private	10	3.30	.949	.300
Librarian has sole power to select and purchase books on various subjects	Public	10	3.00	1.633	.516
	Private	10	3.30	1.567	.496
Librarian put demand for recruitment and hiring external experts for library development	Public	10	3.30	1.703	.539
	Private	10	3.70	1.160	.367
Librarian is a member of the University's different executive committees	Public	10	3.80	1.229	.389
	Private	9	3.22	1.563	.521
University librarian follows a definite advocacy policy for logically approach to the university administration to achieve a common goal for overall library development	Public	10	4.00	1.054	.333
	Private	9	4.00	.866	.289
Librarian has power on library budgeting and strategic decision making	Public	10	3.20	1.549	.490
	Private	10	3.80	1.398	.442
There are some plan to promote the status of this profession within the University	Public	10	3.20	1.476	.467
	Private	10	3.90	.568	.180
Librarian continuously makes communication with University key persons regarding library and its personnel development	Public	10	4.10	.994	.314
	Private	10	4.40	.699	.221
Library professionals are involved in various pressures group and association within the country	Public	10	4.00	.943	.298
	Private	10	3.40	1.430	.452

With respect to the means of the indicators, difference between the public and private university libraries were observed. To be sure whether these differences were statistically significant, independent-samples t-test was carried out for every item using following Hypothesis:

$H_0: \mu_1 = \mu_2$ & $H_1: \mu_1 \neq \mu_2$ where $p < \alpha$ H_0 Rejected & $p > \alpha$ H_0 Accepted

The table values of F at $\alpha = 0.05$ where 95% CI for μ_1 Public university library - μ_2 Private University library

Independent-sample t-test was performed accordingly to compare between the two samples of the public and private university libraries which is shown in **Annex Table-2**. From the result, it was evident that for the case of 'our librarian put demand for recruitment and hiring external experts for library development' which has $p=.045$, $t=-.614$, $df=18$ and 'We

have some plan to promote the status of this profession within the University' which has $p=.007$, $t= -1.400$ and $df=18$ are the significantly different between the public and private university libraries for the cause of the probability level of p is less the 5%. Other than the above two difference between the overall status of library advocacy practices between public and private university libraries were not significant at most of the cases p value is always greater than 5%.

Major Problems

The major problems of the public and the private university libraries were assessed by sixteen indicators. The Table 7.5 shows the sample size (N), mean (M) standard deviation (SD), and standard error of the mean of all the indicators.

Table 7.5 Descriptive statistics of the indicators assessing the major problems

N= Public 10 & Private 10

Indicators	Type of the University	N	Mean	Std. Deviation	Std. Error Mean
Lack of National Policy for university libraries in Bangladesh	Public	10	4.40	1.265	.400
	Private	10	4.40	.516	.163
Lack of sufficient standard for the university libraries	Public	10	4.10	.994	.314
	Private	10	3.70	1.059	.335
Lack of sufficient budget	Public	10	3.90	1.287	.407
	Private	10	3.90	.994	.314
Lack of the initiative of the university authority	Public	10	4.20	.919	.291
	Private	10	3.90	.738	.233
Lack of initiative of library personnel [absenteeism in job field]	Public	10	3.60	.843	.267
	Private	10	3.70	.823	.260
Lack of full time professional librarian	Public	10	4.20	.919	.291
	Private	10	3.70	.823	.260
Lack of sufficient space	Public	10	3.60	1.174	.371
	Private	9	4.00	.866	.289
Lack of research and development activities	Public	10	3.90	.994	.314
	Private	10	4.00	.943	.298
Lack of vision, mission and objectives	Public	10	4.30	.949	.300
	Private	10	4.30	.675	.213
Lack of qualified professional staff	Public	10	4.10	.568	.180
	Private	10	3.70	.823	.260
Lack of knowledge about latest tools and technologies in library field	Public	10	3.50	1.179	.373
	Private	10	3.90	.876	.277
Lack of library committee	Public	10	3.20	1.317	.416
	Private	10	3.70	1.059	.335

(Table 7.5 contd.)

Lack of proper training and development	Public	10	4.10	.994	.314
	Private	10	4.10	.738	.233
Lack of proper library education in the country	Public	10	3.80	.919	.291
	Private	10	3.90	.876	.277
Lack of initiative from the professional bodies	Public	10	3.20	1.317	.416
	Private	10	4.00	.471	.149
Lack of library separate building and architectural plan	Public	10	3.30	1.494	.473
	Private	9	4.00	1.118	.373
Inadequacy of ICT facilities	Public	10	4.80	.42	.13
	Private	10	4.90	.32	.10

With respect to the means of the indicators, most of the cases differences between the public and private university libraries were observed. To be sure whether these differences were statistically significant, independent-samples t-test was carried out for every item using following Hypothesis:

$H_0: \mu_1 = \mu_2$ & $H_1: \mu_1 \neq \mu_2$ where $p < \alpha$ H_0 Rejected & $p > \alpha$ H_0 Accepted

The table values of F at $\alpha = 0.05$ where 95% CI for μ_1 Public university library - μ_2 Private University library

Independent-sample t-test was performed with SPSS accordingly which is given in **Annex Table-3**. From the result, it was evident that for the case of 'Lack of initiative from the professional bodies' the difference between public and private university libraries in respects of the major problems were significant that produced a value of $t = -1.809$ with a p value, or probability level of $p .011$ which is less than 5% [$\alpha = .05$] So it is possible to conclude that there is a evidence on the basis of the indicators sixteen value from public and private universities libraries there are a real difference in one indicator. Again this result is not surprising that for all other problems are the same among the public and private university libraries.

Opinion of the Library Head/Librarian

Overall opinion related to the library modernization was asked to the Library Head/Librarian to have a general idea and the suggestions were assessed by eighteen indicators. The Table 7.6 shows the sample size (N), mean (M) standard deviation (SD), and standard error of the mean of all the indicators.

Table 7.6 Descriptive statistics of the opinion of the respondent for library modernization*N= Public 10 & Private 10*

Indicators	Type of the University	N	Mean	Std. Deviation	Std. Error Mean
Library should open 24 hours in a day or Maximum hours of the day	Public	10	3.20	1.229	.389
	Private	10	3.80	.789	.249
Duration of book loan period should be increased [i.e. for entire semester]	Public	10	2.60	1.265	.400
	Private	10	3.80	.919	.291
University library should have books on various disciplines	Public	10	4.00	1.247	.394
	Private	9	4.56	.726	.242
Library should have a recreational corner with a facilities of TV, Computer, etc.	Public	10	3.30	1.494	.473
	Private	9	4.11	1.269	.423
Librarian and library staff should always be professional	Public	10	4.50	.972	.307
	Private	10	4.60	.699	.221
Librarian's should have academic status like developed countries	Public	10	4.20	1.229	.389
	Private	9	4.67	.500	.167
Library professionals should be provided Competitive salaries within the university	Public	10	4.30	1.252	.396
	Private	10	4.60	.699	.221
More technological facilities should be provided in the library	Public	10	4.30	1.252	.396
	Private	10	4.80	.422	.133
Library should have its own vision mission and objectives	Public	10	4.30	1.252	.396
	Private	10	4.70	.675	.213
Library should follow the standard for its various functions	Public	10	4.20	1.229	.389
	Private	9	4.78	.441	.147
Library should have proper planning for smooth operation	Public	10	4.40	1.265	.400
	Private	10	4.70	.483	.153
Library should have open access system	Public	10	3.60	1.506	.476
	Private	10	4.40	.516	.163
To protect learning resources lib. staffs have a great responsibility	Public	10	3.70	1.337	.423
	Private	10	4.30	.675	.213
10-20% of the university budget should be spent for library development	Public	10	4.40	1.265	.400
	Private	10	4.40	.516	.163
There should be a national policy to run university library systematically	Public	10	4.00	1.633	.516
	Private	10	4.50	.707	.224
There should be same type of organogram among the university libraries	Public	10	3.90	1.595	.504
	Private	9	4.44	.726	.242
Charges should not be introduced for basic services [i.e. membership...]	Public	10	3.50	1.581	.500
	Private	9	4.00	.866	.289
Satisfaction level regarding the functioning of the library is very high	Public	7	3.14	1.215	.459
	Private	6	3.83	.753	.307

With respect to the means of the indicators, difference between the public and private university libraries were observed. To be sure whether these differences were statistically significant, independent-samples t-test was carried out for every item using following Hypothesis:

$H_0: \mu_1 = \mu_2$ & $H_1: \mu_1 \neq \mu_2$ where $p < \alpha$ H_0 Rejected & $p > \alpha$ H_0 Accepted

The table values of F at $\alpha = 0.05$ where 95% CI for μ_1 Public university library - μ_2 Private University library

Independent-sample t-test was performed using SPSS which is shown in **Annex Table - 4**. From the result, it was evident that the differences on various opinion between the public and private university libraries was significantly different at 'Library should be open access system' which produces a value of $t = -1.266$, $p = .026$ at $\alpha = .05$, 'More technological facilities should be provided in the library' which produce a value of $t = -1.197$, $p = .091$, $df = 18$ at $\alpha = .10$, 'There should be a national policy to run university library systematically' which produce a value of $t = -0.889$, $p = .096$, $df = 18$ at $\alpha = .10$, 'Charges should not be introduced for basic services [i.e. membership...]' which produces a value of $t = -0.840$, $p = .055$, $df = 17$ at $\alpha = .10$. Other than the above four; among the rest of the indicators there are no significant difference as all the value of p is greater than the $\alpha = .05$ to $\alpha = .10$.

Comparative analysis between public and private university libraries under study reveals that most of the cases there are no significant differences between public and private university libraries on various factors. The study also exposed that university libraries are facing same kind of problems and challenges for modernization in Bangladesh. Two types of test have been carried out: Independent Sample t-test and Chi-square test for the study based on the nature of data. Hypothesis for this study was designed (based on type of the data) carefully keeping in mind that the table values of F at $\alpha = 0.05$ where 95% CI for μ_1 Public university library and μ_2 Private University library where $H_0: \mu_1 = \mu_2$ & $H_1: \mu_1 \neq \mu_2$ and $p < \alpha$ H_0 Rejected & $p > \alpha$ H_0 Accepted. In a few cases Hypothesis accepted and revealed the result that their differences between the two university libraries are statistically insignificant. During the study it was also found that some issues are not completely related with the library modernization but these has great influence on it. This study disclosed the real situation of public and private university of Bangladesh. As a result, this research would definitely get a good direction to propose a common model plan for both types of the university libraries in Bangladesh.

SECTION – B

PROBLEMS IDENTIFIED IN THE PROCESS OF MODERNIZATION OF THE UNIVERSITY LIBRARIES IN BANGLADESH

During the research, the researcher found many constrains and limitation in university library administration and operation in the public and private university libraries in Bangladesh. Among these are infrastructural, environmental, psychological, social, and economical issues. Some are related to the political, government policy making, standard, university policy, university act/amendments, and roles of the professional bodies. Some issues are related to legal and ethical perspectives. All these issues directly or sometimes indirectly making impacts towards university library modernization in the country. Short descriptions of the problems are given below:

- **Library infrastructural limitation:** University library infrastructural facilities are very much limited in Bangladesh. Library building planning, sufficient space for library furniture, materials and extra facilities are not allocated. In maximum cases, libraries have no own building. Building design does not reflect scientific methods and so on. As a result, modernization program hindered a great.
- **Higher educational environment:** The country's higher educational environment is not congenial towards university library modernization. Problems started from the primary level to the higher secondary level of education. As there is no library in maximum primary schools thorough secondary to the higher secondary levels, students have no basic ideas about library and its impacts on education. Usually students get familiarity with the organized library at the university level and they become used to it. At this level they come in the library when they face acute problems during examination otherwise they keep themselves away from the library. When these students become graduated and hold an administrative position in any public and private university, they do not show their sympathy towards the library.

- **Psychology:** General psychology of the student is to keep away from books and studies. This is true for the faculty/teaching staff also. Teachers' communities are far away from studies, research, and innovation. They are sometimes reluctant to improve themselves with latest knowledge and teach in the class room. As a result, students and faculty members are averse to the library.
- **Educational System of the country:** Educational system of the country is not consistent and favorable towards library modernization. As described in Chapter-3 there are various layers and systems of education and there is no consistency among them. Education commission is actively working to harmonize among the various systems but they have failed to accommodate it. Application based education has not been introduced yet in all level of the education. Research is hardly seen in higher studies. In such situations, library has failed to attract the higher authority by proving various distinctive features.
- **Social recognition:** Social recognition is another problem for smooth development of university libraries. Among the profession categories librarianship is not recognized as a respectable job class yet. They are low paid, slower in professional development, no award and incentives for best performance, and lastly they have no motivation. Absenteeism rate and job turnover is very high. Shifting of job to the other sectors is remarkable. Pay structure among the public and private universities is different. To some extent some private universities are paying high salary but rests of the part are not. In such a situation, there is grievance among the professionals which ultimately impacts library development and modernization.
- **Economic condition of the country:** Country's overall economic conditions and development is not satisfactory. Since the independence, Bangladesh did not achieve the status of a mid-income country. Bangladesh is a lower income country. Performance in financial administration is not satisfactory. Corruption and inefficiencies in implementation of ADP made us an ineffective country. Bureaucracy in administration made everything complex. Sector wise financial allocation is very insufficient. Though education sector

used to get one of the top priorities in national budget each year. Universities get a competitive share of financial allotment from UGCB for development and non-development sectors. Consequently, library gets a little amount from the annual development budget of the university. From these little amounts, budget has been cut for other sartorial development frequently. As a consequences, university library suffers for lack of fund whole the year.

- **Political instability:** Political instability is another vital reason that hampering library modernization. Violation of all the development plans and initiatives which was adopted by the immediate past government is an usual practice in Bangladesh. As a result, no plan has been implemented just after the change of the government since 1971. We could see frequent change in Education Policies and FYPs. For this cause, sustainable development did not take right place in education sector for the last 40 forty years.
- **Government policy:** Government policies do not give right direction towards university library development. Most of the policy makers participated in the policy making were not subject experts and representative from the ISLM department. As a result, pedagogical decisions did not get reflected in the policy. When these policies were tried to be implemented by the governments they did not sustain for the lack of experience. The researcher found no representative in any education commission (from 1971 to 2012) and FYPs (from 1st FYP to 6th FYP) from the ISLM department of DU and RU.

The above scenarios are in the governmental level. But inside the university administration librarians have no power to take any decision related to the policy making.

- **University foundation act/amendments:** University act/amendments have no provisions/clauses for library development and modernization. The researcher studied most of the university acts during literature review and found many inconsistencies regarding appointment of the librarian, his/her role in the university, authority in decision making, qualification during the recruitment, organogram, promotion, selection grades, and getting promotion in due time, etc.

In many public university acts/amendments librarian is shown as an academic council member. But this is totally omitted from the private university act of 2010. University librarian is not a member of any important committee of the university. As a result, the librarian has no authority to take part in important decision making activities. Consequently, library development and modernization activities did not take any shape or progress for this reason.

- **Lack of Standard:** There is no definite standard for not only university libraries but also for any academic library in the country. As a consequence, when any new university library starts, it starts in a faulty way. When it expands haphazardly, part of it becomes a problematic in the university. After a few years when any expert librarian tries to modernize it, he/she has to face many problems. Lastly he/she has to stop the renovation due to pressure from the higher authority.
- **Technological barrier:** Technological barrier is another important aspect which creates problem in library modernization. Library modern tools and technologies are costly and mostly are not available in the local market. If there are those who have the ability to buy them, they are unable to procure it. There are another great problems in installation and maintenance due to unavailability of sufficient experts.
- **Lack of unique library software and databases:** Developing a good library software and database is a costly project. Most of the university libraries have insufficient budget for preparing a database only for library purposes. Recently, lots of free and open source library software and databases have become available in the net but there are many problems in installation. There is a great scarcity of expert manpower to maintain and provide continuous support to the open-sourced software and their linked databases.
- **Insufficient library networking and resources sharing activities:** There are no strong library networking and resource sharing software, initiatives, leadership, strong infrastructure and moral courage among the university libraries in the country. Without resource sharing and networking no library can perform its modernization activities completely.

- **Legal compliance:** Legal compliance is another important factor for library modernization. There are no world renowned publishers or official collaboration in Bangladesh. Most of the books have to purchase from abroad through local vendors. As a result, the documents needed to take permission from the authors or publishers for copying or digitization have to face tremendous hurdles for clearance.
- **Lack of training and workshop:** There is a serious shortage of national level training programs for improving qualities of library and information professionals in Bangladesh. Although some institutes have started training programs on fee basis which is not sufficient to improve the situation. This problem affects library modernization greatly.
- **Administrative barrier:** Administrative barrier is very acute in public and private university libraries in Bangladesh. From the investigation it is evident that sometimes private university library administration is strait forward towards fulfilling the target if it is realized by the authority. In public university libraries, complexities arise within departments which results in any implementation becoming time consuming.
- **Divide in technology application:** During the research, the researcher found a clear divide in technology application between public and private university libraries. Another difference was found between universities located in big cities like Dhaka, Chittagong and small cities like Jessore. A university located in small cities are lag behind in using technology as users are not aware about the latest technology and services. On the other hand, private universities are very prone to use technology while public universities are not aware about it.
- **Lack of appropriate communication media:** The status of ICT infrastructure is very poor in Bangladesh. There is a lack of Internet facilities, lower bandwidth, country's own satellite, high speed data transfer, etc. Some university libraries have Internet connection but speed is not up to the mark. Most libraries are using microcomputers containing low configuration which in some cases may not support advanced IT systems.
- **Insufficient number of digital resources:** Another major problem of the university libraries in Bangladesh is insufficient number of e-resources and

digital subscription, lacking in digital repositories, scholarly collection and in-house databases. Compared to private universities, public universities are very reluctant to subscribe to them.

- **Role of private university authority:** Authorities of private universities are not fully aware about modern library and role is not favorable for library development. This is a general tendency of the PvtU owners' to deploy little number of executives for library administration in most of the private universities. They feel that the library is a non-productive division.
- **Lack of library marketing and publication relations:** Library marketing and public relations activities are very insufficient in university libraries in Bangladesh. Though some private university libraries are trying to make it an institutionalized practice whereas public university libraries are completely averse to the practice. As a result, the appeal of library to the stakeholder does not grow effectively.
- **Fear of losing job:** Most of the traditional librarians or low educated library staff feel that if library become automated or digitized, many staff will not be required for library operation. For this reason, they are not interested to propose library modernization to the concerned authority. To modernize library systems and services IT based library personnel is necessary. In Bangladesh, many university libraries do not even have computer literate library staff. This is a major problem for developing modern library systems and services.
- **Lack of information literacy program:** The culture of organizing Information Literacy program or user orientation program at university libraries in Bangladesh is not present yet. For this reason, most of the students are not aware about library systems, resources, collections and library services. Many students don't know how to use the library and how to find their desired information. It may discourage students from using the library.
- **Library advocacy issues:** Most of the librarians suffer from inferiority complex about their position and fail to convince the authority about library development. It is also notable that, the lack of presentation skills of librarians may act as a barrier to communicate with the authority. Librarians

need to play the role of a library advocate for achieving their target. But long term practices were not able to create this impression in the university administration.

- **Role of professional bodies:** Role of the professional bodies regarding appropriate direction towards university library modernization is not realized in Bangladesh. Professional bodies play the role of library advocate and bargain with the government and the policy makers and forward recommendations for library development and modernization in the developed world. But this practice is absent in Bangladesh. Since independence of the country no professional body formulated any standard and policies for university library modernization. As a consequence, modernization did not take shape as a regular phenomenon.

Without of the above, a number of tangible and intangible problems hindered library modernization in Bangladesh. These problems should be solved with priority basis if we want to ensure quality education in the country. The probable solution and appropriate directions of the these problems have been described in the Recommendation Chapter.

CHAPTER – 8

Modernization Plan and Recommendation

CHAPTER 8

PROPOSED MODEL PLAN

As it is clear from the findings of this study that the overall situation of the university libraries in the country is not satisfactory to meet the present demand of the higher studies, an attempt has been made to propose an elementary model plan for establishing modern university libraries for the country. The proposed model plan is not restricted to any frame or limited to any particular administration or university library despite their various types. As a result, the model plan has been designed to serve common purposes for all types of the university libraries. The Model Plan has the following characteristics:

- The model plan has been proposed based on the socio-economic condition of the country;
- The plan includes all the necessary elements rather than accumulating all the problems identified by the study;
- The plan has been proposed to set up a modern library by ensuring all modern tools and technological facilities;
- The plan has been proposed to set up an ICT based information system in the university libraries in Bangladesh; and
- The ultimate aim of the plan is to build a modern library and provide world class services to the users.

Objectives of the plan

The primary objective of the Model Plan is to propose a workable system for modernization of the university libraries in Bangladesh. It presents a comprehensive structure and development efforts which gives an easy guideline for better solution of existing problems towards achieving the goal. However, based on the survey result, the following objectives have been selected for the proposed model plan:

- to identify the major components and sub-components of the modernization issues and prioritizing the components on the basis of the socio-economic condition;

- to present a comprehensive mechanism for modernization of university libraries in the country;
- to propose guidelines for designing various infrastructural facilities in the library;
- to indicate areas where ICT can be used effectively, to improve IT based information services and to improve IT based access to electronic media;
- to set various standards on the basis of various indicators related to Bangladesh;
- to propose a national consortium for sharing library resources;
- to provide a safe and secure physical environment which encompasses the best library practices and state-of-the-art resources and study facilities;
- to delineate the roles of all parties who would be involved in the implementation of the model plan; and
- to indicate ways for implanting the model plan in a cost effective way.

Expected benefits of the model plan will be as follows:

- Effective utilization of the library building, infrastructure and space;
- All kinds of basic and advanced services may be provided;
- Better management and maximum accessibility to the information;
- Appropriate utilization of the Information and Communication Technology (ICT);
- Development of Integrated Library System (ILS) for executing library functions and institutional repositories;
- Saving labor, time and cost of the university library; and
- Enhancement of the capabilities of library human resources.

Functions of the plan

Considering the existing status of the university libraries of the country the following functions and activities have been selected for the proposed model plan:

- Renovating existing building, infrastructure, and facilities to provide the best services to the user groups;

- Performing basic tasks as acquisition, processing, and circulation with modern tools and techniques;
- Introduction of new services and enhancement of the effectiveness of the library;
- Framing standard for various activities; and
- Formulation of development phases to implement the model plan.

Scope of the plan

The model plan includes all the major components necessary for modernization of the existing public and private university library system in the country. Therefore, it makes provisions not only for ensuring an effective guidelines for policy makers from the part of the government but also university libraries of all kinds will find a helpful direction to transform their existing situation towards modernization. Considering the importance of ICT in university libraries, major emphasis has been given for its optimum utilization to perform library's regular activities.

The areas which have been covered by the plan are provisions of high quality information and library services throughout the university library communities; providing efficient service to the users and bringing dynamism to the activities; introduction of information literacy program and marketing strategies; emphasis on the vendor and publisher relationship and proposing standards for the university library growth and development in the country.

Strategy of the plan

The Plan has been proposed in the context of the Bangladesh socio-economic condition and has been formulated with detailed consideration and review of the library environment including these:

Institutional Analysis

- Institutional vision, mission, and objectives of the sample university libraries
- Growth of the students and their maturity;
- Implication of the annual budget; and
- Growth of the staffs and work load.

Views of key stakeholders

- Individual interviews of faculty and student;
- Researcher survey;
- UL student satisfaction survey; and
- Student survey.

Library environment

- Library situational analysis (by sampling);
- Literature review;
- Review of trends;
- Quality review – self-assessment; and
- Visiting websites of– national and international libraries.

Consultation

- Discussion with library development committee ;
- Departmental analysis for operational planning from 1971-2012; and
- Development of performance indicators (based on various educational report and five year plan).

Analysis of the policy documents

- University formulation charter/ordinance/Act;
- Rules and regulation of UGC;
- University library standards of the country;
- Annual budget and sanction for the educational sectors; economic growth;
- Increasing the rate of the literacy;
- Demand of higher studies;
- Information needs and growing demand; and
- Information creation and impact of global information explosion.

Possible Barriers of the Model Plan

Considering the existing university library status of the country and reviewing the relevant literature the following major barriers have been identified which may be faced by proposed model plan:

- Unwillingness of the university authority;
- Copyright permission for digitization of the library resources;
- Inadequate financial support;
- Absence of national library and information policy and system in all fields;
- Lack of Skilled and trained professional personnel;
- Absence of appropriate library standard;
- Need of technological facilities; and
- Non-cooperation in forming consortium and networking from participating university libraries.

Components of the model plan

Components were identified for public and private university libraries and distributed commonly for setting a platform of modernization.

- Infrastructure and other facilities
- Departmentalization
- Basic Functions
 - Acquisition
 - Processing
 - Circulation
 - Reference
 - Documentation Services
- Digitization of Materials
- Digitization of Services
- Institutional Repositories
- Marketing and Promotion
- Information Literacy
- Library Consortium
- Library Advocacy Issues
- Library Vendor/Publisher Interface
- Management and Staffing
- Library Auditing

Description of the Components

Library infrastructure and facilities

Considering the existing situation of the university library infrastructure and facilities and reviewing the relevant literature (Soule, 1891; Rowe, 1955; Gelfand, 1968, pp. 127-128; Freifeld & Masyr, 1991, pp.41-75; Latimer & Niegaard, 2007, Metcalf, n.d.) the following proposals have been made for development of library infrastructure and facilities of the country:

- Every library building should be planned especially for the kind of work to be done, and the community to be served;
- The interior arrangement should be planned before the exterior is considered;
- Convenience of arrangement should never be sacrificed to mere architectural effect;
- The plan should be adapted to probabilities and possibilities of growth and development;
- Library should be planned with a view to economical administration;
- The rooms for public use should be so arranged as to allow complete supervision with the fewest possible attendants. Modern library plans should provide accommodation for readers near the books they want to use, whatever system of shelving is adopted;
- Climate is an important factor in the planning of library buildings, particularly in tropical countries;
- As library collection grows continuously, more space will be required accommodating it. During space planning sufficient provision should be preserved for future expansion so that it can adopt itself with the changing requirements and becomes economical to operate;
- Library interior arrangement and furnishing should be well planned so that stairway for elevators and book lifts, windows and other internal features accommodate it; furniture layouts and design will be made perfectly;

- Equipment location and tentative provision will be indicated in electrical outlets, lighting need will be considered. It should be uniformly distributed;
- Internal arrangement should be in such a way that it will give sufficient room for resources allocation and to the personnel to perform their functions. Separate rooms should be provided for books, periodicals and for reference services;
- There should be kept an emergency exit system with exit layout inscribed in front of the public;
- An especial ramp provision as well as lift facilities should be ensured for the disabled people;
- The library building should be free from noise. There will be fumigation equipment, maintenance provisions and communication-book lifts, conveyors, telephones, pneumatic tube, teletype, fire alarm as well as sufficient fire extinguisher and hydrant and public address system;
- Library should be outfitted with all equipment such as photocopier, colour photocopier, electric typewriter, PCs, CPUs, keyboards, mouse, UPS, laptop, image scanner, server, laser printers, colour printer, card printer, telephone, fax, e-fax, hub, several terminals for OPAC search, multimedia, web cam, RFID technology, and Wi-fi device, should be made available to accommodate all the materials that library has. Open access system is proposed to ensure in very kind of library in Bangladesh.

Proposed standard for library space

Reviewing related literature (Freifeld & Masyr, 1991, pp.26-29; Metcalf, n.d, p. 7) the following standard have been proposed for library space:

- ✧ **For library materials:** 1 square foot per 15 volumes
- ✧ **For seating space,** after deciding the size of each group of readers, undergraduates, graduate students, faculty for which seating should be provided: 25 square feet for each undergraduate, 35 square feet for each graduate student, 75 square feet for each faculty member.
- ✧ **For staff,** counting present and anticipated size: 100 square feet per person.

- ✧ **Space for other purposes:** under this heading there may be included the space required for stairways, lobbies, corridors, ductwork for ventilating or air-conditioning, building service and other accommodations.
- ✧ **For rough estimating purposes** 40% of the total floor space requirements for books, readers and staff, to allow for all other purposes. Thus, if 100,000 square feet of space is required for books, readers and staff, 40,000 square feet should be added for all other purposes.

Departmentalization

Departmentalization is an important factor for smooth operation of the university library. The performance of the university library largely depends on it. "It makes the services more quick and accurate" (Sharma, 1990, p. 123). Departmentalization not only covers the seminar or branch library but also indicates various sections inside the library. According to Wheeler and Goldhor (1962), 'the organization of a library department is justified when there emerges 'a distinct, coherent, specialized and important activity, extensive enough to require the full-time services of at least two persons.' In a university library, librarian is not solely liable for performing all activities himself rather he has to distribute the work load to among others. Furthermore, the needs of the library's clientele may dictate the creation of separate departments in one or a group of related subjects. Law students, for example, may require special services and collection and undergraduates require a different form of service from graduates and faculty. The physical location of the university buildings, in relation to that of the main library, may require that separate facilities and services to be organized. Form of materials is frequently a basis for departmentalization (Gelfand, 1968). Dhaka University Libraries, for example, have separate department for periodicals, documents, manuscripts, acquisition, processing, circulation and reference.

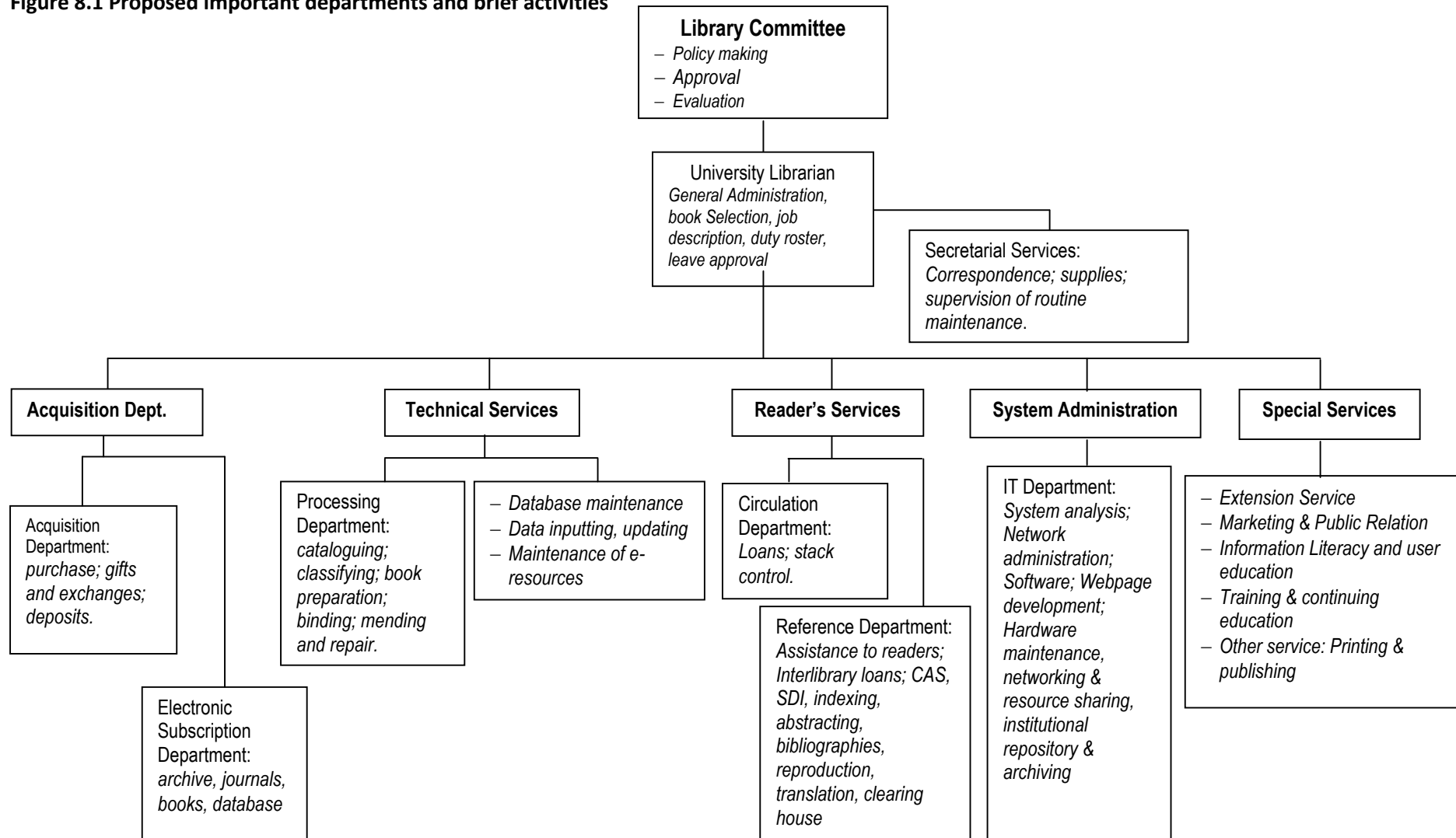
Reviewing the relevant literature (Gelfand, 1968; Gates, 1994) and experience from the existing practice, the following department and sections have been proposed in the model plan for modernization of the university libraries of the country:

— Acquisition Section

- Technical Section (processing)
- Circulation Section
- Reference Section
- Periodical Section
- Reader's Services Section
- Special Service Section
- System Administration and IT
- E-resources cum cyber center
- Documentation Section
- Maintenance Section
- Audio visual section
- Reprographic and reproduction section
- The Office/Administration
- Rare books and subject related book bank
- Manuscripts and University Archives
- Networking and Resource Sharing
- Corner for NCH galleries
- Conference and recreational center

Brief activities of some of the proposed departments are described in the figure 8.1.

Figure 8.1 Proposed important departments and brief activities



Basic Functions

Acquisition

Acquisition of library resources is one of the main tasks of a university library. Library materials are usually acquired by purchase, gift, exchange, loan and deposit. After analyzing the existing practice and review of the related literature (Sameni, n.d.; Integrated Library System, n.d.; Riaz, 1992, p.67) the following procedure has been proposed to follow in all university libraries for purchasing of learning resources:

Acquisition functions

a. Selection: It involves the following steps—

- Sending letters to the department for booklist.
- Checking the availability with the present stock.
- Sending the list to the Agent/supplier for unit price.
- Sending the booklist with unit price to the department (after having the same from Agent/Supplier) for preparing final list with the number of copies to be ordered.
- Receiving back the final list from the departments.

b. Appointment of Agent/Supplier: It involves—

- Framing the basic terms and conditions relating to supplies of books and other library materials and taking approval from the appropriate authority.
- Various processing related to tender.
- Issuance of appointment letter to agent/supplier.
- Signing formal agreement

c. Ordering: It involves the following steps—

- Checking the budget provision
- Getting the administrative approval from the competent authority
- Issuance of work order.

d. Receiving: It includes—

- Receiving the supply within the stipulated period or taking steps for extension of supply date if necessary.

- Checking the supply with the work order in terms of author, title, edition, no. of copies, ISBN, quality of binding, price, etc.
 - Preparing statement of discrepancies, if there is any and taking necessary steps to remove the same.
- e. Accessioning:** It includes—
- Assigning a unique serial number (accession number) against each item procured.
 - Recording various information such as author, title, sub-title, edition, place of publication, publisher, date of publication, no. of volume/part, pagination, nature of binding, price, bill no., source, etc.

Execution Process

- a. **Library Committee:** Acquisition process should be done in consultation with the library committee. The committee will be formed with the Vice-Chancellor or Pro-Vice Chancellor as the head and the librarian will be the member secretary. Representatives from every department will be members of the committee. In addition to the above, University Registrar and Treasurer will be members as ex-officio.
- i) The committee should sit quarterly to decide the titles to be procured, sources to be selected and estimate funds to be needed. Every department will assess their needs and the head of the department will submit final requisition to the member secretary of the committee. After accumulation and verification of the requisition, member secretary will produce the final demand towards the committee for approval.
 - ii) Member secretary will send meeting notice by giving sufficient time to the members of the committee. He/she will send requisition form to the department as well as book list/source for selecting books and other materials.
 - iii) After having approval from the committee, the member secretary will prepare work order to the supplier by mentioning terms and condition of the university.

Librarian will oversee all the procedure after working order of the library resources.

b. **Automated acquisition:** An Integrated Library System (ILS) is proposed to be used for automation activities including acquisition. An ILS usually comprises a relational database, software to interact with that database, and two graphical user interfaces (one for patrons, one for staff). Most ILSs divide separate software functions into discrete programs called modules, each of them integrated with a unified interface.

Examples of modules might include:

- acquisitions (ordering, receiving, and invoicing materials)
- cataloging (classifying and indexing materials)
- circulation (lending materials to patrons and receiving them back)
- serials (tracking magazine and newspaper holdings)
- the OPAC (public interface for users)

Processing

Processing of library materials needs to be systematic, objective and appropriate to the demands of effective library management. After analyzing the existing practice and review of the related literature (Sameni, n.d.; Riaz, 1992, p.67-68) the following procedure has been proposed to follow in all university libraries for completion of processing functions:

Cataloguing: It involves:

- Checking the previous catalogue records.
- If the catalogue of same material is found, only the accession no. (S) is/are added for indicating the addition of new copy (ies)
- If not found, cataloguing the new item according to the AACR II with maximum information (Author, title, Edition, place of publication, publisher, date of publication, pagination, services, bibliography, subject, etc) recorded during Accessioning.

Classification: It involves:

- checking the previous classification records
- If not found, classifying the new records according to DDC 22th Edition or latest
- Preparing the call no. (Class no. + Author Mark)

Preparing catalogue: It involves—(if computerized)

- Customization of open source software to input bibliographical information
- Inputting bibliographical information of books into OPAC following MARC21 format.

Filing: It involves—

- Inserting book cards in previously pasted book pockets inside the book cover.

Shelving: It involves—

- Sending the processed material for placing on shelves as per Call No.
- Lending to the departments on request against valid records.
- Keeping records of shelving and/or lending.

To make processing operations effective, the following measures are deemed to be of much importance:

- a) The system of classifying and cataloging the library materials needs to be introduced so as to facilitate ease of locating materials, monitoring and controlling. The task of classifying and cataloging library materials may be entrusted to technically qualified personnels who will work under the supervision of the librarian.
- b) Instead of depending on traditional catalogues, the entire cataloguing may be given in the ILS (preferable Koha) to which every user shall have access through OPAC from remote location. The entries should be given according to the MARC 21 format so that data can be shared from Z39.50 server. Latest edition of popular classification scheme and subject heading (based on need and type of the university) should be followed for classification of the books and other materials.

- c) Besides, accession number, bar code level should be pasted in title page as well as on the dust cover of the book for easy and quick transaction.
- d) A clue page should be maintained in the book inscribing purchase information, accession number and call number for future use.
- e) Personnel at the processing section are responsible for performing all the processing tasks. They should enter each entry carefully so that essential bibliographical information will not be left out.

Circulation

The circulation system should be fully automated. After analyzing the existing practice and review of the related literature (Ravichandra rao, 1989, pp.220-221; Sameni, n.d.; Riaz, 1992, p.68) the following tasks have been proposed to perform in all university libraries at the circulation desk:

- Charging and discharging of library resources;
- Provision of information on the location of circulation items – either all items or only those items on loan or sent elsewhere, i.e. at the bindery, on reserve, being re-catalogued, etc;
- Identification of items on loan to a particular borrower or class of borrowers or class of borrowers (namely off-campus users);
- Recording of holdings or personal reserves for items on loan but desired by another borrower, often with additional provision for notifying the library staff when the item is returned and printing a book available notice for mailing to the person who requested the item;
- Printing recall notices for items on long-term loan;
- Renewal of loans;
- Notification to the library staff on overdue items and printing of overdue notices;
- Notification to the library staff or problem borrowers (i.e. those with unpaid fines, or overdue books) either at the time of an attempted loan, or at the time a borrower is leaving the institution or on request from the library;

- Calculation of fines, printing of notices, recording receipt of fines, and sometimes printing of fine receipts;
- Calculation and printing of statistics of various types;
- Analysis of both summary statistics and statistics for the circulation of particular items for use in acquisitions, planning of services and other administrative purposes;
- Provision for handling special categories of borrowers and special types of materials;
- Provision for printing due date slips, automatically generating orders for last books or needed (additional) copies and printing mailing labels for remote borrowers.

To perform these functions, circulation systems should be designed to capture and manipulate the following:

- 1) Detailed information about the borrower (name, address, telephone number, identification number, borrower category) should be preserved in ILS database module. Every member should be provided bar code membership card. Library materials also should be pasted with barcode level. Library materials should be issued and returned with the help of ILS circulation module.
- 2) Bibliographical information about the document (call number, identification number, author, title, and date of publication) should be kept in ILS database module.
- 3) Information about the transaction (date due or date of loan, in some cases the period of loan) should be given to the borrower.
- 4) The ILS should be provided short message service (SMS) to the borrowers just after issuing any library materials.
- 5) There should be a provision in ILS for remote renewals and reservation of library materials.
- 6) There should be a provision in ILS for sending automatic alert system as well as automatic reminders by sending SMS to the borrowers on a regular basis.

Proposed Standards:

Loan period

- a. If there are plenty of books available, one week to 10 days is enough for text books;
- b. For books that are not in great demand, a two-to-three week loan period is desirable;
- c. Faculty members are usually permitted to borrow books for longer period and may be issued for the whole semester;
- d. Borrowers who return books late are often charged a small fine for each day the book is overdue. The fine is designed to discourage late returns of library materials.

All books, whether borrowed by students or the faculty members should be submitted in periodic recall.

Reference

University library should maintain a reference section which will be responsible for providing general and specialized reference services to the library members. Review of the related literature (Sameni, n.d.; Ranganathan, 1961) and existing practice in the country, library should perform the following proposed tasks in reference section:

- Keeping records for general reference books and subject reference books.
 - Preparing list for subject reference books on various subjects for providing information on request.
 - Keeping various documents prepared for documentation services.
 - Preparing various information providing items on different subject on request of the user.
- a) Reference section should provide ready reference and long range reference to the researcher as well as to the users of the library. This kind of reference service is performed with the help of ready reference books/works like dictionaries, handbooks, biographical and geographical dictionaries, etc. On the other hand,

long range reference service refers to a process of prolonged search of information involving the activities of “*preparation service and assimilation.*”

- b) Reference service should be provided with ILS’s reference module for quick and exhaustive services.
- c) Reference section should be equipped with encyclopedias (hard and soft copies), dictionaries, almanac, statistical yearbook, various GOs and NGOs report, newspapers, journals (both print and electronic), periodicals, and a wide subscription of electronic resources.
- d) Reference section will be equipped with at least twenty computers (based on the students member and size of the library) from where students will get assistance to access electronic resources.
- e) The library should initiate advanced reference services with the help of state-of-the-art technologies. Technologies like email, web, programmed instructions (where the reference librarian would instruct and assist the users in searching and using information with the aid of software both in and outside the library) should be used to facilitate the users in receiving latest information in their fields of interests.

Documentation Services

Library should provide exhaustive documentation service to the users. This section should be fully automated with ILSs and would comprise various modern services. The following tasks of a documentation division have been proposed after analyzing related literature (Sameni, n.d.; Mohammad, 1989 cited in Rab, 1994) and existing practice in the county:

- Preparing the list of new additions books by subject, title and author.
- Preparing current awareness list of journals.
- Preparing list of journal articles by subject and title.
- Preparing annotated bibliography of journal articles.
- Preparing bibliography on dissertations.
- Preparing current awareness list of articles published in the daily news paper.

The university library should provide certain **auxiliary services** in relation to the basic services to enhance its contribution to the university community. In this connection, auxiliary services include the activities associated with conservation of library materials; photographic and other copying services; provision of reading equipment of materials in micro and machine-readable form, maintenance of equipment; and transportation and communication facilities for interlibrary purposes.

Proposed Supplementary services which include a variety of audio-visual services; special facilities and services for advanced students, researchers and scholars; lectures, concerts and dramatic performances central collection; browsing areas; abstracting and translating services; co-operative projects; mounting special exhibition, operating printing and publishing services and bookstores; conducting library service lectures, workshop, institutes and schools of library science and others.

Proposed Information services

The following categories of information services (for providing to the users) have been proposed for university libraries of Bangladesh:

1. Current Awareness Type: (a) Title announcement service; (b) Announcement of research in progress; (c) Selective Dissemination of Information (SDI); (d) Notification of forthcoming conference /seminars/ meetings/ workshops/ symposium etc.
2. Condensation Type: (a) Abstract bulletin; (b) Extracts; (c) Technical digest.
3. Location type: (a) Indexes; (b) Bibliographies; (c) Catalogues.
4. Condensation and Repacking: (a) Reviews; (b) Hand books; (c) Data service.
5. Evaluation and Emphasis: (a) State-of-the-art-report; (b) Trend report.
6. Reference Type: (a) Reader's guidance; (b) Ready reference; (c) Referral service.
7. Back-up Services: (a) Reprographic service; (b) Translation service; (c) Rendering help in publishing such as preparation of charts, slides, printing, etc.

8. Maintenance Services: (a) Training of documentalists, maintenance of system tools and user education; (b) Advisory service/consultation service in documentation and information work.

Facilities and services for Persons with Disabilities

A modern university library should have facilities and accessibility of library materials, programs, and services to all students. There is a certain portion of students who study beyond their disability in the university. Therefore, library should have special arrangement for the disabled students. After reviewing related literature (Kishore, 1999; CSULB Website, n.d.; Uddin, 2009, p.228) and observing present infrastructural facilities of ULs of the country following measures have been proposed:

- (a) Staff working in the UL should make every effort to accommodate requests from library users whose disabilities limit their use of the Library's facilities and resources. There is therefore an urgent need for training 'Library Managers' and 'Library workers' to understand the nature of disability and help such users according to the severity of their disability.
- (b) Libraries have to design an efficient and effective user assistance scheme, such as:
 - Providing the disabled users with reading lists and catalogues, high demand materials and lecture tapes that are held in open reservation.
 - Delivering books and other documents from library shelves.
 - Photocopying of Library materials and enlarging for the partially blind.
 - Paging books from stacks and shelf areas.
 - Extending loan periods or modifying other lending rules on an individual basis.
 - Accepting telephone requests and providing reference service.
 - Conducting orientation tours and information skills sessions.
 - Providing audio visual equipments.
 - Assisting in the use of computer aided learning equipments such as CD-ROMS, optical disks etc.
 - Providing access to library facilities by ensuring that directional signs are labelled

at appropriate locations with large, simple and clear messages.

- Help with numerous bibliographic citations.
- Instruct on how to use available library technologies located at workstations.
- Keep special parking spaces in the campus for the disabled persons.
- Arrange restrooms on all floors of the library wherein patrons with disabilities can be accommodated.

(c) Offering special services, such as:

- Library services for the blind must enable them to have access to equipments such as Braille printers, Braille embosser and tape duplicators, Kuzweil reader (a text- to speed reading machine with synthesized speech output), closed circuit TVs for magnifying regular text, PCs with CD ROMS, Powermacs with CD ROMS, large print tape writers, special track tape recorders, computers that are having adaptable equipments such as voice eyes.
- Services for speech and hearing impaired users must include TTD communications (a device also known as TTY-text type telephone) for those needing library questions answered on telephone. Librarians must also familiarize themselves with American Sign Language which is considered to be the common language of the deaf community.
- For the physically challenged the library facility must be barrier free to wheel chairs and other mobility devices and ensuring that all devices including door handles are designed for easy manipulation.
- Persons suffering from mental disability can be served by helping to locate and retrieve materials. Because reading is a common problem for them they may enquire assistance in identifying the materials of both the print and electronic types of documents. They also need help in turning catalogue cards or keying in commands on the computer. People suffering from mental illness such as Schizophrenia must be motivated to read books on self-development and may require constant counseling to use library resources to overcome their depression. This is termed as "Bibliotherapy", that is, using books for therapy.

Digitization of materials

Besides hard copy, library should preserve digitized materials to serve as a Digital Library (DL). A DL is visualized as a server which is having linkages to various other sources of information in digitized format. These linkages can lead to a number of sources such as FTPservers, LISTservers, NEWSservers, EBservers, Wired Service articles etc. After analyzing the related literatures (Ravichandra rao & Suma, 1996, p. 185; Goyal, 1996, pp.36-37; Lynch & Garcia-Molina, 1995, Association for Computing Machinery, 1995 cited in Rajashekar, 1996, pp.204-2) the following characteristics and parameters have been proposed for digitization of university libraries in Bangladesh:

1. DL is a heterogeneous library which contains hard and soft copies online. The full-fledged DL is one in which all the information is available in the digital form.
2. Storage in digital form, that is, works like books, magazines, newspaper, records, videos, etc. are to be stored in digital form.
3. Readers no longer need to come to a library, they use electronic methods to have materials delivered to them
4. Material is always copied from the master version of the work in the electronic library.

Technical issues in the development of digital libraries

The following technical issues have to be addressed in the development of digital libraries:

- High bandwidth computer networks supporting efficient multimedia documents transfer,
- Open communication protocols (client-server, e.g., Z39.50 for IR),
- Information access tools (browse, display and search tools),
- Meta databases (databases that describe and provide links to other databases/information sources),
- Electronic publishing tools (personal, institutional, publisher),
- Data compression,
- Scanning and conversion technologies,

- Media integration technologies (multi-media),
- Advanced retrieval, indexing, natural language processing, routing and filtering,
- Documents description and representation standards (e.g. SGML),
- Inter-operability (how do multiple digital libraries interact?),
- Privacy, authentication and security,
- Location independent naming of digital sources.

Software Required for Digital Libraries

An ILS is proposed for storing and handling digital content which should have the following capabilities:

- a) the software should support document management needs such as object storage, text manipulation, document navigation, and full journaling backup and recovery for documents,
- b) it should allow users to search the text of all documents to locate relevant information. It should provide electronic delivery of full text documents,
- c) it should provide Online Public Access Catalogue (OPAC), catalogue maintenance, circulation, serial management, acquisition, processing and MARC cataloguing, image and information access, access to information in current content. It supports Z39.50 protocol connectivity to facilitate access of other databases,
- d) support publishing, annotation and integration of new information,
- e) provide network access and user friend interface, and
- f) support multimedia content.

Digitization requires full copyright permission from the publisher or owner otherwise no part of the document will be digitized. It is proposed to digitize only those items that have copyright permission. It is wise to start from in-house materials for digitization work. Subsequently the library authority should try to collect permission of the other copyrighted documents for digitization works.

Digitization of services

Digitization of services requires full digitization of the library activities. After having full-fledged digitization of materials and functions of the library, it can provide service to the users. For this kind of services, availability of internet and network connectivity is a must. An ILS is proposed to setup and make it suitable for providing services. From library materials acquisition to the reference services every work should be done with state-of-art modern technology.

Institutional Repository

Institutional repository (IR) is an important part of the modern university library. Hence, IR has been proposed to create in each library for preserving and showcasing institution's research (faculty and student) materials, presentations, images, teaching materials, and administrative documents. The IR should have open access standard and provision for searching, retrieving and deriving maximum benefit from it.

Review of the related literature (Johnston, 2004, p.172; Lam & Chan, 2007, p.312) the following ***policy issues*** have been proposed to resolve during the early stage of planning of IR:

- Making the IR totally open and accessible to the world. If a faculty member wishes to restrict access the document, it will not be accepted.
- The IR is a deposit of research documents, not merely an index with links to external sources; if the Library does not have the right to deposit the full-text papers, they cannot be included in the IR.
- Undertaking of retrospective work to include documents previously published in addition to the current ones.
- Ephemeral materials should not be included such as faculty-produced course notes, popular works or feature columns from newspapers, but would limit the coverage to published material and grey literature only.
- Allowing authors to submit documents online and they will sign a permission agreement, granting the Library non-exclusive distribution rights.

- Adopting Adobe's PDF format as the default document format.
- Building a single database and not to have multiple databases.

Selection of the software

While there are many options for selecting IR software and hosting services today, university libraries have to select an ideal Integrated Library System (ILS) for IR purposes. Like many of its digital library projects, the university libraries should use open source software for its IR. The main advantage of open source software is that it provides flexibility for local customization and feature enhancements. The significant software cost savings is also to be taken into consideration, as the Library has financial constraint in funding for the IR project. Considering all the above aspects, DSpace is advised to be used in IR project.

Marketing and promotion

To disseminate information, various marketing and promotional policies should be adopted. Corral (1997, p.50) states that university libraries must grasp marketing and business plans these are essential for survival in the face of rising competition and a fast changing environment. After reviewing the related literature (Kaur & Rani, 2008) the following suggestions have been made for improving the marketing practices in the university libraries:

- Each university library should have a marketing plan for its products and services with a mission to serve its parent organization.
- Users should be involved in the designing process of new services and products targeted at them.
- Regular user surveys should be conducted to determine whether a service/product should be continued/modified or withdrawn. Immediate feedback on the quality of services/products is essential for making the necessary adjustments to meet the requirements.

- Libraries should appoint full time personnel to look after marketing activities in the library. If possible, a separate marketing unit or marketing division/department should be set up as part of the library.
- Provision should be made for separate and sufficient finances for efficient marketing.
- Libraries should constantly maintain and improve the quality and range of its services/products and match these to the changing requirements of the users.
- Libraries should harness technology fully to achieve full automation of their library activities.
- Access to library products/services should be made more convenient.
- There is a need to consider the pricing issue. Charges for services and products should be introduced on no profit, no loss basis. Efforts should be made to convince the users that they are to pay for such services as online, CD-ROM, CAS, SDI, abstracting, indexing, e-mail, internet browsing and paid photocopying facilities.
- Promotional efforts such as user orientation programmes, publicity and personal contact programmes should be regularly carried out to make the users aware of the services/products of the library. With the availability of internet, each library should design its homepage/web page and use it as a strategic tool to improve awareness, advertise products/services, distribute and disseminate digital products and services.
- Library and information science curricula should be suitably changed to widen the subject of management in great detail giving importance to topics on marketing, PR and quality management to equip future library professionals with the management skills. Short term training programmes for all levels of staff should be organized for imparting marketing skills/capabilities to the library staff.

- Library should consider using popular social media for marketing and creating awareness among the users. These are: Facebook, Library Blog, Twitter MySapce, Google Buzz, Digg, Delicious, StumbleUpon, Reddit, Google Bookmarks, etc.

Information Literacy (IL)

Students of higher studies have to face tremendous problems for complexity in surfing information in the vast ocean of knowledge. Moreover, students have to prepare variety of classroom related tasks and assignments within the shortest possible time. They need to know the way of how to search and use desired information from a huge bunch. In such a situation, students should be information literate. An integrated curriculum of IL should be developed by the university librarian keeping all users in mind.

Information literacy is becoming an increasingly essential part of university library user education. After reviewing the related literature (Callison et al., 2005, p. 94; Partello, 2005, p. 115; Virkus, 2004, p.98; Bruce, 1994, p.10; Chen & Lin, 2011; Schloman, 2001; Scales et al., 2005; Roberts & Levy, 2005; Lamouroux, 2008; Tantiongco & Evison, 2008) the following key characteristics have been identified for an information-literate person:

- 1) engages in independent, self-directed learning;
- 2) uses information processes;
- 3) uses a variety of information technologies and systems;
- 4) has internalized values that promote information use;
- 5) has a sound knowledge of the world of information;
- 6) approaches information critically; and
- 7) has a personal information style that facilitates his or her interaction with the world of information.

There is no doubt that implementation of information literacy programs requires the collaboration of all staff, including academic faculty, librarians, IT professionals, and administrators. Such programs should include academic and library staff as well as students. Since the needs, say of a physics student will be different from those of a social science student, information literacy programs should be learner centered, and

discipline and subject based. Similarly, the needs of a first year student will not be exactly the same as those of a PhD student. The aims and expected learning outcomes of the programs should be explicitly spelt out, and should be specific, achievable, and assessable.

Library Consortium

No university library can be self sufficient. Financial constrain, unavailability of the resources and expertise and lacking in appropriate knowledge are the main reasons of it. To satisfy users' variety of needs in this information and communication technology environment, university libraries should work together in a collaborative way. University libraries should participate in consortium, networking and resources sharing activities at the national and international level.

Considering the networking and resource sharing scenario and reviewing the related literature (Kaula, 1986; Sharma, 1992 cited in Mannan & Bose, 1998, p.68; UNESCO, 1985 & 1995) following objectives, facilities and activities have been selected for the proposed model plan:

- a) The objectives of the consortium, networking and resources sharing should be: to increase availability of resources, to extending the accessibility of resources, to promote full utilization of resources.
- b) Area of resources sharing should be shared or based on cooperative acquisition, storage, technical processing, lending or interlibrary loan, as well as any other cooperative ventures.
- c) Functions of the resources sharing should be cooperative acquisition; assignment of specialization in material acquisition; co-ordinated subscription; exchange of duplicate holding; cooperative cataloguing, inter-library loan; reciprocal borrowing privileges; and reference and referral services.
- d) Activities of the resources sharing should be preparation of union catalogue of books and periodicals; indexing and abstracting services; listing of new arrivals on accessions/acquisitions list; bibliography development; network newsletters;

directories and inventories; manuals; translation service; users interest survey; joint research project; in-service personnel training; workshop and meetings; marketing of network services; photocopying service, etc.

- e) There may be more than one network and a focal point should be selected from each type of networking in the country. Common barriers should be eliminated by mutual understanding among the participating libraries. Every kind of networking tools and techniques should be applied for networking. There should be ensured LAN, WAN, Internet, and website of each participating library. A central server and sufficient expert group should be provided to succeed towards the networking and resources sharing.

Library Advocacy issues

The goal of the library advocacy is to get maximum allotment of the grants in comparison with the competitor departments. As stated in the Chapter-4, advocacy is essential for ICT environments but not limited to any boundary. Its implication crosses its previous limits to the newer environments of library operation and management.

Role of Librarians and library staff

In practice of advocacy in university library, librarians and library staff have an important role to perform. Reviewing the relevant literature (Merola, 2008; ALA Library Advocate's Handbook 2006) some of the strategic roles have been proposed below:

- Recruitment of advocates at every opportunity whom the library is better known and who can help and support the library. Hand out library advocacy information available from the office and other possible sources.
- Informing members of advocacy network at least twice a year to give them updated information.
- Meeting with community, campus and faculty leaders regularly to educate them about the activities and concerns and to recruit their assistance.

- Keeping library users informed of library issues and advocacy activities. Posting action alerts in the library. Dedicating a portion of the library's newsletter and website to local, state or national legislative issues and concerns.
- Encouraging library users to share their "library stories." Inviting them to testify at budget hearings, participate in media interviews and visit legislators with library officials.

Library vendor/publisher interface

The overall success of a university library does not lie only in its best performance and services provided to the stakeholders but depend on many factors which need to ensure the entire activities. Library vendor/publisher interface is one of them. Vendor may sometimes be an agency who will be a broker between the library and publishers. "All librarians have inherited various relationships with vendors, and their successors will inherit their relationships. Because of this fact, librarians must take the long view (Thomas, n.d.)"; as Ronald Gagnon reminds librarians, these relationships themselves should be considered an important investment (Gagnon, 2006, p.96). Nothing is more important to than maintaining vendor relationships and a frequent communication, in writing for clarity and later referral, and in person whenever possible. A final thought might be Anderson's overarching theme: "be assertive, but reasonable (Anderson, 2004, p.xii).

After reviewing the related literature (Gagnon, 2006, p.96; Anderson, 2004, p.xii; Brooks, 2006, p. 1) following techniques are proposed to adhere for better communication and keeping good relationship with the vendors/suppliers:

- Librarian should visit shop/office of the vendors physically or online periodically to establish better communication;
- Transparency should be established in purchase procedure and tender to create trust among the suppliers;
- Payment of the vendors should be made on time. To ensure payment on right time the librarian also has to keep continuous liaison with the accounts office;

- Invitation of the vendors should be made on various occasion and university day;
- Vendors should be given chance to display their stock periodically at university premises;
- Response should be made quickly at their query.

Responsibilities of the vendors

- Vendor can make a library's job easier in various ways like providing information about prices, publication schedules, title changes, etc. dealing with currency, providing information from publisher, handling all subscription renewals and cancellations, providing one contact for subscription orders.
- Vendor would maintain ethics and disclose everything while making any agreement. Both parties would maintain various relationship viz.: buyer and seller, development partner (to improve service by enhancing product standard), and mutual dependencies to each other.

In a nutshell it can be said that without making good relation with the vendor/supplier no library can succeed in attaining its goals.

Management and Staffing

Digital world is changing the function of libraries and information services, and the role of the librarian and information professional is as vital as ever in developing the knowledge and skills of the individuals in the communities they support (Hossain & Rahman, 2010, p.79). The services of the trained and well-qualified personnel are essential for the development of the university library. They should be competent enough to organize and administer the resources of the library at an effective teaching and research level. In order to maintain a high standard of service, the library staff through extended training in the profession must understand the objectives of the university and assist the university in making its teaching and research activity much fruitful. (Shahabuddin, 1970, p.70).

Depending on various services and functions of the university library, the library requires adequate number of service-efficient, well-educated, professionally qualified,

dedicated, competent and motivated executives as well as supporting staff to achieve its vision, mission, and objectives. In the following Table-8.2, 40 personnel have been proposed for a university library where at least 2000 users use library everyday. Among the personnel, 25 are executives and 15 are supporting staff.

Proposed Status and Qualifications of the University Library Staff

After reviewing related literature (Hossain & Rahman, 2010; Rahman, 2011) and existing practice of human resources management in the country the following status and qualification of the university library personnel has been proposed:

- a) There would be two kinds of the university library staffs: (i) Library executives, (ii) Supporting staffs. Library executives would be of two kinds: (i) Professional (ii) Non-professionals. Professional would comprise full professional, semi-professionals and paraprofessionals. Non-professionals will comprise system support and administrative works related.
- b) It is desirable to provide faculty status of a professional librarian similar with full time faculties/teachers based on their qualification, competencies, and experiences. The status, pay scales and qualifications of professional library staff should be divided into four grades with designations and scales of pay corresponding to those of Professor, Associate Professor, Assistant Professor, and Lecturer which was accepted by UGC.
- c) This is also proposed that Librarian of a University should always be professional and full time Librarian for its smooth functioning. He/she must be directly responsible to the Vice-Chancellor. He/she must also be made ex-officio member of the various academic bodies and senate of the university so that educational policy of the university can be complemented and implemented by making available the required teaching research materials.
- d) There is the need to introduce job description, job specification and monitoring formats to ensure effective operation of the library.
- e) Person in charge of the library should be empowered to perform duties independently within the jurisdiction of operations set for the post.

- f) There should be a national policy for pay-scale, qualification, and right organogram for the university library staff to bring uniform standard throughout the country to minimize administrative hurdles.
- g) There should be provision for imparting training for those working in the library.
- h) Performance rating of the personnel working in the library should be introduced and regular feedback on performance needs to be given.
- i) Computer literacy and specialized knowledge in IT based library management needs to be made mandatory for fresh appointments.
- j) The system of quarterly reporting of the progress of work about library operations needs to be introduced using specific format designed for the purpose.

Figure 8.2 Proposed oraganogram for university libraries

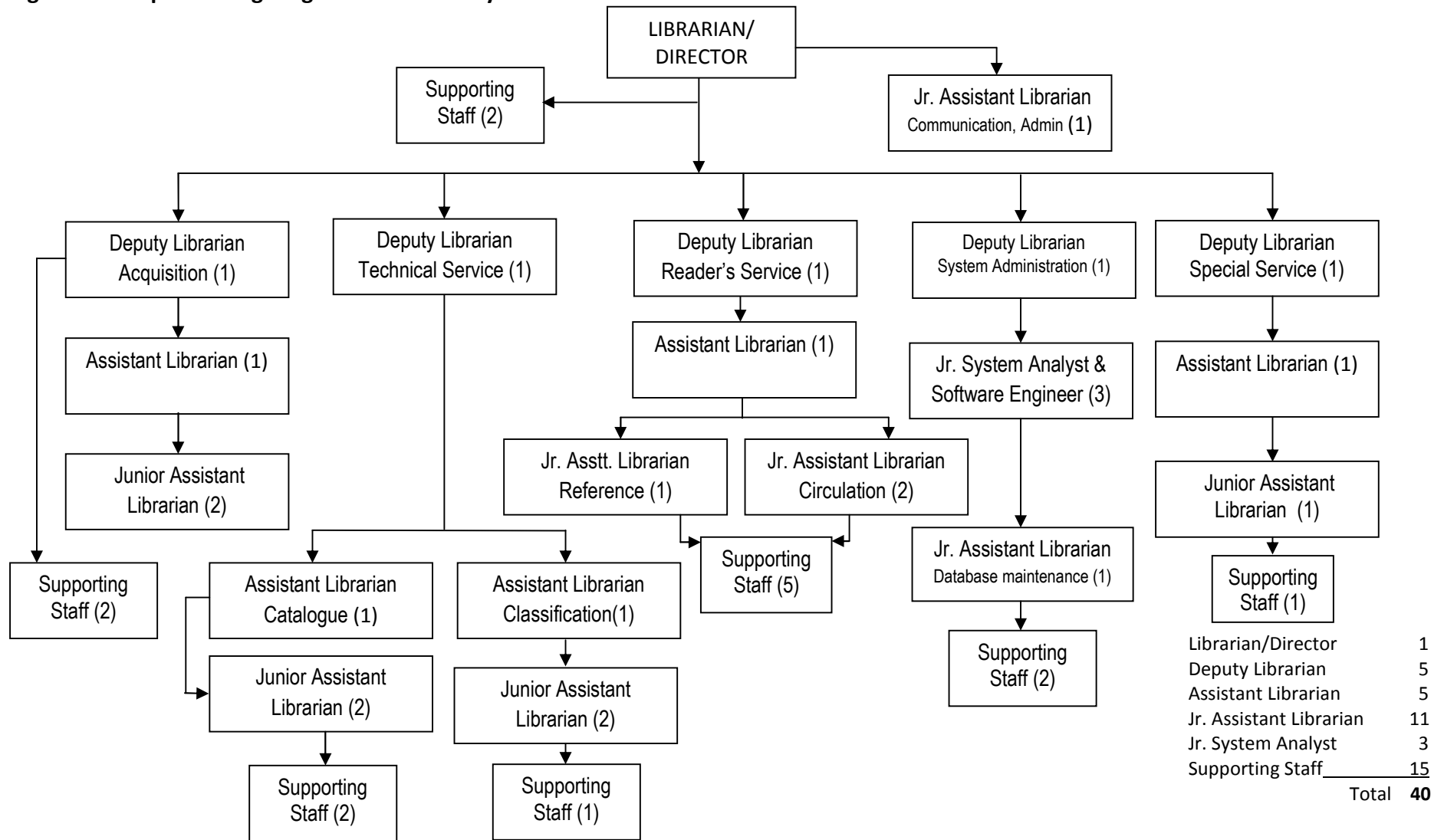


Table 8.1 Qualifications of the University Library Staff (proposed)

SL	Designation & Status	Qualifications*
1.	Librarian [Equivalent to the University Professor]	(a) I or II Class Master degree in Information Science and Library Management/Library and Information Science; (b) At least 10 years experience as Deputy Librarian in any University library; (c) Ph.D degree or equivalent research work in the field; (d) In certain situations training in computerization /information technology/specialized areas may be taken into account.
2.	Deputy Librarian (General) [Equivalent to the Associate Professor]	(a) Same as (1) (a) (b) At least 5 years experience as Assistant Librarian in a university; (c) Same as (1) (c) (d) Same as (1) (d)
2.1	Deputy Librarian (System) [Equivalent to the Associate Professor]	(e) Same as (1) (a) (f) At least 5 years experience as Assistant Librarian in a university; (g) Same as (1) (c) (h) Additional Masters/Higher Diploma in Computer Science & Engineering
3.	Assistant Librarian [Equivalent to the Assistant Professor]	(a) Same as (1) (a) (b) At least 5 years experience as Jr. Assistant Librarian in a University Library; (c) Same as (1) (d)
4.	Jr. Assistant Librarian [Equivalent to the Lecturer]	(a) Same as (1) (a) (b) Good command in Computer Applications and IT;
4.1	Jr. System Analyst/System Engineer [Equivalent to the Lecturer]	(a) Same as (1) (a) with Higher Diploma in Computer Science & professional course certified as CCNA, RHCP or equivalent and OCP certified or more (b) BSc in Computer Science or equivalent

* Qualification will be the same for the both type of the universities.

Proposed Standard

✧ **Recruitment Ratio:**

- 50% promotion, 50% direct recruitment from the post of Deputy Librarian;
- 67% promotion; 33% direct recruitment from the post of Assistant Librarian;
- 100% direct recruitment from the post of Junior Assistant Librarian;
- 50% promotion; 50% direct recruitment for the post of skilled/semi skilled & supporting staff.

✧ **Hierarchy:** There would be four layer administrative hierarchies for the case of university library staff.

✧ **Pay Scale:** Pay Scale would be similar with the faculty positions adopted by the UGC of Bangladesh; selection grade, senior scale and seniority would as per UGC and institutional practice.

- ✧ **Status of the Library Professional Staffs:** The status of the library professional staffs would always be equal to the faculty/teaching staff of the university. University librarian should always be professional.
- ✧ **Qualification:** Qualification would be devised by the UGC.

Library Auditing

The general definition of an audit is an evaluation of a person, organization, system, process, enterprise, project or product (Audit, n.d.). Auditing in library management refers to the Quality Audit (QA) by which library services and performance are measured in terms of documentation, resource management, human resources management, innovative planning, service, collection and premises, etc. 'During the past two decades, the quality management approach has gained a foothold as well as in the service sector including universities. In both the public and private sectors, libraries are service organizations and as such, they exist in dynamic environments where the demands of the users seem to become ever more difficult to meet (Balague' & Saarti, 2009, p.227)'.

Auditing is necessary in university libraries where users' satisfactions are very hard to meet and challenges have been increasing towards achieving its target. University libraries of Bangladesh should be brought under auditing of its various sectors to ensure international standard in term of service and quality. Library auditing should be done related to:

1. Building library collection
2. Service evaluation
3. Measurement of user satisfaction
4. Human resource management
5. Environmental and safety system
6. Various external and internal auditing related to
 - a. Annual stock taking
 - b. Library expenditure and income evaluation
 - c. Perfection of task completion and achieving the target
 - d. Performance evaluation of the employee
 - e. Documentation and filing
 - f. Knowledge management

- g. Software selection
- h. Use of IT in housekeeping operations

International Standard Organization (ISO) has been introducing several quality standards to ensure standard at service sector. ISO 9001:2000 is one of the possible ways to manage quality in an organization. This is a generic quality standard that appeared in 1987 (published 1st time) to be applied to all types of organizations in all sectors. Following clauses, key factors and their implication in the libraries devised by ISO 9001:2000 have been proposed for the university libraries of Bangladesh:

Table 8.2 ISO 9001 clause, key factors and their implication in the libraries

ISO 9001 clause	ISO key factors	Their implementation in the libraries
4.1	Complete management system	University's commitment Process mapping Integrating library to the university's core processes
4.2	Documentation	University's/library's quality documentation Library's use of the internet- and intranet Applications
5.1	Management involvement	Re-organization of the services and library's management
5.2	Customer focus	Strategic decision in service production
6.1	Managing the resource optimization	Constant cost/effective analysis Yearly negotiations with the university
6.2	Human resource management	University's strategies and reporting procedures Tailored programs for every member of staff
7.2	Customer-related process approach	Integrating library's processes to the university's core processes
7.3	Innovative design and development planning	Project work Networking nationally and internationally
8.1	Measurement	From collecting statistics into analyzing indicators Internal and external auditing
8.2.1	Customer satisfaction	User surveys and constant feedback

Source : Balague' & Saarti, 2009, p.236

For internal auditing university librarian should have extensive knowledge on quality issues. He/she will be an expert and will lead as an internal auditor to ensure qualities prior to going to conduct external audit. External auditor may be a firm or a body appointed by the university authority who will conduct auditing neutrally to recommend for enhancement of qualities.

LONG TERM DEVELOPMENT OBJECTIVES

Development objective of the library: To fulfill long term objectives of the library and to tackle the probable challenges in higher studies in next few decades, university library should take comprehensive steps for its continuous development. In line with the changes, library should take timely measures to meet users' demand. Technology has been developing in such a speed that next generation of educational system will be on virtual environment. To fulfill the virtual requirements university library should take preparation from its very beginning. Access to the e-resources should be increased. Digitization of materials should be completed. OPAC should be introduced urgently. In the context of the changing scenario and knowledge explosion the world over, library facilities should include latest edition books, journals, magazines and reports of international and national agencies. Keeping the present broad based needs and the needs that are likely to rise in the future; four types of library services are proposed to be provided:

- university library service [charging, discharging, instructional, etc]
- reference service [general and referral]
- special services [extension service, marketing & public relation, IL, training and continuous education, printing & publication]
- e-library service [digital content, access to e-resources, access to digital archives, etc.]

Infrastructural developments: Infrastructural facilities will be needed similar with the future demands of the higher studies. New kinds of tools and technologies should be installed. Side by side, development of physical facilities, equipment, furniture, manpower and logistics supports would require to be provided.

Excellences in library facilities: Basing on the future demand, excellence in library facilities should be made. University library should be prepared as a reservoir of knowledge and repositories of history, culture and heritage.

Suggested Action Plans

Library is the heart of the university. No university can provide quality education without enrichment of its library. So, its continuous development is necessary. 'Development of library is a continuous process that takes a long time to have its desired form and structure. Present study reveals that university libraries of Bangladesh have been growing independently without following any national standard and systematic order. It creates problems in further development and fails to achieve its desired goals and objectives. Present day library should be designed with ensuring modern facilities and services. All modern tools and technologies should be implemented to achieve its mission vision, and objectives. To modernize university libraries there should be a national policy and standard by which every university will modernize library and activities based on their resources and financial structure.

The proposed model plan has been devised for modernization of the university libraries and divided into four phases to achieve its goal, objectives, mission and vision. The phases are:

Phasing of the plan

Appropriate phasing and providing required time for implementation are important factors of a model plan. The following Table 8.3 comprises with appropriate phasing, during and achievements of the model plan:

Table 8.3 Phasing of the Plan

Phase	Duration	Achievements
First Phase	[0 to 2 years]	Strategy, and goal setting
Second Phase	[3 to 7 years]	Objectives
Third Phase	[8 to 12 years]	Mission
Fourth Phase	[13 to 18 years]	Vision

Implementations of different phases have been described in the following model plan development life cycle:

Development Life Cycle

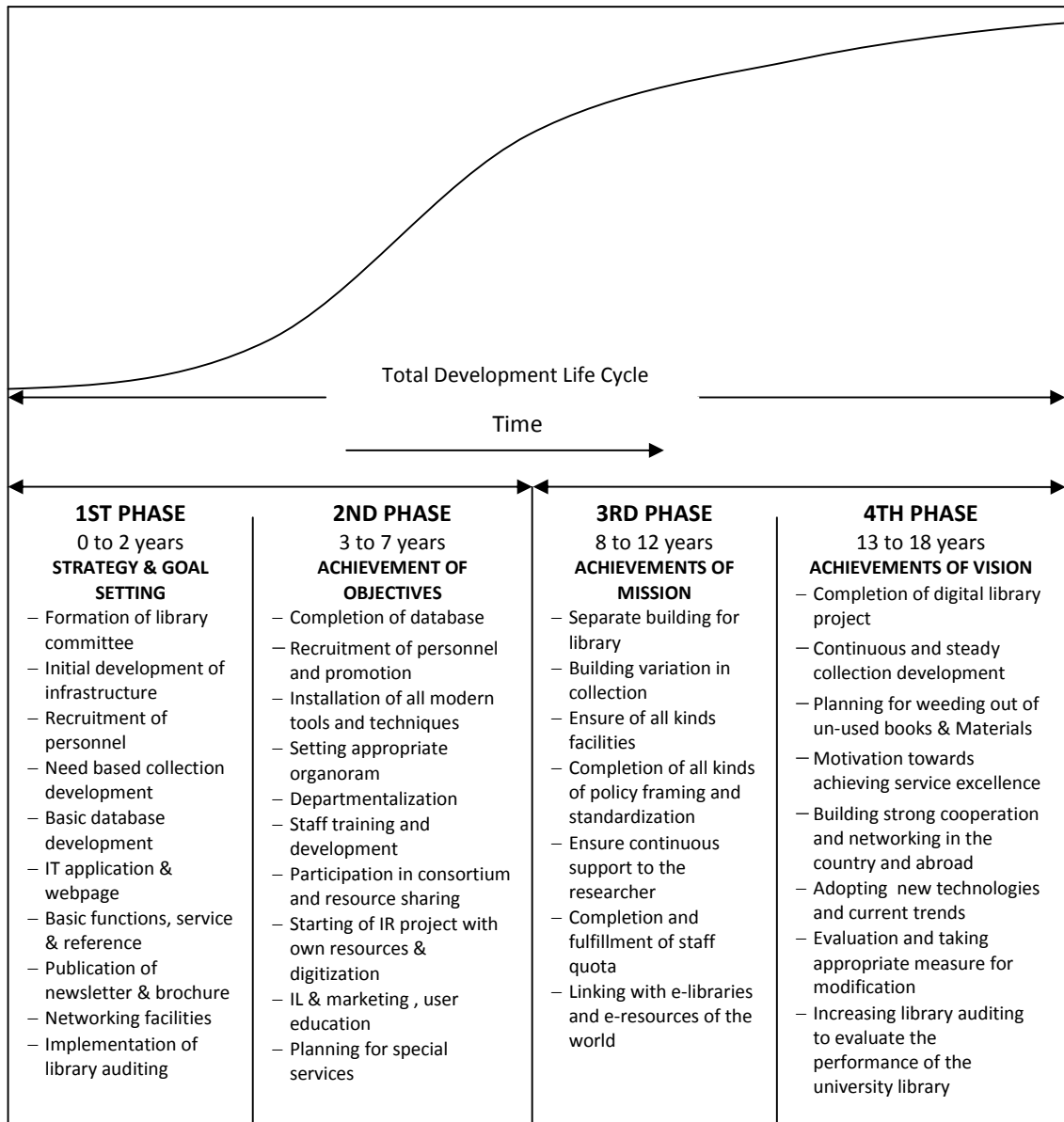


Figure 8.3 Model plan development life cycle

First Phase

Suggested measures for immediate action include:

1. A library committee should be formed to monitor library activities and to adopt library policies from the first day of the university. The Vice-Chancellor or Pro-Vice Chancellor will be head and the librarian will be the member secretary of the

committee. Representatives from every department will be member and University Registrar and Treasurer will be members as ex-officio.

1. In order to make environment congenial to the users and suitable to provide effective services, there is a need to construct a detail development plan by the university authority immediately. A professionally qualified interior decorator/consulting firm and they should be appointed to find out all the deficiencies of library materials and other infrastructural facilities as chair, tables, counter, screens, partition, color, interior and exterior layout of the library building and to prepare a report for modernization.
2. In the light of the detailed report, necessary actions should be taken to modify all required components and to take a development program based on priority and economic condition. Basic infrastructure like wash room facilities, provision for air cooler, security measures, screens, lighting, and ventilation should be provided on the basis of the proposals given by the library committee.
3. Book stock, space for books, book for students and faculties and budget should be on the basis of the following formula:

1. For book stock $60^B/S$ $400^B/F$
 Keeping 4: 1 Ratio

2. For Space

75%	25%
Stacks	Readers Staff

a. Each reader 30sft

b. 25-30 % seating at any one time

c. 30% of (b) for Cubicles

d. Metcalf Standard
 20,000 - 200,000
 Sq ft. 1: 10V

3. For Library Budget 10% of University Budget $60 : 40$ (Est. : Oper.).

Source: Association of Indian Universities (n.d.)

4. Professionally qualified personnel should be recruited by forming a selection committee. Action should be taken for immediate fulfillment of the vacancies. Job specification and job description should be clearly stated. They should be given target for completion of the tasks within stipulated time.
5. Need based acquisition of books and other ICT materials should be acquired. Number of text and reference books should be on the basis of number of the student and faculties.
6. A library database should be made using Integrated Library Software (ILS) and data should be entered into the database according to internationally standard format which may suit to data exchange and capturing from Z39.50 protocol.

7. Basic functions like acquisition, processing, circulation, and reference should be performed by making appropriate departmentalization of the activities.
8. Modern tools and techniques [bar code, photocopier machine, printer, scanner, digital camera, close circuit camera, etc.] should be implemented for library activities as well as library webpage should be made.
9. Publication of newsletter and brochure should be started on regular basis stating various activities of the library.
10. Provisions for training of the existing personnel should be made with immediate effect.
11. Library should be provided with communication as well as networking facilities by providing telephone and broad band network connectivity.
12. Implementation of library auditing [internal & external] to measures service quality and taking further steps for improvement.

Second Phase

1. Completion of library database and make functioning its entire module like acquisition, processing, circulation and reference. Taking all the measures for providing automated services and facilities.
2. New recruitment and promotion of the existing personnel and setting hierarchy and appropriate organogram. Continuous staff training and development.
3. Setting up an Electronic Resource Center (ERC) with sufficient number of computer with provision of Internet and fulltime connectivity.
4. Installation of RFID with security gate and similar other technology.
5. Subscription of electronic resources i.e. electronic journal, e-book, e-archives, etc.
6. Participation in local and international consortium and in networking and resources sharing activities.
7. Introduction of library marketing and information literacy program.
8. Introduction of special service like extension service, training and continuing education, etc.

9. The task of up-gradation of ILS should be made.
10. System of quarterly reporting of progress of work should be introduced.
11. Performance rating of library personnel may be started within the shortest possible time.
12. In order to make Internet services for e-library easily available for the students and teachers, immediate arrangement may be made to take Wi-fi service to reduce the pressure on computer lab and ERC.
13. The library management needs to procure digitized library materials and preserve the same in the computer for use of students and teachers.
14. Institutional repository should be established by own research and other materials. Subsequently other materials should be digitized those who have copyright permission.
15. Initiatives are needed to be taken to explore the possibility of arriving at MOU/agreement with libraries of different universities/institutes/bodies of well-repute for exchange of rare library materials that are intended to be used by researchers.
16. In order to facilitate teachers/fellows to use library materials, intending teachers need to be provided with independent desk in the library for working.
17. Getting preparation and installation all the required rest of the component for introducing digital repositories and libraries.

Third Phase

1. Allocation of separate building for library or based on proposed space requirement and ration given in 1st Phase article no. 4. The said building may also accommodate conference room, auditoriums and audio visual laboratories.
2. In order for creating a reservoir of data sources on various subject fields, information, policy documents, government and non-government publications in the area of business and other subjects, journals, and magazines in various fields, unpublished theses, monographs, reports, the library may organize archives as well as institutional repositories.
3. Ensure of all kinds of physical as well as technological facilities and the task of up gradation of ILS software.

4. Completion of all kinds of policy framing and standardization of works and facilities.
5. Ensure continuous support to the researcher and providing referral and all kinds of documentation services.
6. Reference library to be used not only by users of the Faculty, but also by all researchers of the country in particular and the world community in general. These needs are to be organized in a manner so as to provide ready reference through Internet and links to the web page.
7. In order for ensuring automatic monitoring of arrival and departure of the library personnel, an automated punching system may be introduced.
8. Employee strength needs to be enhanced in line with the increase in the number of users and library materials.
9. The Faculty authority needs to explore the possibilities of linking all the e-libraries of the renowned universities of the world to the web site of the Faculty which is also linked with the central library site.

Fourth Phase

1. Fourth phase is for achieving long term vision of the model plan. In this phase university library will reach to its culmination ensuring all kinds of physical and technological facilities. No major physical development is need not to be done. Every development will be continuous and steady if the authority does not decide to open double shift or evening shift study system in the university. If it is seen, everything will be increased based on the ration and proposed plan as described in the First Phase.
2. Completion of the digital library project and declare the library as a full-fledged digital library.
3. Planning for weeding out of the unused materials. If the university promotes research, the process of the weeding out will be slower that other type of the university. Basic rules and standard set by the university should be followed during weeding out of library resources.
4. Motivation towards achieving service excellence by providing basic and supplementary services to the users. Continuous user education and IL program should be conducted to hold continuation of the user satisfactions.

5. Building strong cooperation and networking in the country and abroad. Relation with the vendor/publisher should be continued.
6. Adaptation of new technologies which arrived over the period of time if it has not taken into consideration.
7. Evaluation and taking appropriate measure for modification of the program which has been taken over the year. Monitoring and oversee of the development should be increased by the library committee to hold its continuation.
8. Increasing library auditing (internal and external) for gaining excellence in services and for the best support to education of the university.

In the 'Model Plan' emphasis has been given on ensuring basic services perfectly in the university libraries (ULs) of Bangladesh. Besides, ULs have been advised to offer some auxiliary and advanced services to the users. Emphasis also has been given on library marketing and user education by information literacy program, creation of IR and formation of consortium, resources sharing and networking among the university libraries, implementation of library advocacy and keeping good liaison with vendors and publishers. Adoption of modern tools and technologies especially ICT for library operation and administration also have been proposed in the model plan. The plan recommended to ensure best HR practice in university libraries in Bangladesh with providing in-service training and continuous motivation by giving intrinsic and extrinsic benefits to the library personnel. Implementation of a model plan takes many times. As a result, different phases have been suggested for entire period of implementation of the plan. Each phase has been divided into several action plans which have to be taken into consideration during implementation.

RECOMMENDATION FOR THE IMPLEMENTATION OF THE MODEL PLAN

Success in implementation of a model plan largely depends on systematic approach, financial and administrative support from the concerned authority. Since the independence of Bangladesh, many recommendations were made by the government, non-government organizations and individuals regarding library modernization but none of them was implemented fully. For example, the Qudrat-e-Khuda Education Commission Report 1974, the first education commission of Bangladesh after the independence, recommended for university library modernization and expansion of education but no recommendation of the report was implemented. Another five education commissions were formed in Bangladesh, but their achievements have not been satisfactory. Recently, the Kabir Chowdhury Commission (2010) has been formed but its recommendations are yet to be implemented. The picture of Bangladesh Five Year Plans is also the same. Recently, SFYP (2011-2015) has been adopted by the government by stating many good proposals but it can be assumed that a little portion will be implemented. These phenomena indicate that devising plans and policies are not enough; effective implementation of these plans for meeting the intended objectives is more important.

As it is evident from the literature review as well as the findings of this study, proper dissemination of higher education and research is almost impossible unless university libraries are modernized. Bangladesh is now going through an important period in its journey towards development and self-sufficiency. In spite of grappling with myriad problems like population explosion, unemployment, corruption, political instability and as such, the country has set itself a target of emerging as a middle-income country by 2021. The government has identified proper higher education and research as one of the main tools for achieving this target. Current Education Policy has been formulated bearing this objectives in mind. In such a situation the proposed model plan will be a helpful instrument in Government policymaking and setting standard for modernization of the university libraries of Bangladesh.

Researchers and students in this field will also find a new direction for further research.

RECOMMENDATION

Based on the review of existing literature, discussion with the stakeholders, and key administrators of the university and observation through field visit and analysis of the survey data, the researcher would like to put forward the following recommendations for ensuring successful implementation of the model plan and thus establishing the university library as hub of excellence for providing information and assisting in research and development in higher studies of the country:

1. Modernization of university libraries is a comprehensive task. The whole process needs sufficient infrastructural facilities in terms of physical and logistical considerations. To implement the proposed model plan in Bangladesh, facilities should be provided accordingly. Building structure and architectural design should reflect the essential aspects of a modern university library. Sufficient space should be allocated for both physical and digital resources and divisions of the university library. Separate space should be allocated for executives, staff, photocopy corner, cyber center, wash room facilities, computer work station, student seating, seating for researchers, seating arrangement for teachers, space for strategic arrangement of all kinds of furniture and equipments, server and IT facilities, stair ways and lobbies. Necessary technologies, skilled manpower, administrative support should be provided. And lastly, being given sufficient time to grow step-by-step towards achieving its goal.
2. Differences in educational system should be eliminated. Government should take steps to introduce modern and contemporary educational policy keeping basic facilities like library and laboratory. Library should be set up from the primary to the higher levels so that students can be familiar with library and form their reading habits from very childhood. Library based educational system should be introduced.

3. Reading habits should nurture in the minds of both the faculty and the students of the university. Library oriented tasks should be given to the students so that student come frequently to the library and understand its importance. Research activities as well as library facilities should be increased. Library services like documentation, reference, ready reference and long-range service should be introduced so that students can leverage its full benefits.
4. Social recognition of the library executives should be increased by giving them appropriate status. Library professionals should be given competitive salary within the university. Motivation should be provided by giving promotion and incentives in due course. A unique organogram should be established throughout the country to eliminate grievances among the employees. University authorities should provide fulltime professional librarian in each university library rather than a part-time teacher. Keeping the library open for longer hours for the benefits of the students. Sufficient staff should be provided for this reason.
5. Sufficient library budget allocation, monitoring and evaluation at every stage are key for successful implementation of the Model Plan. A comprehensive and strategic development plan (phasing) should be taken by the authority each year so that the library can grow simultaneously with the university. A logical and proportionate budget allocation would be provided for physical (hard copy) as well as digital (soft copy) resources collection. There should be sufficient budget provision for IT purchase, database creation and maintenance, training and development, recruitment of skilled manpower and so on. In this respect UGC can play a pioneering role for providing annual grants for libraries.
6. Political stability and commitment is very much needed for the overall development of the country. The culture of avoiding effective plans of one government's by the other, soon after taking the power should be eradicated. For continuous development in the country, all the parties and people should be unified and should raise voice simultaneously. Without everyone's participation in national development no sector can be modernized.
7. Professional experts should be included in national policy making especially in education commission, FYP, information council and in UGC. Separate ministry and various directories for library and information sector should be established

as well as a national accreditation council should be established who will monitor its activities.

8. University Act/amendments should clearly state the universities overall development including libraries. The Act will set up standards for various department, its activities, and procedure of operation. This will finalize the pay scale, organogram, recruitment process, selection criteria and terms and conditions of appointment. During formulation of the Act for setting up new universities, subject expert should be appointed from various fields. Librarian should be given authority and scope to participate in various policy making committees so that modernization activities can be carried out.
9. In consultation with the library experts as well as international bodies and departments, library standards should be devised by the government. For this reason ALA, ISO and professional and international bodies can be helpful sources.
10. To implement the proposed model plan for university library modernization and development technological barriers should be eradicated. The findings of this research indicate that the library requires integration of ICT but encountered many barriers. The major barriers are lack of confidence in implementation, lack of competencies and lack of access to resources. ICT resources like software, hardware, effective professional development, and technical support for the successful implementation should be taken into consideration.
11. Library modernization requires an integrated library software and database. The selection of an open source software and creation of new software both are tough tasks. Pedagogical selection of software for library would be a blessing. So, if it is customized software, should follow all the technical aspects during analysis to implement it. If it is open source free software the best one should be selected which will be suitable for the university's aims and objectives. As an example, Koha, DSpace and GreenStone can serve the purposes of the university libraries.
12. Networking and resources sharing activities should be increased. The data communication support for the establishment of network at local, regional,

national and international level should be encouraged by the government. For this purpose all technical barriers should be eliminated. There should be a common standard for all types of users.

13. Formation of national consortium for sharing resources with minimum cost should be encouraged. Consortium may be formed among public universities only or in collaboration with public and private university libraries. Consortium not only saves national reserve of foreign currencies but also forms the platform for international collaborations.
14. Copyright permission and preservation of digital materials should be acquired from subscription level. Other hard, copies which are going to be digitized should be taken prior permission from the author or publisher.
15. Training for library and information personnel in the application and use of computers in university libraries need to be provided. Professionally skilled human resources are very much required for successful implementation of the proposed model plan. Programme should be undertaken to train university library personnel in handling information technologies. Necessary steps also should be taken to develop properly trained and competent professional human resources for initiating and maintaining information technology based libraries in the universities of Bangladesh. The training should cover data entry, search information from library database, information retrieval, in-house IT operation, office maintenance, e-mail, e-governance, Internet surfing, and institutional repository. Professional library associations in Bangladesh should organize short term training programmes for library professionals in the field of application and use of IT in library and information services.
16. All the barriers from the administration should be removed with the cooperation of the university librarian. Disbursement of fund and prioritizing the library purchase should be encouraged. Purchase of learning resources should be top most priority.
17. Gap between urban and local areas in respect of technology use should be eliminated. Use of modern technology should be reached to sub-cities and

small cities of the country. Awareness among the users should be made by campaigning various activities.

18. All kinds of library and information technology should be used to implement the proposed library model. Technology covers communication as well as information and computer related technologies. Computer technology covers: database organization and management, library management and operation. Communication technology includes: library networks and information networking. Library technology includes: classification, cataloguing/indexing, database creation and CAS/SDI. Technical communication covers: technical writing, editing and publishing and reprographic technology includes: photography, microfilms, optical disc, audio-visual materials, etc.
19. Collection of digital resources should be encouraged rather than hard copies in Bangladesh the reality is some of the hard copies get lost through traditional mailing system in APSO and GPO. Online purchase of books and e-books should be encouraged for ensuring quick and smooth library services for users. At the same time, tender system for purchase of books should be dropped from all universities as this is very time consuming and hinder library services. Issuance of (library resources import) licenses should be accelerated and letter of credit (LC) facilities should be opened for all with a minimum of deposit.
20. Trust bodies of the private universities should realize the importance of the library in service point of view rather than the business. They should be very sympathetic and to invest for the use of modern information technology in university libraries of Bangladesh
21. Library marketing and public relation activities should be increased. Various modern social communications systems should be applied in library service marketing. Social media of communication is a strong channel for creating awareness and consciousness among stakeholders. At the present time marketing should be encouraged through display boards, e-mail, Web Portal, Web Notice Board, Automatic E-mail Alert, Mobile short message, Telephone, Mailing Group. Using social networking like: Facebook, Library Blog, Twitter, MySpace, Google Buzz, Digg,

Delicious, StumbleUpon, Reddit, Google Bookmarks, and so on. The strategy is that when anyone would like to share something just select it as a bookmark and publish in several media.

22. Implementation of common communication format (CCF) in processing and inputting library materials. CCF was sponsored by UNESCO General Information Programme to formulate an international bibliographic exchange format based on ISBD. CCF conforms to the ISO-2709. Without this, MARC-21 should be used for cataloguing purposes. Dublin Core Metadata and Web 2.0 should be used for making websites. All the database should be made in such a way that Z39.50 supports it in importing and exporting data. In information retrieval, common format should be used. Sufficient computer terminals should be provided for access to the resources through OPAC.
23. Digital institutional repositories should be implemented instead of traditional ones for better security of the materials. It would be a combination of in house products such as thesis, reports, research and term papers as well as scholarly articles of others that have preservation rights. Besides repositories, digital photo galleries, archives of the precious old materials and CD-Rom database should be established and maintained.
24. Information literacy program should be implemented in university libraries as a medium for user education and awareness.
25. Library security measures should be taken to protect valuable library materials. Common measures to protect resources from hazards include the installation of closed circuit camera (CCC), electronically accessed entryways, alarms on exit doors, RFID, access authorization cards, sign-in sheets, placing facilities and equipment in high-visibility area, installation of fire extinguisher, setting virus guards, firewalls, and of biometrics: the body as password.
26. Library advocacy groups should be formed in combination with library staff, trustees, stakeholders, and other beneficiaries from inside and outside the university and library professional groups. They will be the lobbyists who will advertise the library to the users and bargain with the administration and to some extent with government policy makers for achieving appropriate goals.

27. Professional bodies should come forward for promoting the libraries and library professionals to the general public. They have great role to play. They can arrange periodic training programs for the library professionals. They can act as a national support hub of the library professionals. They can campaign for the new challenges of libraries and library professionals by arranging seminar and symposium. In this respect LAB and BALID have a great role for the development of libraries and library professionals of Bangladesh.

Conclusion

During the last four decades, there have been tremendous changes in higher studies in Bangladesh. The diverse forces which compelled these changes are technology, environment, market based economy and globalization, etc. Among these the most important is technological advancement. Technology made possible to open an e-campus rather than a physical university. E-class enables students to learn and watch videos of a live classroom just sitting in their homes. During the formal classes, students are riding on the wave of information and gathering vast knowledge on any subject. Computer, i-phone, i-pod, notepad, notebook technology are seen in the hands of almost every student. Virtual campuses and video tutorial in YouTube help students in many ways. Therefore, the roles of university libraries have changed rapidly. Libraries are not mere store house of books and periodicals but the hub of learning excellence now. Traditional library services have not been fulfilling the requirements of the students. In this situation, university library modernization or redesigning its activities is the demand of the day.

The present study was conducted with an intension of proposing a suitable model plan for modernizing university libraries in Bangladesh. Efforts have been made throughout the research to determine problems related to the library modernization. A comparative analysis has been conducted to get a clear picture about the differences in problems between public and private university libraries and found no significant differences between the two libraries except few aspects. Based on the summary of the findings a model plan has been proposed and guidelines have been provided for its implementation. The researcher believes that

this research would help university library modernization greatly. University administration, librarian, library officers and students will find a significant avenue of learning by this study. Government policy makers and higher authorities will also find an updated direction for further development of library aspects.

Limitation of the Study

Despite the various opportunities for conducting research in Bangladesh, there are also many obstacles lie in the way towards its accomplishment. The present study on Planning for modernization of university libraries in Bangladesh faced many seen and unforeseen impediments during completion. During the survey, field visit and discussion with the professionals the researcher found many problems of university libraries of Bangladesh that need to be solved as soon as possible. The problems included the infrastructural facilities and the application of the modern tools and technologies. It would have been desirable to include everything in the proposed model plan but due to various limitations this could not be. The limitations of the study are stated below:

- The research narrowed its focus with the term university libraries only. Two important universities like The National University (which coordinates more than 1600 colleges/institutes) and Bangladesh Open University (that has 12 Regional Resource Centers (RRC), 80 Coordinating Office (CO) and 1106 Study Centers (TC) all over the country) were not included in the study sample.
- The cost benefit analysis of the proposed model has not been taken into consideration. Furthermore, the technological aspects for implementation of the model have also not been taken into account due to resource constraints.

Future research

The modernization program of academic libraries in general and university libraries in particular is a wide field of study. This research was conducted based on university libraries only and many issues were left out during the study. To ensure quality education and research in the universities of Bangladesh libraries should be

modernized. All modern facilities should be introduced in the libraries. A continuous development effort should be made by the government as well university controlling authority. A continuous research activity should be undertaken throughout the country for better solution of the present problems and to provide guidelines to the policy makers. Based on the results of this study, the following areas are suggested for future research.

- ➔ Information management system in university libraries of Bangladesh;
- ➔ HRM practice in university libraries of Bangladesh: A study of some selected private and public universities;
- ➔ Library movement in Bangladesh: an evaluation of university libraries;
- ➔ Problems and prospects of forming consortium of university libraries in Bangladesh;
- ➔ An assessment of user education practice in university libraries of Bangladesh;
- ➔ Librarian Training and Professional Opportunities in Bangladesh: A study on selected academic libraries;
- ➔ Professional competences in Libraries: A study on Academic Libraries in Bangladesh;
- ➔ In-service Training for non-professional and professional library staff of Academic Libraries: A case study of Bangladesh;
- ➔ Study on staff attitude towards IT implementation;
- ➔ Study on user attitude towards IT based information services;
- ➔ Impact of Internet on information access;
- ➔ Study on development of bibliographical databases;
- ➔ Resources sharing and networking;
- ➔ Use of library application software packages; and
- ➔ Library performance evaluation and user satisfaction.

APPENDICES

**Appendix-1 (A) : Questionnaire
(Librarian/Library Head)**

Appendix-1 (B) : Questionnaire (Users)

Appendix-2 : Annex Tables

Appendix - 1 Questionnaire for Librarian & Library Head (A)

[Section – I] Organizational Information

Name of the University:-----

Year of Establishment :-----

Type of the University: Public Private

Number of the Faculties/Schools/Departments :-----

Number of the Students:-----

Number of the Teachers:-----

Number of the Management Staff:-----

Address of the University:-----

Telephone:----- Fax:-----

Email:----- Websites: -----

[Section – II] Library Information

2.1 Name of the Library :-----

2.2 Year of Establishment:-----

2.3 Please mention your total number of staff with their designation/status and qualification:

Designation	Qualification	Total Number
Chief Librarian/Principal Librarian		
Librarian [Full time] or [Part time]		
Additional Librarian		
Deputy/Associate/Joint Librarian		
Senior Assistant Librarian		
Assistant Librarian		
Jr. Assistant librarian/ Library Officer		
Library Assistant		
Library Attendant		
Library Administrator		
Others Supporting Staff		
IT Specialist/ system administrator		
Others (please specify):		

2.3.1 Do you thing that the above staff pattern and size are sufficient? Yes No

2.4 **Library Time:** [a] 8:30am-5:00pm [b] 8:30am-8:30pm [c] 8:30am-9:30pm
(Please Tick v) [d] 9:00am – 10:00pm [e] Any other please specify:-----

2.5 **Library open in a week:** [a] 5 days [b] 6 days [c] 7 days [d] Others:

2.6 Number of users (per day): Institutional-----Non-institutional-----Researcher---

2.7 Library Access System: [a] Open Access [b] Close Access

2.8 Does the university have seminar/departmental libraries other than the central library? Yes No

2.9 Does the library have any rules and regulations? Yes No

2.10 Library Resources:

Books [Total number]

Item No.	Original Book	Photocopy (if any)	Total Number
Book			
Thesis			
Reports			

Journals/Magazines

[Total title]

Item No.	National	International	Total Number
Journal			
Magazine			
Bound Journal/ Magazines			
Newspaper			

Audio Visual Materials [Total]

Item No.	Original	Copy (if any)	Total Number
Audio Cassette			
CD Rom			
DVD			
Video Cassette			

Manuscript and other old documents

Item No.	Original	Copy (if any)	Total Number
Manuscripts			
Microfiche			
Microfilm			
Special Collection			
Rare book collection			
Rare Journal Collection			

Digital and Electronic Collection

Item No.	Number of Sites [vendor]	Disciplines	Total Number
E-Resources (Journal)			
E-Archives			
Database			
E-Report			
E-Thesis			
E-Book/Digital Book			

2.10.1 Please mention the following e-resources, journals and archives you subscribed and received as complementary. Please write 'p' for purchased 'g' gift/complementary in the left side box:

- JSTOR Emerald ScienceDirect Springer Ebscohost
 IEEE ACM WileyIS SAGE ACS
 HBR CJ PMUSE OARE HINARI
 AGORA OUP INASP Peri , Others (Please specify) : -----

2.10.2 Always you prefer for E-resources [a] Consortium [b] Free trial [c] individual subscription (Please Tick v)

2.11 Library Divisions

Please mention the various division/units of your library: (Please Tick v)

- Acquisition Audio Visual Processing/Technical
 Periodical Circulation/Lending Galleries
 Reference Archives Documentation Service
 Textbook Section Reprographic Rare Collection Section
 IT Division Others (please specify):-----

2.12 Library total space in square feet [please write] : -----

2.13 Student and faculty/staff seating capacity [please write]: -----

2.14 Library Automation: Do you think that your library is: (Please Tick v)

- 2.14.1 Automated
 2.14.2 Semi- automated
 2.14.4 Manually operated

If fully automated/semi automated/hybrid then mention what functions is performed with the help of computer and related technologies in your library:

- 2.14.1.1 Administrative function
 2.14.1.2 Acquisition functions
 2.14.1.3 Processing/Technical
 2.14.1.4 Circulation/Lending
 2.14.1.5 Reference services
 2.14.1.6 Documentation functions
 2.14.1.7 Serial control
 2.14.1.8 Preparing in-house database
 2.14.1.9 Other (please specify):-----

2.15 Does the library have? [a] Card catalogue [b] Computerized catalog

2.16 Classification System followed by your university library:

- Dewey Decimal Classification System (DDC) Edition in use-----
 Universal Decimal Classification (UDC) Edition in use-----
 Library of Congress Classification (LC) Edition in use-----
 Other (Please specify)-----

2.17 Various Catalog codes and format based on ISBD, are followed for processing:
(Please Tick ✓)

AACR-1 AACR-2 ALA LC
MARC 21 Metadata Others-----

2.18 Subject Heading used for data inputting and assignment of subject (Please Tick ✓)

LC Edition in use-----
 Sears Edition in use-----
 MeSH Edition in use-----
 Other (Please Specify) Edition in use-----

2.19 Circulation System: Computerized Brown System Newark System
 Others:--

2.20 Does the library conduct yearly stock taking based on policy? Yes No

2.21 Does the library has weeding policy and doesn't weed out regularly?

Yes No

2.22 Does the library have an acquisition policy? Yes No

2.23 Does the library have a committee? Yes No

[Section – III] Library Building, Infrastructure and Furniture

[The following questions are related to the library building, infrastructural facilities and furniture planning of the library]

3.1 Has the library its [own building] or is housed in [parts of building] or a [hired building]? Yes No

3.2 If yes, was the building based on architectural/structural plan and layout? Yes No

3.3 Does the library have proper water supply? Yes No

3.4 Does the library have sufficient ventilation system? Yes No

3.5 Is there air conditioner in the library? Yes No

3.6 Does the library have humidity controlling system? Yes No

3.7 Does it have sufficient accommodation for reading materials? Yes No

3.8 Does it have sufficient accommodation for library staff? Yes No

3.9 Does it have sufficient accommodation for users? Yes No

3.10 Does your library planning reflect security measures? Yes No

3.11 Does the library have fire control system? Yes No

3.12 Do you claim that your library is an environment friendly? Yes No

3.13 Does the library have sufficient furniture and equipment? Yes No

3.14 Does the library follow any standard for overall furniture and equipment planning? Yes No

3.15 Are there any options for future development? Yes No

[Section – IV] Organizational Climate and HR Planning

The following questions are related to the overall organizational climate and Human Resources (HR) planning in the library which was determined for the scientific manpower planning.

[1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree]

SL#	Item	1	2	3	4	5
1	Institutions maintains a separate HR Department					
2	Formal HR policies are maintained in the University					
3	University maintains formal recruitment policies					
4	University librarian and HR Manager participate in selection					
5	University publishes advertisement in the popular media for recruitments					
6	University applies the popular selection devices like initial screening, interview, written examination, medical examination					
7	University offers formal orientation program to all new employees					
8	University, training needs analysis (TNA) is conducted systematically					
9	Further training and education are encouraged in the University					
10	University maintains adequate budget for training and development of the employees					
11	Formal performance appraisal system is used in the university like Graphic Rating Scale, Ranking Methods, MBO, BARS, ACR, 360					
12	The compensation of employees is directly linked to their performance in the University					
13	University's performance appraisal system is highly effective					
14	University annually does performance appraisals for promotion, pay rise, increment, for TNA, career development, termination					
15	University offers competitive salaries and benefits to the employees					
16	University conducts pay surveys to review the salaries and benefits of the employee regularly					
17	University emphasizes on non-financial benefits like job interesting , recognition, empowerment and so forth as tools of employee motivation					
18	Management has positive attitudes towards association of employees					

[Section – V] Information Service Pattern

Please mention the availability of the following services in a systematic pattern:

5.1 Current Awareness Type (CAT)

SL#	Item	Yes	No
1	Current Awareness Services (CAS)		
2	Selective Dissemination of Information (SDI)		
3	News clipping services		
4	Title Announcement service		
5	Announcement of research in progress		
6	Notification of forthcoming conference/seminar/meeting/workshop/symposium		

5.2 Condensation Type

SL#	Item	Yes	No
1	Abstract Bulleting		
2	Extracts		
3	Technical digest		

5.3 Location Type

SL#	Item	Yes	No
1	Indexes periodicals/Journals		
2	Bibliographies		
3	Catalogues		

5.4 Condensation and Repacking

SL#	Item	Yes	No
1	Reviews		
2	Handbooks		
3	Data Services		

5.5 Evaluation and Emphasis

SL#	Item	Yes	No
1	State-of-the-Art-Report [substantive topical reports that explore the current status of an issues]		
2	Trend Report [offers cutting-edge critical thought on various issues i.e. fashions, customs, etc]		

5.6 Reference Type

SL#	Item	Yes	No
1	Reader's Guidance		
2	Ready Reference		
3	Referral Service		

5.7 Back-up Services

SL#	Item	Yes	No
1	Reprographic Service		
2	Translation Services		
3	Rendering help in publishing such as preparation of charts, slides, printing, scanning, etc.		

5.8 Maintenance Services

SL#	Item	Yes	No
1	Training of documentlist, maintenance of system tools and user education		
2	Advisory services/consultation services in documentation and information work		

5.9 Literature Searching

SL#	Item	Yes	No
1	Database searching		
2	CD-Rom Searching		
3	Internet Information browsing		
4	Electronic Information Storage & Retrieval		
5	Access to any specialized Network and resources		
6	Microfiche/ Microfilm Searching		

5.10 Which of the following best describes how your library primarily provides reference service? **Please select one response.**

- At a centralized reference desk only
- At specialized/divisional libraries only
- At both a centralized desk and specialized/divisional libraries

[Section – VI] Use of Modern Technology

6.1 Equipments and technologies that are in use for library services: (Please write total number)

- 6.1.1 Total Number of Computer with multimedia :
 6.1.2 Internet Connection [dedicated IP] :
 6.1.3 Total Number of Printers :
 6.1.4 Fax Machine :
 6.1.5 Total Number of Photocopy Machine :
 6.1.6 Microfilm/Microfiche Reader :
 6.1.7 Television :
 6.1.8 Air-Conditioning System :
 6.1.9 Audio Player :
 6.1.10 CD/DVD Writer :
 6.1.11 Video Player :
 6.1.12 Spiral Machine :
 6.1.13 Laminating Machine :
 6.1.14 Telephone :
 6.1.15 Book trolley :
 6.1.16 Bar code reader :
 6.1.17 Digital Camera :
 6.1.18 Scanner :
 6.1.19 Notepad or Laptop :
 6.1.20 Multimedia Projector :

6.2. Use of Information Communication Technology (ICT) for library activities

- 6.2.1 Please mention the year of IT installation in your library activities: -----
- 6.2.2 Please mention the operating system used with its version:-----
- 6.2.3 Does your library maintain a separate Server? Yes No
- 6.2.4 Does your library have a webpage Yes No
- 6.2.5 If yes, did you follow 'information sharing, interoperability, and user-centered design feature like Web 2.0' Yes No

6.3 Library Database

6.3.1 Do you have any database where you are inputting bibliographical record for electronic or computerized cataloguing? Yes No

6.3.2 Does the library have digital archives and repositories? Yes No

6.3.3 Which software you are using for cataloguing and preparing digital repositories and archives?

LIBSIS DSpace EverGreen

GLASS Koha GreenStone

Others (Please Specify)-----

6.3.4 Do you follow international/national copyright law while you create archives and repositories? Yes No

6.3.5 Does the library have the following access/content management system?

SL#	Category/item	Yes	No
1	MyAthens [Note : Athens is an Access Management System]		
2	VuFind [Note: VuFind is a library resource portal]		
3	Joomla [Joomla the dynamic portal engine and content management system]		

6.3.6 Do you have automated serial control system? Yes No

6.3.7 Does every member of the library have Bar Code identifier? Yes No

6.3.8 What are the following search options are available to search your database?

Author Search Title Search

Keyword Search Others:-----

6.4 Library Security System: Does the library have the following security measures?

6.4.1 Close Circuit Camera Yes No

6.4.2 RFID tagging with security gate Yes No

[Section – VII] Library Budget

Total budget for Library overall development for the following year: (Please write)

SL	Budget Heads	2007-08	2008-09	2009-10	2010-11	2011-12
01	Library Expansion					
02	Furniture and Equipment					
03	Information Technology					
04	Database Creation					
05	Software Development					
06	New Personnel Recruitment					
07	Staff Development/promotion					
08	Journal/Magazines Purchase (Hardcopy)					
09	Electronic Journal & Archives					
10	Books					
11	Stationeries and Others					

****Among the total annual budget of the university please mention % of library expenditure in the year of 2010----- 2011----- 2012-----**

[Section – VIII] Library Public Relation and Marketing8.1 Do you have any Public Relation policy for your library Yes No

8.2 How do you inform your information product and services to the users?

- | | | | |
|---|--------------------------|----------------------|--------------------------|
| Through display board | <input type="checkbox"/> | E-mail | <input type="checkbox"/> |
| Web Portal | <input type="checkbox"/> | Web Notice Board | <input type="checkbox"/> |
| Automatic E-mail Alert | <input type="checkbox"/> | Mobile short message | <input type="checkbox"/> |
| Using Telephone | <input type="checkbox"/> | Printed Documents | <input type="checkbox"/> |
| Using Social Networking | <input type="checkbox"/> | Mailing Group | <input type="checkbox"/> |
| (i.e. Facebook, Library Blog, Twitter | | Others: ----- | |
| MySapce, Google Buzz, Digg, Delicious, StumbleUpon, Reddit, Google Bookmarks) | | | |

8.3 Does the library have following strategy for marketing library product/ information and services?

SL#	Category/item	Yes	No
1	Does the library arrange seminar, user training and orientation program?		
2	Do the library personnel deliver speech at the orientation to fresher?		
3	Does the library arrange library week and quiz competition regarding library?		
4	Does the library publish any newsletter?		
5	Does the library have any leaflet or brochure for users and visitor?		
6	Does the library have any Information literacy program?		
7	Does the library arrange reading competition and reader's circles		
8	Does the library shows videos and documentaries to the students		

8.5 Does the library have any discussion group? Yes No

8.4 Does your library have any special strategy for marketing information (Please specify):-----

[Section – IX] Library Cooperation and Resource Sharing

The following questions are for assessing the networking and resource sharing status among the university libraries in Bangladesh.

SL#	Categories/Item	Yes	No
1	Does your library participate in any National Resource Sharing and Networking?		
2	Does your library participate in Regional Cooperation?		
3	Does your library participate in International Cooperation?		
4	Does your library participate in any social network?		
5	Does your library participate in any consortia?		

If your answer is ‘Yes’ in any from the above, please select from the list below:

BANSLINK BDSIC INRD HeLLIS

DEVINSA INASP-Peri DSpace Community

Koha Community Greenstone Community Others (Please specify):-----

If you select any of the above, please specify area of resource sharing:

- Library various Resources Sharing Cooperative Manpower Development
- Inter Library Lending Services To subscribe e-journals/archives
- Technical Support To get access to the electronic database
- Manpower Sharing To get access to the OPAC
- Inter Library Loan To get access in the Union Catalogue
- Exchange of Learning Resources Other (Please Specify):-----
- Joint Research and Development

[Section – X] Library Advocacy

[The following aspects are intended to assess influencing power of the library staff to the decision making authority on various issues]

[1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree]
Please Tick (v)

SL#	Item	1	2	3	4	5
1	Library Committee always seeks suggestion rather than impose any decision					
2	Library administration create pressure to the University administration on various issues					
3	Librarian has sole power to select and purchase books on various subjects					
4	Librarian put demand for recruitment and hiring external experts for library development					
5	Librarian is a member of the University’s different					

	executive committees					
6	University librarian follows a definite advocacy policy for logically approach to the university administration to achieve a common goal for overall library development					
7	Librarian has power on library budgeting and strategic decision making					
8	We have some plan to promote the status of this profession within the University					
9	Librarian continuously makes communication with University key persons regarding library and its personnel development					
10	Library professionals are involved in various pressures group and association within the country					

[Section – XI] Major Problems for Modernization of University Libraries in Bangladesh

1 = not important; 2 = somewhat important; 3 = Important; 4 = very important; 5 = extremely important

SL#	Item	1	2	3	4	5
1	Lack of National Policy for university libraries in Bangladesh					
2	Lack of sufficient standard for the university libraries					
3	Lack of sufficient budget					
4	Lack of the initiative of the university authority					
5	Lack of initiative of library personnel [absenteeism in job field]					
6	Lack of full time professional librarian					
7	Lack of sufficient space					
8	Lack of research and development activities					
9	Lack of vision, mission and objectives					
10	Lack of qualified professional staff					
11	Lack of knowledge about latest tools and technologies in library field					
12	Lack of library committee					
13	Lack of proper training and development					
14	Lack of proper library education in the country					
15	Lack of initiative from the professional bodies					
16	Lack of library separate building and architectural plan					
17	Inadequacy of ICT facilities					
	<i>If you feel any other point, please specify in the following :</i>					
17						
18						
19						
20						

[Section-XII] Opinion

[1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree]

SL#	Category/Item	1	2	3	4	5
1	Library should open 24 hours in a day or Maximum hours of the day					
2	Duration of book loan period should be increased [i.e. for entire semester]					
3	University library should have books on various disciplines					
4	Library should have a recreational corner with a facilities of TV, Computer, etc.					
5	Librarian and library staff should always be professional					
6	Librarian's should have academic status like developed countries					
7	Library professionals should be provided Competitive salaries within the university					
8	More technological facilities should be provided in the library					
9	Library should have its own vision mission and objectives					
10	Library should follow the standard for its various functions					
11	Library should have proper planning for smooth operation					
12	Library should have open access system					
13	To protect learning resources lib. staffs have a great responsibility					
14	10-20% of the university budget should be spent for library development					
15	There should be a national policy to run university library systematically					
16	There should be same type of organogram among the university libraries					
17	Charges should not be introduced for basic services [i.e. membership...]					
18	<i>Satisfaction level regarding the functioning of the library is very high</i>					

If the above opinion did not satisfy you in planning for modern university library, please mention the additional things in the following:

- a. -----
- b. -----
- c. -----
- d. -----

[Section –XIII] Background Information (Personal Data)

Information and Data furnished by the respondents will be treated as strictly confidential and will be used for the academic purposes. All the response will be pooled together so that individual cannot be indentified; therefore, you are encouraged to answer each question as honestly as possible.

Please write where space provided and put tick (✓) mark the item applicable to you

1. Type of the University where you work for : [a] Public [b] Private
2. Professional Type (Gender): [a] Male [b] Female
3. Age group
 - a. Below 20 years
 - b. 20-25
 - c. 26-30
 - d. 31-35
 - e. 36-40
 - f. 41-45
 - g. 46-50
 - h. 51-55
 - i. 56-60
 - j. 61-Above
4. Marital Status: [a] Married [b] Single [c] Unmarried
5. Present Official Designation:

a. Chief Librarian <input type="checkbox"/>	f. Assistant Librarian <input type="checkbox"/>
b. Librarian <input type="checkbox"/>	g. Jr. Asstt. Librarian/Library Officer <input type="checkbox"/>
c. Additional Librarian <input type="checkbox"/>	h. Library Assistant <input type="checkbox"/>
d. Deputy Librarian <input type="checkbox"/>	i. Library Attendant <input type="checkbox"/>
e. Sr. Assistant Librarian <input type="checkbox"/>	j. Any Other----- <input type="checkbox"/>
6. Please Indicate all of your professional qualifications at the time of joining the library profession:
 - a. PhD in Library & Information Science
 - b. M.Phil in Library and Information Science
 - c. M.A/MSS in Information Science & Library Management
 - d. BA/BSS in Information Science & Library Management
 - e. Post Graduate diploma in Library and Information Science
 - f. Certificate Course in Library Science
 - g. Any Others: (Please Specify).....
7. Total year of experiences in the present university:

[a] 1 – 4 <input type="checkbox"/>	[b] 5 – 8 <input type="checkbox"/>	[c] 9 – 12 <input type="checkbox"/>	[d] 13 – 16 <input type="checkbox"/>	[e] 17-20 <input type="checkbox"/>
[f] 21 – 24 <input type="checkbox"/>	[g] 25 – 28 <input type="checkbox"/>	[h] 29 – 32 <input type="checkbox"/>	[i] 33 and above <input type="checkbox"/>	
8. Overall year of experience in Library Profession/Management:

[a] 1 – 4 <input type="checkbox"/>	[b] 5 – 8 <input type="checkbox"/>	[c] 9 – 12 <input type="checkbox"/>	[d] 13 – 16 <input type="checkbox"/>	[e] 17-20 <input type="checkbox"/>
[f] 21 – 24 <input type="checkbox"/>	[g] 25 – 28 <input type="checkbox"/>	[h] 29 – 32 <input type="checkbox"/>	[i] 33 and above <input type="checkbox"/>	
9. How many persons directly report to you?.....
10. How many years have you been working in your present position?.....
11. How much promotions have you received since your first job?.....
12. How many organizations have you worked for in your career?.....

13. Have you ever participated in any of the following :

Workshop	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Seminar/Symposium	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Training on Library management	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Training on Computer Application	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Training at National Level	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
International Training program	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Training on library Database and Software	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
In-house / on the job training	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

14. If you have participated in any training / workshop/ seminar, who was the sponsoring agencies for that?

- [a] Scholarship [b] Own money [c] The training organization
[d] Managed the fund personally [e] The organization where you served

Signature-----

Date:

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 either my supervisor [Prof. Dr. S. M. Mannan, Professor, Department of Information Science & Library Management] or myself [Md. Zillur Rahman, Mobile : 01712-087311]

Appendix - 1**(B)****Questionnaire for Users****[Section-I] Background Information** (Please tick [✓] where appropriate)

1. 1.1 University type: [1] Public [2] Private
- 1.2 Name of the University:-----
- 1.3 Gender: [1] Male [2] Female
- 1.4 Age group : [1] Under 20 years [2] 20-25 [3] 26-30 [4] 31-35 [5] 36-40
[6] 41-45 [7] 46-50 [8] Over 50 years
- 1.5 Category of users : [1] Student [2] Faculty [3] Staff [4] Others:-----
[a] If you are a student [please ✓] : [i] Undergraduate (Bachelor)
[ii] Graduate (Master)
[b] If you are a faculty/Staff please mention your designation & Dept.:-----
- 1.6 Purpose of library visit : [1] Individual study [2] Group study [3] Reference work [4] Internet use [5] Preparing assignment [6] Borrowing books
- 1.7 Frequency of visit: [1] Once in a week [2] 2 to 3 times in a week
[3] 4 to 5 times in a week [4] More than 5 times in a week

[Section-II] Library Collection/Learning Resources (Please choose the appropriate one)

[5=Excellent; 4=Good; 3=Fair; 2=Poor; 1=Very poor]

SL#	Category/ Item	5	4	3	2	1
1	Text Book					
2	Reference Book					
3	Thesis and report					
4	Journal/Magazines/Periodicals					
5	Newspaper					
6	Digital Collection					
7	Online Journals					
8	Audio Visual					
9	CD-Rom					
10	E-Book					

[Section-III] Library Building, Architecture, and Infrastructure Facilities

[1 = Strongly Disagree; 2 = Disagree; 3 = Fairly Agree; 4 = Agree; 5 = Strongly Agree]

SL#	Category/Item	1	2	3	4	5
1	Location of the library is very convenient to the students and faculties					
2	Building exterior view is excellent [i.e. color, design and architectural view]					
3	Library internal environment is pleasant [i.e. AC is installed]					
4	Other facilities are available [i.e. sufficient ventilation (Exhaust Fan), humidity and dust controlling system, entrance of daylight, and sound control etc.]					
5	Sufficient space for reading					
6	Sufficient space for safekeeping area					
7	Close Circuit Cameras are installed to protect library materials					
8	Library furniture like chair, table and book shelves are standard					
9	Silent reading facilities with individual reading booth/cabinet					
10	Group study facilities					
11	Library provides wash room and water supply properly					
12	Library provides pure drinking water for users					

[Section-IV] Library Catalogue and Databases

[Please mention the availability of the following aspects]

SL#	Category/item	Yes	No
1	The library has a catalogue	Card catalogue	
		Computer Catalogue	
2	Library Database		
3	CD-Rom Database		
4	Digital Archives and database [online : International]		
5	Digital Archives [internal]		
6	Access to other library resources through networking and resource sharing		
7	Digital library items		
8	Institutional repositories		
9	Institutional Bibliography		
10	Library resources and collection of other agencies [i.e. British Council, UN, UNICEF]		
11	Library website		

[Section-V] Library Software and Searching Facilities

[Please mention the availability of the following options]

SL#	Category/item	Yes	No
1	Library Software		
2	MyAthens [<i>Note</i> : Athens is an Access Management System]		
3	VuFind [<i>Note</i> : VuFind is a library resource portal]		
4	Archival Software		
5	Database software		
6	Institutional repository software		
7	Joomla [Joomla the dynamic portal engine and content management system]		

[Section-VI] Library Equipment and IT Facilities

[Please mention the availability of the following aspects]

SL#	Category/item	Yes	No
1	Sufficient computer in the library		
2	Library entrance and exist system		
3	Online Internet connectivity		
4	Audio Visual equipment		
5	RFID tagging and security system [<i>Note</i> : book security device]		

[Section-VII] Library Services and facilities

Does the library provide the following services?

SL#	Category/item	Yes	No
1	Library materials borrowing facility		
2	Book reservation from remote location [i.e. from home]		
3	Book renewal from remote location [i.e. from home]		
4	Photocopying facilities		
5	Scanning facilities		
6	CD-Rom Writing facilities		
7	Spiral binding facilities		
8	Printing		
9	Current Awareness Services (CAS) [services on recent materials, news, etc]		
10	Selective Dissemination of Information (SDI) [based on specific request]		
11	Newspaper clipping service		
12	Online requisition services		
13	Internet browsing services with full text downloading facilities		

[Section-VIII] Library Marketing and Public Relation

SL#	Category/item	Yes	No
1	Does the library arrange seminar, training of the stakeholders and orientation program?		
2	Does the Library personnel deliver speech at the orientation to freshers?		
3	Does the authority arrange library week and quiz competition regarding library?		
4	Does the library publish advertisement through social networking? [like: facebook, twitter, etc]		
5	Does the library publish any newsletter?		
6	Does the library have any leaflet or brochure for users as well as visitors?		
7	Does the library have any Information literacy program for fresher?		
8	Does the library have reader's circle or reading group		

[Section-IX] Attitude of the Library Professionals

Weight: [5=Strongly agree; 4= Agree; 3=Neither agree, nor disagree; 2=Disagree; 1=Strongly disagree]

SL#	Category/ Item	5	4	3	2	1
1	Librarian is very much cordial to increase service quality					
2	Behavior of the circulation desk officer is amicable					
3	Library personnel helps to get materials easily					
4	Cooperation in reference section is very good					
5	Behavior of the supporting staffs are very good					
6	Library staffs are very much professional					
7	Library staff overall cooperation is satisfactory					

[Section-X] Advocacy from the part of the Users

SL#	Category/ Item	Yes	No
1	User can complain for anything to the library authority		
2	User has opportunity for selecting library resources [books, journals, etc]		
3	User can change service pattern by putting their opinion		

[Section–XI] Overall Impression on the library

Weights: [Strongly Agree = 5, Agree= 4, Undecided = 3, Disagree = 2, Disagree strongly = 1]

SL#	Category/ Item	5	4	3	2	1
1	The library does not possess recent books in the collection					
2	Like to search resources in the open shelves					
3	Close access collection (rare & reference)has been carefully selected					

4	Whenever visit the library like to see among recent books on display board					
5	The library does not weed old books of research value					
6	The present staff size of our university library is sufficient					
7	library is operating with modern tools and technology					
8	Overall our library operation and activities is satisfactory					
9	Considering all the facilities (mentioned above), provided by the library satisfaction level is very high					

[Section–XII] Opinion

Weights: [Strongly Agree = 5, Agree= 4, Undecided = 3, Disagree = 2, Disagree strongly = 1]

SL#	Category/Item	1	2	3	4	5
1	Library should open 24 hours in a day or Maximum hours of the day					
2	Duration of book loan period should be increased [i.e. for entire semester]					
3	University library should have books on various disciplines					
4	Library should have a recreational corner with a facilities of TV, Computer, etc.					
5	Librarian and library staff should always be professional					
6	Library personnel should have status like faculties					
7	Library professionals should be provided Competitive salaries as other departments within the university					
8	More technological facilities should be provided in the library					
9	Library should have its own vision mission and objectives					
10	Library should follow the standard for its various functions					
11	Library should have proper planning for smooth operation					
12	Library should be open shelve system					
13	To protect learning resources users have a great responsibility					
14	A certain portion of the university budget should be spent for library development					
15	There should be a national policy to run university library systematically					

If the above opinion did not satisfy you in planning for modern university library in Bangladesh, please mention the additional things in the following:

- e. -----
- f. -----
- g. -----
- h. -----

Thank you

Signature-----

Date:

APPENDIX-2

ANNEX TABLES

Annex Table 1 : Organizational climate and HR planning

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Our Institutions maintains a separate HR Department	Equal variances assumed	3.452	.081	-1.251	17	.228
	Equal variances not assumed			-1.271	16.502	.222
Formal HR policies are maintained in our University	Equal variances assumed	.627	.439	-.797	17	.436
	Equal variances not assumed			-.788	15.374	.443
Our University maintains formal recruitment policies	Equal variances assumed	.000	1.000	.361	18	.722
	Equal variances not assumed			.361	17.996	.722
In our University librarian and HR Manager participate in selection	Equal variances assumed	2.311	.147	-1.165	17	.260
	Equal variances not assumed			-1.151	15.488	.267
Our University publish advertisement in the popular media for recruitments	Equal variances assumed	.311	.585	-.199	17	.845
	Equal variances not assumed			-.199	16.939	.844
Our University apply the popular selection devices like initial screening, interview, written examination, medical examination	Equal variances assumed	.020	.889	.461	17	.651
	Equal variances not assumed			.461	16.801	.651
Our University offers formal orientation program to all new employees	Equal variances assumed	2.087	.166	-.308	18	.762
	Equal variances not assumed			-.308	16.062	.762
Our University, training needs analysis (TNA) is conducted systematically	Equal variances assumed	1.578	.226	-.499	17	.624
	Equal variances not assumed			-.503	16.948	.621
Further training and education are encouraged in our University	Equal variances assumed	.508	.485	-1.059	18	.303
	Equal variances not assumed			-1.059	17.654	.304
Our University maintains adequate budget for training and development of the employees	Equal variances assumed	.057	.814	-1.994	18	.062
	Equal variances not assumed			-1.994	17.997	.062
Formal performance appraisal system is used in our University like Graphic Rating Scale, Ranking Methods, MBO,	Equal variances assumed	1.064	.320	-1.572	14	.138
	Equal variances not assumed			-1.526	11.321	.155

Independent Samples Test						
BARS, ACR, 360						
The compensation of employees is directly linked to their performance in our University	Equal variances assumed	1.118	.304	-1.530	18	.143
	Equal variances not assumed			-1.530	17.442	.144
I found our University's performance appraisal system is highly effective	Equal variances assumed	.015	.902	-1.095	18	.288
	Equal variances not assumed			-1.095	17.965	.288
Our University annually performance appraises for promotion, pay rise, increment, for TNA, career development, termination	Equal variances assumed	1.840	.193	-1.120	17	.278
	Equal variances not assumed			-1.101	14.649	.289
Our University offers competitive salaries and benefits to the employees	Equal variances assumed	1.997	.176	-1.839	17	.083
	Equal variances not assumed			-1.812	14.898	.090
Our University conduct pay survey to review the salaries and benefits of the employee regularly	Equal variances assumed	1.151	.298	-2.420	17	.027
	Equal variances not assumed			-2.397	15.750	.029
Our University emphasizes on non-financial benefits like interesting job, recognition, empowerment and so forth as tools of employee motivation	Equal variances assumed	2.210	.158	-1.694	15	.111
	Equal variances not assumed			-1.722	14.686	.106
Management has positive attitudes towards association of employee	Equal variances assumed	1.024	.325	-.908	18	.376
	Equal variances not assumed			-.908	17.298	.376

Annex Table 2 : Library Advocacy

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Our Library Committee always seeks suggestion rather than impose any decision	Equal variances assumed	.672	.423	-1.853	18	.080
	Equal variances not assumed			-1.853	17.644	.081
Library administration create pressure to the University administration on various issues	Equal variances assumed	.158	.695	-1.018	18	.322
	Equal variances not assumed			-1.018	16.913	.323
Our librarian has sole power to select and purchase books on various subjects	Equal variances assumed	.094	.763	-.419	18	.680
	Equal variances not assumed			-.419	17.969	.680
Our librarian put demand for recruitment and hiring external experts for library development	Equal variances assumed	4.636	.045**	-.614	18	.547
	Equal variances not assumed			-.614	15.869	.548
Our librarian is a member of the University's different executive committees	Equal variances assumed	1.480	.240	.900	17	.380
	Equal variances not assumed			.889	15.197	.388
Our University librarian follows a definite advocacy policy for logically approach to the university administration to achieve a common goal for overall library development	Equal variances assumed	.256	.620	.000	17	1.000
	Equal variances not assumed			.000	16.880	1.000
Librarian has power on library budgeting and strategic decision making	Equal variances assumed	.189	.669	-.909	18	.375
	Equal variances not assumed			-.909	17.815	.375
We have some plan to promote the status of this profession within the University	Equal variances assumed	9.333	.007**	-1.400	18	.179
	Equal variances not assumed			-1.400	11.606	.188
Our librarian continuously makes communication with University key persons regarding library and its personnel development	Equal variances assumed	.287	.599	-.780	18	.445
	Equal variances not assumed			-.780	16.151	.446
Our library professionals are involved in various pressures group and association within the country	Equal variances assumed	2.373	.141	1.108	18	.283
	Equal variances not assumed			1.108	15.582	.285

**P<.05

Annex Table 3: Major problems for modernization of university libraries in Bangladesh

Independent Samples Test						
t-test for Equality of Means		Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)
		F	Sig.			
Lack of National Policy for university libraries in Bangladesh	Equal variances assumed	1.568	.227	.000	18	1.000
	Equal variances not assumed			.000	11.919	1.000
Lack of sufficient standard for the university libraries	Equal variances assumed	.127	.726	.871	18	.395
	Equal variances not assumed			.871	17.928	.395
Lack of sufficient budget	Equal variances assumed	.379	.546	.000	18	1.000
	Equal variances not assumed			.000	16.924	1.000
Lack of the initiative of the university authority	Equal variances assumed	1.911	.184	.805	18	.431
	Equal variances not assumed			.805	17.198	.432
Lack of initiative of library personnel [absenteeism in job field]	Equal variances assumed	.080	.780	-.268	18	.791
	Equal variances not assumed			-.268	17.990	.791
Lack of full time professional librarian	Equal variances assumed	.844	.370	1.282	18	.216
	Equal variances not assumed			1.282	17.787	.216
Lack of sufficient space	Equal variances assumed	.551	.468	-.837	17	.414
	Equal variances not assumed			-.851	16.421	.407
Lack of research and development activities	Equal variances assumed	.064	.802	-.231	18	.820
	Equal variances not assumed			-.231	17.949	.820
Lack of vision, mission and objectives	Equal variances assumed	.424	.523	.000	18	1.000
	Equal variances not assumed			.000	16.253	1.000
Lack of qualified professional staff	Equal variances assumed	1.576	.225	1.265	18	.222

(Annex Table -3 contd.)

	Equal variances not assumed			1.265	15.980	.224
Lack of knowledge about latest tools and technologies in library field	Equal variances assumed	1.274	.274	-.862	18	.400
	Equal variances not assumed			-.862	16.616	.401
Lack of library committee	Equal variances assumed	.534	.474	-.936	18	.362
	Equal variances not assumed			-.936	17.212	.362
Lack of proper training and development	Equal variances assumed	.512	.484	.000	18	1.000
	Equal variances not assumed			.000	16.605	1.000
Lack of improper library education in the country	Equal variances assumed	1.044	.320	-.249	18	.806
	Equal variances not assumed			-.249	17.958	.806
Lack of initiative from the professional bodies	Equal variances assumed	8.000	.011**	-1.809	18	.087
	Equal variances not assumed			-1.809	11.270	.097
Lack of library separate building and architectural plan	Equal variances assumed	.621	.442	-1.145	17	.268
	Equal variances not assumed			-1.163	16.497	.261
Inadequacy of ICT facilities	Equal variances assumed	1.531	.232	-.600	18	.556
	Equal variances not assumed			-.600	16.691	.557

**P<.05

Annex Table 4: Opinion

Independent Samples Test						
t-test for Equality of Means		Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)
		F	Sig.			
Library should open 24 hours in a day or Maximum hours of the day	Equal variances assumed	2.285	.148	-1.299	18	.210
	Equal variances not assumed			-1.299	15.337	.213
Duration of book loan period should be increased [i.e. for entire semester]	Equal variances assumed	2.521	.130	-2.427	18	.026
	Equal variances not assumed			-2.427	16.430	.027
University library should have books on various disciplines	Equal variances assumed	.400	.536	-1.168	17	.259
	Equal variances not assumed			-1.200	14.713	.249
Library should have a recreational corner with a facilities of TV, Computer, etc.	Equal variances assumed	1.359	.260	-1.267	17	.222
	Equal variances not assumed			-1.279	16.955	.218
Librarian and library staff should always be professional	Equal variances assumed	.363	.555	-.264	18	.795
	Equal variances not assumed			-.264	16.349	.795
Librarian's should have academic status like developed countries	Equal variances assumed	1.372	.258	-1.060	17	.304
	Equal variances not assumed			-1.103	12.151	.291
Library professionals should be provided Competitive salaries within the university	Equal variances assumed	.849	.369	-.662	18	.517
	Equal variances not assumed			-.662	14.119	.519
More technological facilities should be provided in the library	Equal variances assumed	3.194	.091**	-1.197	18	.247
	Equal variances not assumed			-1.197	11.017	.256
Library should have its own vision mission and objectives	Equal variances assumed	1.319	.266	-.889	18	.385
	Equal variances not assumed			-.889	13.826	.389

(Annex Table -4 contd.)

Library should follow the standard for its various functions	Equal variances assumed	2.164	.160	-1.332	17	.201
	Equal variances not assumed			-1.390	11.493	.191
Library should have proper planning for smooth operation	Equal variances assumed	2.067	.168	-.701	18	.492
	Equal variances not assumed			-.701	11.570	.497
Library should be open access system	Equal variances assumed	5.911	.026*	-1.589	18	.129
	Equal variances not assumed			-1.589	11.089	.140
To protect learning resources lib. staffs have a great responsibility	Equal variances assumed	2.859	.108	-1.266	18	.221
	Equal variances not assumed			-1.266	13.305	.227
10-20% of the university budget should be spent for library development	Equal variances assumed	1.568	.227	.000	18	1.000
	Equal variances not assumed			.000	11.919	1.000
There should be a national policy to run university library systematically	Equal variances assumed	3.086	.096**	-.889	18	.386
	Equal variances not assumed			-.889	12.260	.391
There should be same type of organogram among the university libraries	Equal variances assumed	2.317	.146	-.938	17	.361
	Equal variances not assumed			-.973	12.858	.348
Charges should not be introduced for basic services [i.e. membership...]	Equal variances assumed	4.250	.055**	-.840	17	.412
	Equal variances not assumed			-.866	14.222	.401
The ways your library is functioning, your are completely satisfied	Equal variances assumed	2.047	.180	-1.204	11	.254
	Equal variances not assumed			-1.250	10.138	.240

*p<.05, **p<.10

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