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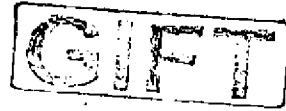
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CHICAGO, ILL.

Automation in the Public Libraries of Bangladesh: A Plan for Development

Automation in the Public Libraries of Bangladesh: A Plan for Development



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

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Dhaka University Library

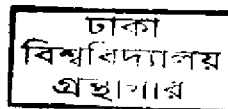


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Md. Nasiruddin

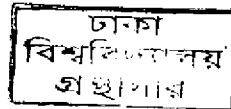
**Department of Information Science and Library
Management
University of Dhaka**

January, 2011



**Dedicated
To
My Respectable Late Parents**

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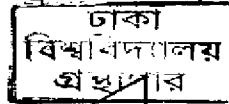





Certificate

Certified that the work incorporated in this thesis entitled
“Automation in the Public Libraries of Bangladesh: A Plan
for Development” was carried out by Md. Nasiruddin under my
supervision

449675




20.3.11
(Professor Dr. S. M. Mannan)
Supervisor

Declaration

The work reported in this thesis is original and it 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. Nasiruddin)

Date: 19/03/11

ACKNOWLEDGEMENTS

The present study was conducted under the supervision of Dr. S. M. Mannan, Professor of the Department of Information Science and Library Management, University of Dhaka. I am deeply indebted and grateful to my supervisor for his utmost sincere interest in my intellectual development and professional guidance throughout this study. He went through the thesis at all stages and offered valuable comments and a good number of suggestions for improvement in the framework of analysis, logic of argument as well as the style, presentation of thoughts and language. My sincere thanks to him is inestimable.

I am grateful to Mr. Kazi Abdul Mazed, former Deputy Director, Department of Public Libraries, Bangladesh for his encouragement and supports. He was the person who helped me a lot to provide me the literature support and sincere cooperation in completion of this study.

I extend my gratitude to Mr. Md. Maksudur Rahman, BSc. Engineer, Begum Sufia Kamal National Public Library, Dhaka for his valuable support on public library literature.

I would like to express my gratitude to all officers of Begum Sufia Kamal National Public Library for providing me the continuous support throughout the whole period of my study.

I respectfully thank to Professor Madhab Chandra Dey, Department of Information Science and Library Management, University of Dhaka whose critical discussions, advice and support with providing relevant information were always helpful. Mr. Dey also encouraged me to choose the topic of the study.

I am expressing gratitude to Kazi Mostak Gausul Hoq, Assistant Professor of the Department of Information Science and Library Management, University of Dhaka for providing me editing support and sincere cooperation in completion of this study.

I am thankful to Dr. Ms. Salma Chowdhury, Associate Professor and Chairperson of the Department of Information Science and Library Management, University of Dhaka; Dr. Md. Nasir Uddin Munshi and Dr. S. M. Zabeed Ahmed, Professor of the Department of Information Science and Library Management, University of Dhaka; Dr. Md. Saiful Alam, Associate Professor of the Department of Information Science and Library Management, University of Dhaka and all of the teachers of the Department of Information Science and Library Management, University of Dhaka and University of Rajshahi who have cooperated with me all through the period.

Other professional colleagues to whom I am expressing my gratitude are Dr. Abdus Sattar, Ex Registrar, Royal University of Bangladesh; Late Mirza Abdul Matin, Ex Registrar, City University; Dr. Fazlul Alam, Ex Librarian, Planning and Development, University of Dhaka.

In pursuing the study, I had to depend on different national and international publications. I am indebted to the authors whose work I have used in this study.

I gratefully acknowledge the patience and courtesies shown by the 60 users and 20 librarians of different district government public libraries in Bangladesh for responding to the lengthy questionnaire that generated useful and valuable data.

I can not deny the loving inspiration, cooperation and constructive criticisms of my wife Luthfunnahar Shipu that lessened much of my hardship. She has given me constant support and care throughout the whole period for the completion of the work. I will be grateful to the readers and users of this thesis if they consider my limitations with clemency.

Md. Nasiruddin

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LIST OF ABBREVIATIONS

ABN	: Australian Bibliographic Network
AHEAD	: Asian Health Environment and Allied Database
AIC	: Agricultural Information Centre
ASLIB	: Association of Special Libraries
ALA	: American Library Association
ALP	: Advancement of Librarianship Programme
ALISE	: Association in of Library and Information Science Education
BAS	: Bangladesh Academy of Sciences
B. Com.	: Bachelor of Commerce
B. Sc.	: Bachelor of Science
BSKNPL	: Begum Sufia Kamal National Public Library
B. A.	: Bachelor of Arts
BAEC	: Bangladesh Atomic Energy Commission
BPLA	: Bangladesh Public Library Automation
BALID	: Bangladesh Association of Librarians Information Scientists and Documentalists
BALICAS	: Bangladesh Integrated Library and Information Centre Automation Systems
BANBEIS	: Bangladesh Bureau of Educational Information and Statistics
BANSLINK	: Bangladesh National Scientific Library and Information Network
BANSDOC	: Bangladesh National Scientific and Technical Documentation Centre
BARC	: Bangladesh Agricultural Research Council
BBC	: British Broad Casting Corporation
BSCCL	: Bangladesh Submarine Cable Company
BCSIR	: Bangladesh Council of Scientific and Industrial Research
BBS	: Bangladesh Bureau of Statistics
BIDS	: Bangladesh Institute of Development Studies
BIRDEM	: Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders
BIT	: Bangladesh Institute of Technology
BLC	: Bangladesh Library Council
BNB	: Bangladesh National Bibliography
BNB	: British National Bibliography

BNR	: Bureau of National Reconstruction
BTTB	: Bangladesh Telegraph and Telephone Board)
BRAC	: Bangladesh Rural Advancement Committee
BUET	: Bangladesh University of Engineering and Technology
CAS	: Current Awareness Service
CDI	: Compact Disk Interactive
CDL	: Community Development Library
CDS/ISIS	: Computerized Documentation Systems/Integrated set of Information Systems
CIRDAP	: Centre on Integrated Rural Development for Asia and the Pacific
CLR	: Council for Library Resources
CONSAL	: Congress of Southeast Asian Libraries
CPL	: Central Public Library
DBase	: Database
DEVINSA	: Development Information Network for South Asia
DEVSIS	: Development Science Information System
DRTC	: Documentation Research and Training Centre
DPL, C	: Divisional Public Library, Chittagong
DPL, R	: Divisional Public Library, Rajshahi
DPL, K	: Divisional Public Library, Khulna
DPL, B	: Divisional Public Library, Brisal
DPL, S	: Divisional Public Library, Sylhet
EMAIL	: Electronic Mail
E-Books	: Electronic Books
E-Resources	: Electronic Resources
ENA	: Eastern News Agency
FAO	: Food and Agricultural Organization
FAQ	: Frequently Asked Questions
FID	: Federation of International de Documentation
HSC	: Higher Secondary Certificate
IBM	: International Business Management
ICDDR, B	: International Centre for Diarrhoeal Disease Research, Bangladesh

ICT	: Information and Communication Technology
IDRC	: International Development Research Centre
IFLA	: International Federation of Library Association and Institutions
ILL	: Interlibrary Loan
ILIM	: Institute of Library and Information Management
INRD	: Information Network on Rural Development
IR	: Information Retrieval
IR	: Institutional Repository
ISBN	: International Standard Book Number
ISSN	: International Standard Serial Number
IT	: Information Technology
LAB	: Library Association of Bangladesh
LAS	: Library Automation Software
LDC	: Least-Developed Country
LISU	: Library and Information Service Unit
M.ED	: Master of Education
M. Phil.	: Master of Philosophy
M. A.	: Master of Arts
MARC	: Machine Readable Cataloguing
NAEM	: National Academy for Education Management
NAIS	: National Agricultural Information system
NASTIP	: National Science and Technology Information Policy
NGOs	: Non-government Organizations
NHLDC	: National Health Library and Documentation Centre
NISO	: National Information Standards Organization
NLM	: National Library of Medicine
NOCUSIFLA	: National Organizing Committee United States International Federation of Library Association
NSL	: National Science Library
NSU	: North South University
NWD	: Nation-Wide Dialling
OCLC	: Online Computer Library Centre

OCR	: Optical Character Recognition Symbol
ODA	: Overseas Development Agency
OLUC	: On-Line Union Catalogue
OPAC	: Online Public Access Catalogue
PANSDOC	: Pakistan National Scientific and Technical Documentation Centre
PC	: Personal Computer
Ph. D.	: Doctor of Philosophy
PIB	: Press Institute of Bangladesh
PLs	: Public Libraries
POPLINE	: Population Information Online
POPSI	: Postulate based Permuted Subject Indexing
R & D	: Research and Development
RAM	: Random Access Memory
SILAS	: Singapore Library Automation Service
S & T	: Science and Technology
SAARC	: South Asian Association of Regional Cooperation
SAIC	: SAARC Agricultural Information Centre
SDC	: SAARC Documentation Centre
SDI	: Selective Dissemination of Information
SLIC	: Selective Listing of Combination
SSC	: Secondary School Certificate
UGC	: University Grants Commission
UK	: United Kingdom
UNESCO	: United Nations Educational, Scientific and Cultural Organization
UNDP	: United Nations Development Programme
UNFPA	: United Nations Fund for Population Activities
WHO	: World Health Organization
WiFi	: Wireless Fidelity
WiMax	: Wireless Maximum Forum

Chapter I

Introduction

Chapter-I

Introduction

Background

Dramatic changes have taken place in the mode of storage and transmission of information across the globe during the post second world war years. These changes have been caused mainly by the developments in computer and communication technologies and their application in the storage and dissemination of information. The second half of the 20th century has ushered in computer based system or what may be termed as “automation” or “mechanization”. Computer is the most sophisticated electronic device invented by human being for processing enormous amounts of raw data into meaningful and useful information with speed, accuracy and reliability (*Rauch 1982:117*). Its use in the automation of library activities began in the 1930s when punched card equipment was implemented for use in library circulation and acquisitions. Bush (1945) wrote about a hypothetical ‘memex’ system which he described as a mechanical library that would allow a user to view stored information from several different access points and look at several items simultaneously. Librarians then moved beyond a vision or idea for the use of computers, given the technology, they were able make great advances in the use of computers for library systems. This led to an explosion of library automation in the 60s and 70s (*Mishra: 1979*). By the mid-60s, computers were being used for the production of machine readable catalogue records by the Library of Congress (LC). Between 1965 and 1968, LC began the MARC-I project, followed quickly by MARC II. MARC was designed as way of “tagging” bibliographic records using 3-digit numbers to identify fields. For example, a tag might indicate “ISBN,” while another tag indicates “publication date,” and yet another indicates “Library of Congress subject headings” and so on. In 1974, the MARC II format became the basis of a standard incorporated by NISO (National Information Standards Organization). This was a significant development of library automation (*Thomas: 1965*).

Library automation - creation of computerized databases and information retrieval system, computerized library network and use of telecommunication for information handling - all these phenomena are not only confined within the western hemisphere

only. Countries of the eastern hemisphere also have made significant progress in this respect. Some countries have developed their own technologies - both primary and advanced. Some countries have acquired necessary technology and equipment for specific purposes. Bangladesh is one of the few countries of the world, which started automation in 1964, but it is still in its infancy as long as automation of libraries is concerned. Newer areas such as database development, library software development, creation of electronic resources, Internet access tools, electronic libraries, and information and knowledge management are being explored by libraries and information centers of this country.

Bangladesh -a small and over populated (164.4 millions) country (wiki.answers.com/Q/) is ranked as 129th (according to the Human Development Index-2010) developing countries out of 169 countries and one of the 48 low income group nations of the world. The country is striving hard to flourish its educational sector within its limited resources after it achieved its independence in 1971. Although the per capita income is around US\$685 (*World Development Indicators, 2010*) Government of Bangladesh has given top priority to education and ensured highest budgetary allocation to education for the last few years. The libraries of Bangladesh also are striving hard to keep pace with the rapid changes that are taking place in information and communication technology.

Rationale of the Study

Information technology relating to library systems and services has come into force in the present information age in Bangladesh. This technology has been adopted by some academic libraries in carrying out their duties and responsibilities on information services and management. However, it is quite challenging for Bangladesh to effectively adopt these technologies because of high expenses, infrastructural weakness and other problems. As a result, the country is lagging far behind. It has been observed that many library professionals, who are working in the government public libraries, are not much skilled in the application of information technology for handling information systems. On the other hand, those working in the special and academic libraries are more skilled in the use of information technology in their organisations.

It was almost about two decades back that the need of the use of information technology in libraries was felt in Bangladesh. But those efforts were isolated, institute based and confined to individual foresight, dedication and determination. If we consider these efforts in the light of a long span of 20 or more years, it is very disappointing, compared to the situation of our neighboring country India. In spite of rapid advances in computer, communications, media and related technology, most libraries could not catch up with the trend. While the application and use of IT in library and information services are developing at a rapid pace in other countries, we in Bangladesh, are making less progress as a result of lack of initiatives for using IT. Although there has been an upward trend in IT awareness among the library professionals of Bangladesh, just the desire to use information technology is not enough. Still, there are many fundamental problems in the application and use of information technologies in libraries, particularly in government public libraries.

Information Technology has brought about considerable changes in our daily life, such as use of cell phone, electronic communications, internet facilities, etc. In the same manner, development of IT has deeply affected our libraries. Almost every function performed in a library has been altered to some extent by advances in electronics, computerization and telecommunications. The manner in which libraries process, store and retrieve information is changing, as the information medium itself.

Today libraries are transitioning from manual to electronic systems. Library automation is considered essential for acquisition of documents, serial control, circulation control, indexing and abstracting, compilation work, technical processing, information storage and retrieval and reproduction thereof. An automated library has the capability to do this operation with great speed and accuracy. The basic advantage of library automation is that, once information is fed in the machine readable form, checked and verified, it can be stored indefinitely and manipulated at will for output in a large number of desired sequences or approaches. Thirty nine years have passed since independence, but in spite of substantial developments in many other fields, development of the public library system has got little attention in Bangladesh. As of today, Bangladesh has 68 government and about 1603 non-government public libraries. No public library has reached the level of development required to effectively support education, research and socio-economic development. In fact, the

government public libraries are not able to act as public libraries in their true sense. So the question arises: why public libraries in Bangladesh are not able to perform their noble role? Undoubtedly, automation of public library services will prove to be crucial in overcoming the myriad problems faced by the public libraries. If we look at the history of public library development in the developed countries, we will see that they made giant leaps in their development endeavour when they started to automate library activities. Considering this, an attempt has been made in this study to devise a plan for library automation in Divisional and District level public libraries in Bangladesh by identifying problems and showing future prospects. The purpose of the study is to provide a framework for establishing public libraries with automation facilities. As no such programme had been undertaken by any professional librarian in the past, and considering the importance of initiating such a project, I decided to engage myself in the pursuit of developing this framework.

In this study, an attempt has been made to identify the problems relating to automation in organizing government public libraries. So, at first, problems associated with the application of automation in government public libraries of Bangladesh will be identified and then necessary recommendations will be made for removing these problems. The researcher believed that, such an analysis will benefit the librarians and information scientists immensely. In view of the above, the study “automation of public libraries in Bangladesh” has been chosen.

Objectives of the study

In Bangladesh, the present government has fixed its target for achieving ‘Digital Bangladesh’ by 2021. It sounds good, but the concept of Digital Bangladesh is still not clear to most of the citizens, they are not still aware of the outputs of Digital Bangladesh (Siddique 2009). The scope of Digital Bangladesh is that the government wants to make Bangladesh fully digitised by 2021 through application of third generation information and communication technologies (ICTs). In the education sector, Digital Bangladesh visualises that by 2021 all universities, colleges, high schools and primary schools will have computerised connectivity. ICT is intended to be used as teaching-learning aids. After five years of schooling all students should have regular access to computers with Internet facilities. The goal is to improve the quality of education. It is recognized that public libraries play an important role for

establishing a knowledge-based society. Quality of education of a country is impossible without the modernization of public libraries. It has been observed that the Government of Bangladesh is not paying much attention to organize public libraries due to budgetary constraints. As a result, public libraries are suffering a lot. Public libraries are used in various purposes, such as reading, borrowing, reference, referral, browsing, photocopying, guiding, education, recreation, research, skills development, resources-sharing, networking, etc. Keeping these in mind, the current study has been proposed to develop a model plan for public library automation along with all sorts of information technology facilities in Bangladesh. This study has been, therefore, mainly designed with a view to:

- Examine the present situation of government public libraries in Bangladesh;
- Know the current status of automation facilities available in the government public libraries;
- Find out the problems relating to application and use of automation in the government public library services in Bangladesh;
- Determine how automation can be applied to library and information services in divisional and district public libraries;
- Identify the cause of decreasing of users in government public libraries;
- Find out the future prospects for automation in the public libraries;
- Get an idea of the development in computer technology usage in different activities of the libraries and information centers;
- Formulate a plan for the public library automation in Bangladesh in a cohesive manner, and
- Advice the Bangladesh Government and authorities of the department of public libraries for giving importance to the application and use of information technology with a view to realise the 'Vision 2021'.

Scope of the study

The study intends to cover the whole range of facts relating to the automation of government public libraries in Bangladesh. Therefore, Non-government public libraries were not included in the survey. At present Bangladesh have 68 government public libraries. Since it is very difficult to study with 68 libraries due to lot of technical problems, hence the study has been decided to work with 20 major government public libraries in Bangladesh which are as follows:

1. Begum Sufia Kamal National Public Library, Dhaka*
2. District Government Public Library, Gazipur
3. District Government Public Library, Manikgonj
4. District Government Public Library, Narayanganj
5. Divisional Government Public Library, Chittagong
6. District Government Public Library, Cox's Bazar
7. District Government Public Library, Comilla
8. District Government Public Library, Brahmanbaria
9. Divisional Government Public Library, Rajshahi
10. District Government Public Library, Sirajgonj
11. District Government Public Library, Natore
12. District Government Public Library, Bogra
13. Divisional Government Public Library, Khulna
14. District Government Public Library, Jessore
15. District Government Public Library, Jhenaidah
16. District Government Public Library, Magura
17. Divisional Government Public Library, Sylhet
18. District Government Public Library, Maolubi Bazar
19. Divisional Government Public Library, Barisal
20. District Government Public Library, Patuakhali

** The present government has decided to reinstate the name of Bangladesh Central Public Library to Sufia Kamal National Public Library, undoing the change made by the previous four-party alliance government. The alliance government changed the name of Sufia Kamal National Public Library to Bangladesh Central Public Library in 2004. The Cultural Affairs Ministry has taken the step in line with a cabinet decision taken at a meeting on December 14, 2009 to this effect.*

The above mentioned public libraries have been included in this study for ensuring representative-ness from 68 government public libraries.

Limitations of the scope

In the study an attempt has been made to justify the need for transforming the government public libraries into active information centers, modernizing their facilities through automation and networking. With a view to this, the hardware, software, manpower requirements, network topology, automation management and services in the public libraries have been taken into consideration. Among the automation facilities all house-keeping functions and user services such as: Acquisition Control; Serial Control; Cataloguing; Circulation; Bibliographic Databases; Current Awareness Services (CAS); Selective Dissemination of Information Services (SDI); Authority Data; Subject Profile; Inter-Library Loan Services; Document Copy and Transfer Facilities; Access to National and International Database and Cost analysis have been accommodated in this study.

Methodology

The study has applied mixed method (both qualitative and quantitative method) to explore the objectives. In qualitative method, the study has used following tools: i). sample survey using structured questionnaire with users; ii). analysis of secondary sources; and iii). observations. In quantitative method, the study has used followings tools: i). Semi-structured questionnaire for librarians; ii). discussion with library staffs, library consultants, external service providers, IT experts; iii). direct personal interview with library non professional's administrators;

Sample Design

Sample size refers to the number of items to be selected from the universe to constitute a sample. The size of sample should neither be excessively large nor too small. It should be optimum. An optimum sample is one that fulfils the requirements of efficiency, representative's reliability and flexibility. This study is primarily

concerned with the existing status of the government public libraries and its automation facilities in Bangladesh. As on of the date, there are a total of 68 government public libraries in functioning (Directory of 2008-2009 of NBC) under 6 divisions in Bangladesh (In July 10, 2010, Government of Bangladesh has announced Rangpur as a 7th division. It has just started administrative operations as a pilot project. Therefore, this division has been excluded from the survey.

So data/information has been collected from twenty public libraries (4 libraries from each of the one old divisions such as Dhaka, Chittagong, Rajshahi, and Khulna and 2 libraries from each of the one new 2 divisions such as Sylhet and Barisal), which constituted the major database for the present investigation. Hence, the size of the sample remains 29.41%. These libraries have been chosen randomly and brought under investigation based on the availability of data and their geo-physical location from six divisions but these are the representative of the public library systems and services in Bangladesh. The following are the government public libraries, which have been taken as samples and covered six divisions of Bangladesh:

Table-1: Government public libraries brought under the survey

Dhaka	Chittagong	Rajshahi	Khulna	Sylhet	Barisal
Begum Sufia Kamal National Public Library	Divisional Government Public Library, Chittagong	Divisional Government Public Library, Rajshahi	Divisional Government Public Library, Khulna	Divisional Government Public library, Sylhet	Divisional Government Public Library, Barisal
District Government Public Library, Gazipur	District Government Public Library, Cox's Bazar	District Government Public Library, Sirajgonj	District Government Public Library, Jessore	District Government Public library, Maolubi Bazar	District Government Public Library, Patuakhali
District Government Public Library, Manikgonj,	District Government Public Library, Comilla	District Government Public Library, Natore	District Government Public Library, Jhenaidah		
District Government Public Library, Narayanganj	District Government Public Library, Brahmanbaria	District Government Public Library, Bogra	District Government Public Library, Magura		

Note: Sample 20 Libraries

Data Collection of the Study

Semi-Structured Questionnaire for Librarians:

The author prepared a set of structured questionnaire and sent it to the librarians of the sample libraries for pre-testing their opinion. Pre-test has been done successfully. Based on the pre-test, a few moderations were made on the questionnaires. The author subsequently made the questionnaire exclusively self-explained for acquiring information relating to automation and new technologies used in their libraries. Then the questionnaires were sent to twenty librarians working at the representative sample libraries for collecting data and information, which were analyzed for the purpose of the study. Provision was made in the questionnaire to gather information on various variables like general information of the libraries, automation facilities, automation services, internet facilities, manpower, library collections, activities performed and the service offered. Attempts were made to know the existing problems of library automation, installation of new technologies in libraries and information services of Bangladesh. These have also been considered as variables of the study.

Structured Questionnaire for Users:

The author has designed an individual set of structured questionnaire for the users with a view to survey user satisfaction on public library services in Bangladesh, The required data have been collected through questionnaire method, supplemented by informal discussions with the users. Questionnaire consisting on 15 questions have been designed to elicit opinions from the selected groups of users of the six divisional public libraries including students, community people and children. Questionnaires were distributed among 90 users in six libraries to respond. Provision was made in the questionnaire to gather information on various variables like time spent in the public library; users' preference on different resources; public library collection; existing status of satisfaction with services; arrangement of library collection; users satisfaction on computerization of public libraries; and users satisfaction on library automation; etc. Additional data regarding the public library, its development and collection, growth and service facilities were collected and verified from office records. All these have been tabulated and analyzed (both the questionnaires are given in Appendix-II).

Based on the analysis of the general and specific objectives of the study, information on 10 broad categories of variables for librarians and 15 board categories of variables for users were identified.

The variables and indicators of the questionnaires for librarians and users are shown in Table 2 and Table 3 respectively:

Table-2: Variables and indicators for librarians of the government public library

Sl. No.	Types of variable	Indicators
01	Institutional Profile	Name of the library, year of establishment, , educational qualification of the librarian, address, telephone, fax, telex, email, pay-scale of the librarian, highest educational qualifications of the librarian
02	Users attendance	Service holders, researchers, teachers, students, tourists, newspaper readers, children, general readers
03	Facilities	Area of the library, infrastructural facilities, rented or own building
04	Library Statistics	Number of books, journals, daily newspapers, news clippings, audio-visual materials, microfilms, CD-ROMs, reports, maps, atlases, child collections, range of collections,
05	Library budget	Central budget, range of budget, budget of books, journals, salaries of employees, training cost of library staffs,
06	Manpower and ratio of library staffs to library users	Number of professional staffs, para-professional staffs, non-professional staffs, technical staffs and general staffs, ratio of library staffs to library users
07	Computer and infrastructural facilities	Year of first computer installation, computer facilities, number of computers, configuration of computers, internet facilities, CD-ROMs facilities, email facilities
08	Type of technologies used	Computer, facsimile, telex, telephone, photocopier, email, internet and others
09	Library automation services	Acquisition and budgets, methods of processing, cataloguing mode, form of catalogue, catalogue system, cataloguing status of books and journals, circulation, serial control, inter-library loan
10	Barriers of automation	automation resources, skill manpower, training, recruitment process, commitment of the library staffs, library management

Table-3: Variables and indicators of users

Sl. No.	Types of variable	Indicators
01	Personal data	Name, age, range and sex
02	Frequency of the uses	Weekly, fortnightly, monthly
03	Time spent in the library	Time allotted for users, time spent on each visit
04	Evaluation of library resources	Books, periodicals, journals, newspapers, magazines, abstract, index, CD-ROMs,
05	Library collection	Books, reference sources, periodicals, journals, research monographs, newspapers, magazines, abstract, index, CD-ROMs
06	Suggestions for collection development	Publisher's catalogue, buying books, depend on other libraries for desired information
07	Library services	Lending, reference, circulation, referral, photocopy, reader's guidance, CAS, inter-library loan, reprographic services
08	Book-shelf area	Satisfaction of users about the arrangement of resources, suggestions of users
09	Use of computers	Satisfaction of users on the use of computers
10	ICTs Use in libraries	Satisfaction level of the user on the automation services such as acquisition and budget, OPAC, inter-library loan, library cataloguing
11	Internet services	Satisfaction level of the user on internet services
12	Information need	Collect information for teaching, or study purpose, know about socio-political situation, economic activities, check references, for entertainment or recreation, write articles for seminars, conferences, review article or prepare research proposal, find statistical data, get information in discussing with the librarian
13	Reading room	Reading room space, reading room facilities, recommendations for reading room
14	Channel of information	Asking the author, attending the conferences/seminars, assessing on-line database, taking help with your senior professionals, writing letter to your friends, through telephone, email or fax, personal visit to the expert, from personal collection of your colleagues or own collection or any other channels, frequency of the use of information sources
15	Recommendations	Full automation, introducing LAN, science and technology database, provision of online Jobs, provision of more computers, users training, good software, new arrivals on line information, access through websites, on-line catalogue service, Increase trained manpower

Survey Literature

Existing literature on the subject were studied and reviewed to examine the status of activities and services along with the application of IT facilities in major public libraries of Bangladesh. A bibliography of available literature has been given at the end of the thesis in **Appendix-I**

Web-based Search

The researcher collected literature by searching a whole range of online information sources including OCLC on-line from the ERIC learning houses on Information resources, Syracuse University, the World Bank database, SALIS OPAC networking System in the National Library and National University Library of Singapore, etc. The study surveyed many web documents based on the Directory of IFLA. The study has given special priority to searching IFLA Journal, IFLA Newsletter, ASTINFO, OCLC Publications, CONSOL Publications, ASEAN and SAARC Publications, ALA soft version on the ALA sites, Internet public library publication, Information today published from Bangladesh, etc.

Observations in country and abroad

The researcher spent about one year (2003-2004) in visiting the major libraries in Dhaka and other division to search and collect the relevant materials as well data through a questionnaire for the study. Also visited the following countries: Thailand (by IFLA/ALP Fund); Hyderabad in India (by DELNET Fund); Singapore (by IFLA/ALP Fund); Boston in USA (by NOC-USIFLA); Oslo in Norway (by NORAD Fund); London in UK (self finance) for the source materials relating to this study.

Data Processing and analysis

The data were analyzed by using the SPSS 12th edition for both descriptive statistics such as frequency, percentage, mean, standard deviation, and the correlation test among the variables by chi-square. The questionnaire of this study were duly edited to verify the data recorded in the questionnaire and the data have been carefully and accurately filled in. The questionnaire was also duly coded after editing for computer input. The steps followed in the process of data are as follows:

- Entering data on the computer,

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

Implementations

The study was implemented in three steps:

Step-I: Review of all available relevant literature, preparation of reading/list/bibliography for the background study;

Step-II: Preparation and testing of questionnaires, sample design, data collection, data analysis, presentation; and

Step-III: Development of a model plan for public library automation in Bangladesh

Sources of Information

The sources of materials are described in order of importance to design the study as follows:

a. Primary Sources

These included a number of unpublished doctoral dissertations with two published dissertations in the field. Primary sources also include relevant unpublished Master's theses of the Department of Information Science and Library Management, University of Dhaka, Rajshahi. BUET, etc. as well as reports, monographs, official documents etc. that the author have used minutely.

b. Secondary Sources

Encyclopaedias, directories, yearbooks, handbooks, manuals, gazetteers and books of personal as well as corporate authorship from home and abroad were analysed. Of these, journal articles constituted the bulk of the sources consulted.

c. Tertiary Sources

These included directories, guides and other lists which were meticulously used for this study. All the above source materials were indexed alphabetically by categories of types of materials and are appended in bibliography at the end of the text.

Non Documentary Sources

These included both formal and informal sources. Formal sources covered discussions with experts, scientists, potential users, eminent scholars, educationalists, hardware and software engineers, some of whom are mentioned in the acknowledgments. The informal sources included conversation with colleagues and visitors and friends, attendance at the professional meeting, seminars.

Organization of the study

The text has been organized in a logical order in the following stages including preliminaries and appendices:

Chapter one is allocated for background of the study, rationale of the study, objectives, scope, methodology applied to the study, implementation and organization.

Chapter two deals with the literature review related to the study

Chapter three is devoted to historical background and development of government public library systems and services in Bangladesh.

Chapter four includes existing status of public library systems and services. The present scenario of automation in major public libraries in Bangladesh is stated here.

Chapter five gives the findings of the study of 20 government public libraries and the users under this survey.

Chapter six provides a model plan to introduce automation in public libraries of Bangladesh.

Chapter seven concludes with identification of problems and recommendations. The study also includes the status of public library automation in Bangladesh in relation with UNESCO manifesto and in relation with Southeast Asian Countries.

Conclusion

Public library services will be effective when complete control over the collection, improvement of the existing services (from the viewpoint of quality, user friendliness, regularity etc.), introduction of new services, sharing of resources among the libraries with same goal, avoidance of duplication and sustainable human resource development would be ensured. Manual methods of library operation have proved to be insufficient for today's libraries. Therefore, public library automation is a must for to support all types of users in a community with a high and efficient level of services (*Mannan, 1998: 117*). The study has suggested a model plan based on the survey. It is hoped that if the plan (with a few changes as the technologies are changing frequently) is followed; public libraries of Bangladesh could make substantial contributions in national development and play a significant role in the evolving knowledge society.

Chapter II

Literature Review

Chapter II

Literature Review

Review of literature is vital pre-requisite for any social research as it provides knowledge as to what data and other materials are available for operational purposes which enables the researchers to specify his/her own research problem in a meaningful context. Though most of the works mentioned here are in relation to public library automation, no single comprehensive work seems to have been conducted exclusively on automation of public libraries in Bangladesh. The relevant secondary sources both in Bangladesh and abroad of the study up to December, 2010 have been reviewed and analysed. Provision was made in the study to gather information on different variables like background information of the library, year in which computer was used for the first time, access to computer facilities, hardware and software specifications, satisfaction level of the user on the automation services etc. To facilitate easy reference, the gists of the works carried out by different researchers that deserve mention have been furnished below:

R. Gowri (1986; p.115-101) in her work on “Software Development for Indian Public Libraries” gave a detail account of the software developed to automate the ‘India Institute of Science Library’s circulation system. The objectives of the automated system are formulated after giving a thorough study of the major distinguishing features and the objectives of the then existing system. The system has been developed to work on a single terminal extending equal facilities to the staff and the users. Suggestions are made to adopt the system to work on two terminals to improve the service to the users. While discussing the cost efficiency of the system, greater emphasis is given to the factors which contribute to the cost of the system than to the actual figures.

Neelamegan (1996) in a Keynote paper on “Information and Communication Technologies for the Developing Countries especially in the Indian situation” at the 20th Islamic Conference examined the potential of the new technologies which tend to disturb conventional institutional structures, information flow patterns and interactions among individuals and institutions. He showed that, even in situations where there is access to global information, much of them are under-utilized due to

various factors such as low level of R&D and the inability of users to exploit information.

G. P. Phondke (1995; p65-73) in his study on "The Present Scenario of the World of Information" discussed elaborately the significant role of IT in the context of public libraries of India.

Sunjay (1996; p11-102) in his article "An Integrated Library Automation Package" presented an analysis of CDS/ISIS version 2.3. He maintained that, the software uses a Pascal interface, to meet the requirements of a medium sized library. Using it, one can get instant access to information, responses to queries and reports from multiple databases. It is an interactive, menu driven and user friendly package which can be used to perform all the routine functions of a library. The author indicated that, the software is capable of interrelating two or more databases for a single application like acquisition or circulation.

Varalakshmi (1992; p.117-178) in her work "Emerging trends in information technology and its impact on Library Environment" has given an account of the developments in information technology, particularly the computer and telecommunication technology and their impacts on the operations and services of libraries.

Mallinnath Kumar (1996; p17-23) traced the developments in electronics and telecommunication technology and their relevance in the field of librarianship. He discussed this issue in "Use of information technology in library services".

M. A. Gopinath (1995) in his work "CD-ROM Technology & Its Impact on Library & Information Services" cited the functional aspects, social aspects and system dynamics of library automation.

Seth, P C & Sitwala, K C (1997) in their work "Library Automation in India" have given a presentation on the Indian Scenario in respect of library automation.

Dhaka, R P S & Arora, Kamlesk (1995; p152-9) in their work “Electronic Library: a myth or a reality” discussed the factors involved in transforming the traditional libraries into electronic libraries and the future role that librarians have to play.

Abdul Rashid (1996; p122-33.) in his work “Library & information Application of Knowledge based System” gave an overview of the significant developments in library automation, particularly in library management, information retrieval, library networks, OPACs and CD-ROMs.

Ravindran, Sreedevi (1997; p11-16) in her work “Bibliographic Database: Software Issues”, presented an overview of the various packages available in India and the criteria for selecting a suitable one for libraries. Eighteen packages are covered in the paper.

Chowdhury, G G & Chudhury Sudatta (1994; p53-61) in their work “Text Retrieval & Library Management Software in India” presented the main features and facilities of ten indigenous packages viz, Catman, CDSIS/IS, Librarian, Libsys, Tulips and Wilisys etc.

Laxman Rao, N & Ford, Negel (1993; p146-51) in their work “Software Selection for Indian libraries” gave detailed discussion of the criteria for selecting software for library automation.

M. Musek (1992; p111-105) in his work “Micro CDS/ISIS” described the background and development of Micro-CDSISIS, explained the eight basic modules along with their characteristics and peculiarities. The possibility of interfacing data structures of Micro-CDSISIS with the standard for the national union catalogue is also examined. The paper concludes with a description of larger databases run by Micro-CDSISIS.

Ravindran, Sreedevi (1997; p11-6) in her work “Bibliographic Database; Software Issues” gave the latest position regarding the status of CDS/ISIS in India.

Bhargava, J. Ket al (1993; p51-66) in their work “Sanjoy: an Indian Library Automation Package based on CDS/ISIS Programme” discussed some of the

problems in the CDS/ISIS V. 2.3 package and presented the features of the Sanjay Package that overcome these problems.

Jambhekar, Ashok & Parikh, Sheryasi (1995; p95-9) in their article on "Management News Index Service: VSL Experience" described the computerized news index service provided by Vikram Sarabhai Library of the Indian Institute of Management, Ahmedabad. The system is developed using the CDSISIS package.

Herala, M Krishnananda et al (1996; p263-72) in their research paper "A Pascal interface for data validation of CDS/ISIS database records" discussed the need for data validation with respect to subfields while entering data in a CDSISIS database, and a set of Pascal programs which enables specification of mandatory fields and validation of such fields.

Chandhok, Seema (1994; 66-86) in her work "Computer Applications at IGNOU Library" described the plans for producing databases their structures, work sheets, etc. for automating acquisition and circulation systems.

Harinarayana, N S (1997; p163-72) in his work "Acquisitions through Libsys: an experience" gave a critical assessment of the Acquisition module of the Libsys on the basis of his experience in the Indira Gandhi National Open University Library. Both facilities and limitations in the Libsys to carry out pre-order searching, order record creation, order preparation and transmission, receipt of items, claiming and cancellation, invoicing, accessioning, payments, control over the funds, generation of statistics and documentation are discussed in the paper.

The *Desidoc Bulletin of Information Technology* (1997) has published two special issues on collection development in the context of networking and electronic publishing in January and March 1997. The issues covered the impact of CD-ROM databases, Internet and Digital libraries on collection development.

A D R Prashad (1995; p11-6) in his paper "Retrospective Conversion by Downloading Bibliographic Data from CD-ROM databases" explained building local databases of a library collection and its impact of sub continent libraries.

Jalote, Shikha M et al (1995; 1134-40) in their work "Retrospective Conversion" described the procedure developed in the IIT Kanpur Library (India) for retrospective conversion of their catalogue by downloading records from OCLC database and editing them.

M. Varghese (1997; p114-101) in his article on "User study on OPAC" gave a summary of selected articles on subject search and retrieval in online public access catalogues. User studies conducted in respect of OPACs, subject retrieval techniques used, etc are covered in the paper.

Chowdhury, G G & Chowdhury Sudatta (1994; p53-61) in their work "Retrieval & Library Management Software in India" described the features of CIRC; a prototype circulation control system developed using the micro-CDS/ISIS.

Narayanankutty (1997a; p78-45) has developed another module named Circulation Management System, CMS, using the Pascal Programming facility in CDS/ISIS. The system works in a networked environment and it enables management of membership, issue/return transitions, handles overdue and reservations, generates various types of statistics and reports, manages information retrieval and performs trouble shooting. He explained in detail in his work "Library Software for Academic Libraries".

Prasad (1997; p119-114) in his work "Building up a bibliographic database" explained the conversion of data elements in a machine readable form and generation of records in a suitable format can be done mechanically by devices like OCR and suitable software but the identification of data elements from a text is an intelligent job.

Nundgood and Prasad (1996; p566-563) in a joint paper "Expert Systems on Library Automation" attempted to identify the heuristics which would help in developing an expert system for the automatic identification of bibliographic data elements from the title pages of documents.

Neelameghan (1997; p542-500) in his work "The relevance of the knowledge classification formulated by S.R. Ranganathan" explained the design and development and retrieval of information from machine readable databases. The paper summarized the general theory, faceted approach and the analytical-synthesis methodology and the application of these in mechanized information storage and retrieval systems. Examples from working systems are given to demonstrate the usefulness of these techniques.

Vyasamoorthy, P (1995; p11-22) in his work "IT industry in India: a current scenario" gave a brief description of the databases commercially available in India. A survey of the Indian Abstracting and Indexing Services and Databases in Science and Technology has been carried out by S. N. Sur and B. G. Sunder Singh (1995). Altogether some 293 databases were identified and a list of them along with some analysis was published.

Kapila, Nandita (1996; p17-24) in his work "Factual Database in Biomedicine" gave an elaborate list of factual databases in biomedicine. In another paper Sur and Sunder Singh (1997) portrayed the Indian databases scenario as evident from INDAB databases. The indigenous efforts for building databases, their growth, status, availability and opportunities for development are discussed.

Seth, P C & Sitwala, K C (1997; p11-6) in their work "Library Automation in India" explained a profile of TEXINCON, a bibliographic database containing informative summaries of papers, books, standards, etc. in the field of textile and allied subjects, being produced by the Ahmedabad (India) Textile Industry's Research Association. The contents, management, publicity, marketing and sales efforts are also covered in the paper.

Kottai (1993; p47-41) in his study "A comparative study of the Dialog on disc and silver platter interfaces of Medline on CD-ROM" discussed the differences in the technology, hardware, requirements, installation procedure, coverage, searching, display and print features, documentation and user support, etc.

Kaula, P. N. (1996; p62-8) in his work "Some observations on Networking of public Libraries" observed that public libraries need to function as centers of information, making all kinds of knowledge and information readily available to its users. This is given only a low priority at present. The author maintained that it is high time the services of public libraries were modernized utilizing the benefits of modern technology and were networked to form a chain of libraries with one at the apex as envisaged by DR. S. R. Ranganathan.

Kaul, H K. (1992; p209-31) in his work "Delnet: a brief introduction and proposal for extension of its activities" argued for a network of public libraries in South Asia; highlighting its advantages in resource-sharing and in having access to more comprehensive and up-to date information. Hardware and software requirements, network topology, standards etc are also suggested.

Gaur, R et al (1994; p186-98) in their work "Benefits & Problems of networking participation: a case study of Central Road Research Institute" explained the benefits as well as the problems experienced by a library, while participating in a network, taking the library of Central Road Research Institute, New Delhi as a case. The use of LAN with client server architecture, its potential benefits in inter-library loan, cataloguing search facility through e-mail, file transfer and correspondence with member libraries and problems such as non-availability of databases, standardization, data security, financial implications etc are discussed.

Neelameghan (1996; p45-35) in his work "Automation in the 3rd world countries libraries" shown the developments of socio-political, economic and technological conditions, globalization and interdependence of nations, imbalance in development capacity etc. He has given emphasis on international assistance and cooperation in all fields including the development of library and information systems and networks, particularly in the case of 3rd world countries. He also discussed the role of international agencies such as United Nations and its various agencies and other national and international organizations and the nature and impact of their assistance and cooperation activities.

Singh, Surya Nath (1997; p121-39) in his work "The Internet: an approach to finding answers to biomedical information" described Internet as a source of biomedical information. The paper also traces the historical development of the Internet, describes the services and resources available therein, enumerates the major biomedical sources and their home page sites and examines some of the issues involved in getting connectively.

Jagtar Singh (1996; p23-30) in the work "Electronic journals of library and information studies available via the internet" has made a study of the electronic journal of relevance in the field of library and information science available via Internet. The paper attempted to compare aims and objectives, contents, presentation and organization of the electronic journals in the field, available in printed form.

Aptagiri, Devika V. (1995; p25-9) in her research article "Optical Character Recognition: a solution for the data entry bottleneck" gave an overview of the optical character recognition technology and its application in data entry in a library situation. The parameters to be considered in the evaluation of OCR software are also discussed.

Ruth Wuest (1993; p223-215) in her article "From National Libraries to the Global Village Library" explained new opportunities for traditional libraries. She observed that, national libraries have always attempted to be universal in their collections. Universal libraries such as the Library of Congress in the USA or the Bibliotheque Nationale in France expanded their collections especially during the 19th century. With the 'information explosion' in the 20th century, however, they could no longer maintain comprehensiveness. Now it is no longer the exhaustiveness and size of the physical collections, but the national libraries' ability to provide access to information through networks that will give them a new identity. Nevertheless, many national libraries suffer from an identity crisis because in their attempt to find a new role, they often overlook two factors. First, an asset of a national library is its comprehensive national collection, which is still mainly in print and is usually not lent. Second, so far libraries provide access to their collections through networks by means of the bibliographic record only. If national libraries do not develop new concepts of access

they are in danger of being bypassed in the network. In order to survive in the future, global information network access to national collections has to be multi-dimensional.

Marilyn Gell Mason (1993; 124-128) in her paper "Is There a Global Role for Metropolitan City Libraries" explored the potential participation of large metropolitan libraries in the university library now possible through developments in information and communication technologies. She observed that, in spite of unique research collections held by some of the large metropolitan libraries, international cooperation has been limited. Fuller participation depends on remote access to holdings and the ability to deliver the document upon request. These abilities are now limited by inadequate funding and, sometimes an over developed sense of nationalism. The source of funding is also significant. Libraries that receive some portion of their revenue from state or national sources appear to have more flexibility in cooperating with other libraries at every level. The development of strong national library networks also appears to be the key ingredient to global information sharing.

Abdus Sattar Chowdhury (1995; p142-148) in the IFLANET newsletter on "Automation Systems as Tools of Use Studies and Management Information" discussed that automated systems in libraries can serve as effective tools for use studies and management information by producing continuous data about usage and other system activities as a byproduct of computerized operations. However, this potential does not seem to have been exploited effectively. Among other things, this may be due to inadequate capabilities of automated systems and lack of proper appreciation of management information requirements by librarians. A checklist of statistics and management reports expected to be generated to facilitate management information in libraries has been developed and selected library automated systems reviewed with a view to assess their potential against the parameters of comprehensiveness, flexibility, production capabilities and ease of operation. Summaries of management information features of selected automated systems have been described and possible approaches for improvement of management information components have been recommended to overcome the limitations of present systems. Need for appropriate strategies for turning system-generated data into useful information, supplementing it with additional sources and integrating all types of

information for a complete management information system for libraries have been highlighted.

Anju Vyas (1995; p124-120) in her report "Information for Research on Women and Development" describes how information on women and development differs from other information profession has responded to the challenges of this evolving area of research and study provides an indication of areas for future action.

George Boston (1996; p.124-130) in his article "New Technology - Friend or Foe?" explained the developments in the world of information technology are bringing together librarians and archivists working in paper-based materials with those working with sound and image recordings. This task is performed by the many technical magazines and journals that cover this field. What this article tries to-do is to explore the potential of "New Technology" to be a help or a hindrance to a text library - a Friend or Foe. Many librarians are considering using these new systems for the storage of traditional printed materials and a number of questions are discussed. Underlying the article is the clear perception that the sheer quantity of decaying material in storage makes a full examination of the benefits and drawbacks of new technology by all custodians of collections imperative.

Alberto Cabezas (1997; p111-119) in his research paper "Internet: Potential for Services in Latin America" described the evolution of connectivity in the region, the diverse worlds or domains that have and continue to participate in this effort, and points out possible future tendencies. The article raised new questions, especially with regard to the role of national networks, libraries, and user training.

Rae E. Pienaar (1997; p99-108) in the research work "Survival Information: The Role of the Public Library in the Social and Cultural Development of Disadvantaged Communities" explained that the public library can play an important role in enabling the disadvantaged to raise the quality of daily life. The disadvantaged are those who have no ready access to sources of information deciphering the intricate process of survival in modern-day society. The paper explored the exact meaning of the phrase "survival information", outlining briefly the status quo with reference to the commitment of the public library. The initiation, management and maintenance of a

potentially successful survival information service is addressed in detail. The role of the public library in responding to the challenges identified and how it meets the needs of the disadvantaged in particular communities was covered.

Hans-Christoph Hobohm (1997; p200-192) in his work "Entering the New Market Place: On the Role of Traditional Social Science Information Providers within the Internet Community". It was a presentation on the basis of the experience gained by implementing the German national Internet information server for the social sciences; some general reflections are made on the status of providing information by this communication channel. For a certain time the dissemination of information via the Internet will mean an extra workload for the majority of traditional participants in the information market. Other information and publishing media like books, journals or databases will remain the central part of the market. On the other hand it is obvious that Internet information activities will have an essential impact in the near future, while the market players' positions will undergo a fundamental redefinition. Before entering the new market, information providers must analyze carefully their own goals, strengths and possibilities. The task of social science information specialists is to assure the scientific quality of the information they are offering.

George Boston (1995; p111-102) in the work "Ethics and New Technology" discussed some of the concerns that are being expressed about the use of new technologies to make copies of documents for preservation reasons. To highlight some of the questions, parallels with the world of picture restoration are drawn. The possibility of devising a simple ethical rule for making preservation copies is discussed and a possible solution has been given.

Margaret Kinnell (1995;p45-40) in the work "Quality Management and Library and Information Services: Competitive Advantage for the Information Revolution" observed that greater competition for resources, the rising expectations of funders and clients and the increasing complexity of information provision from a variety of new providers mean that management skills of library professionals must match the more intense demands on and threats to library and information services. The exploitation of quality management techniques is therefore timely. A quality approach is important because of the impact of business principles on information services and the changing environment in which all library services are being developed. Defining quality in

terms of users' needs precedes the measurement of quality. Goals have to be understood by the library and information service before it can be determined whether they have been achieved. An effective quality management approach within a library and information service can facilitate the setting of goals for the service and chart a way forward to ensure that services meet the challenges not only of today but of tomorrow.

Paul Wasserman (1995; p122-145) in his work "Developing new Information Products: A Revised Role for Librarianship in Advanced and Developing Countries" narrated the case for the adaptation of the role responsibility of librarianship to include efforts leading to the development of needed new information products. The argument describes two forms of activity - political and intellectual. After specifying the characteristic features of each form, suggestions are given for training issues focused upon identifying elements useful in identifying needed new information tools. Such enhancing of librarian performances is seen as a promising potential route to furthering the image of the occupation in developing and developed information cultures.

Reid, Edna O.F. (1996; p95-90) in her work "Exploiting Internet as an Enabler for Transforming Library Services" described the world of increasing technological development, global competitiveness and unrelenting change, many organizations are responding to the turbulent environment by rethinking their mission and continuing to assess the impact of technology on their organization and the way they conduct operations. Major technological changes in hardware, software and networks have now reached a threshold of cost and ease of use that is having widespread organizational impact. In spite of these advancements, questions still remain regarding the major impact of information technology (IT) on the library's operational processes, the impact of Internet on libraries and on how this impacts on libraries being designed for the 21st century. This study suggests that Internet is having a tremendous impact on libraries and can provide a network-based tool for analyzing the transitional requirements of managing networked and electronic library services. In order to accomplish this objective, a manager needs to do a number of things. First, he/she must assess the library's current stage of IT applications. Next, he/she should analyze the organization's use of Internet services and outline a strategic plan for

exploiting Internet with the goal of using it as a prototype for work design, electronic integration, and responding to changing requirements. Each of these issues is considered in this study.

Batt, Chris (1996; p89-71) in his work "The Library of the Future: Public Libraries and the Internet" considered the possible potential for service development offered by the Internet to public libraries. It described the traditional models of network access and their lack of relevance to public libraries and describes current research being undertaken by public libraries to assess the value of the Internet to their services. Finally, it presented a range of new service paradigms and suggested that public libraries will become even more central to people's lives than they are today.

Fjällbrant Nancy (1996; p122-110) in her work "EDUCATE: A Networked User Education Project in Europe" described the EDUCATE (End-user Courses in Information Access through Communication Technology) project for end-user training in information access. EDUCATE is a CEC Libraries Programme Project which involves six members: Limerick University, Ireland (coordinator); and the Ecole Nationale des Ponts et Chaussées, France; Chalmers University of Technology, Sweden; Imperial College and Plymouth University, UK; and the University of Barcelona, Spain. The aim of the EDUCATE project is to produce a new type of model self-paced user education course in the selection and use of information tools. EDUCATE courses have been produced within two subject areas: physics and electrical and electronic engineering. The EDUCATE project started in February 1994 for a period of three years. The paper started by describing the need for courses in Information Retrieval and Handling in the age of the information superhighways. It continues with a presentation of the course design. The goals for the EDUCATE project are given, together with a short description of the media developed. The use of networks in connection with EDUCATE is then discussed, followed by a presentation of tools and interfaces used. The paper concludes with a description of the potential uses of the programme.

Chowdhury, Abdus Sattar (1996; p78-70) in the research work "Exploiting Network Information Resources for Collection Development in Libraries" explained the potential of networks as extensions of library collections is reviewed, focusing on the

role of Internet to facilitate selection and procurement of information materials, document delivery, and access to electronic journals and specialized materials. Critical issues involved in the effective utilization of networked and network able tools and facilities are discussed. Major issues discussed include copyright management, standardization, training and education and the ownership versus access approach of resource development. Steps taken and changes introduced in policies and procedures by leading libraries to prepare for taking maximum advantage of network information resources are also examined. Strategies are suggested for proper adjustment of library work to the new environment including restructuring of collection development functions, redesigning of processing tools, and establishing new roles and relationships for information professionals in general and collection librarians in particular. The paper also highlights problems of new information media by pointing out the downside of the Internet and other networks.

Kluiters, Christiaan C.P (1996; p52-42) in the study "Towards Electronic Journals: the Publishers' Technical Point of View" discussed the important technical standards/formats involved. Starting with the delivery of 1200 printed journal titles to external production, or document imaging processing, the system facilitates, via an internal validation procedure, production of a customized CD for, in principle, every library-customer. The paper touched briefly upon the technical disclosure and dissemination solutions as well.

Wedgeworth, Robert (1996; p96-90) in his work "A View towards Library Users" explained the change in the information environment, and the rate at which this change has been taking place, preoccupies not only the library community but society as a whole. Technical advances such as the Internet have radically influenced the future role which libraries and librarians will play. Against the background of the librarian's traditional role as the collector, preserver and recorder of society's knowledge, the author explored the array of new questions and dilemmas which the Information Age has thrust the library community. It is now widely accepted that there is a direct link between timely access to accurate and reliable information and a nation's positive economic development. Consequently, users' expectations of libraries as providers of information are rapidly changing. Emphasis is placed on the fact that the quality and variety of user services are more likely to be the

distinguishing characteristic of libraries in the future. As more libraries are managed by automated systems and more technology-based information sources are available in libraries, how will these systems and services be used to improve services to users? New training programmes must be devised to help librarians meet the needs of these new users, an area in which IFLA is particularly active.

Webb, T.D. (1996; p77-70) in his research paper "Exploiting Online Potential: Information, National Development and Public Libraries" described the economic and social development can be greatly accelerated by libraries that create online databases composed of research conducted within their own institutions. At universities and research centres in developing nations, bodies of new information are abundant, relevant, and close at hand. Yet most of this information will never find its way into conventional channels of information dissemination, such as print publications or vendor-produced databases. But this information can become the content for original, library-based databases and other online resources that will stimulate further research and promote national development, and give libraries a new and important role as points of information provenance.

Galler, Anne (1997; p. 105-101) in his work "National Policy for School Libraries: A Survey" described the process of consultation, preparation and dissemination of a questionnaire regarding national policy for school libraries, under the aegis of the National Library of Canada where the author spent a year as a Fellow. It explained the background that led to the survey, the preparation and testing of the questionnaire in both English and French and the mailing to 100 countries to all members of the CDNL which is affiliated with IFLA. The responses received from 51 countries are analyzed, and compared with other studies conducted in the field. There is also a list of documents attached to the article, which describe the various policies as established in the countries of some of the respondents, as well as the list of the 51 countries that participated in the survey.

Walsh, Virginia (1997; p. 77-49) in her work "The Future of the Library Profession" focused on threats and opportunities to the global library community as posed by modern information technologies, the author surveyed issues to be addressed: the regulation of content of online information; copyright issues in the new environment

of digitization; the continued provision of traditional library services; and the interests of developing countries. The author stressed that with the advent of new information technologies there is no longer a neat delineation between the library and archive profession, and effective partnerships should be developed with other members of the information sector, including archivists.

Devadson, F. et. al (1997; p. 99-93) in his work "A Methodology for the Identification of Information Needs of Users" explained that, identification of information needs is essential to the design of information systems in general and to the provision of effective information services in particular. But it has been found to be a difficult task as it is almost investigative or detective work. In order to identify information needs one should adopt various methods to gather information on the many factors that influence the information needs. No single method or tool will serve entirely. A careful selection and blending of several techniques depending on the user whose need is being studied is necessary. In fact, the "information needs identifier" should study, prepare and equip him/her self thoroughly to perform the task of identifying information needs. A formal step by step procedure which can be adopted to study the information needs of a majority of users is proposed in this paper. In addition to gathering and recording the information needs, a careful analysis should be made to distil actual needs from the data gathered. It was hoped that the methodology presented here would be easy to perceive and be translatable into practice. Moreover it has been found that the proposed methodology is not only useful in identifying the information needs, but also has a profound impact on finding ways and means of satisfying such needs. In other words, the information needs identifier would discover, as a by-product, several ideas, tools, methods and techniques of satisfying the users in meeting their needs.

Lone Dybkyacr (1997; p166-156) in the research work "Libraries and Information for Human Development" explored the opportunities offered by new information technologies. A successful solution depends on how the new opportunities offered by information technology to create an open democracy are exploited. Technology should not be left to an elite group. Development must build on the values and principles on which our society is based. After a brief survey of the Danish government's first general proposal on the future of information, which directly

involves the library system in the development programme, the author concluded with a list of information technology issues which libraries must address. These included a determined effort to include those groups which have not traditionally been using information services; improved methods of communication and high-speed data transmission; security issues; the free and rapid flow of a country's data nationally and internationally; the development, of a multilingual programme for automatic translation; the issue of Internet censorship; and the considerable process of readjustment for library personnel.

Owen, Ursula (1997; p155-150) in her work "Gateways to Freedom: Public Libraries and the Next Millennium" points out that the concentration of ownership in the media has affected the extent to which minorities are heard. For any concept of human rights to be universally accepted and globally enforced, equal respect and mutual comprehension between rival cultures is demanded. Hate speech, political correctness and the dangers of making exceptions to the absolute right to free speech are covered. The author concluded with the role of the public library has in supporting and disseminating the importance of free expression. Libraries can be places where 1) dialogue takes place; 2) the diversity of cultural lives is displayed; 3) the right to choose is pre-eminent; 4) people can be guided through information which some might find offensive; and 5) freedom of expression is taught and people are encouraged to know their own rights.

Terry Kuny and Gary Cleveland (1997; p15-9) in their research work "The Digital Library: Myths and Challenges" exposed some myths that permeate the popular press reporting about digital libraries, and set the stage for a closer examination of the significant challenges to digital library equipment.

Peter R Young (1997; p82-76) in the work of "Measurement of Electronic Services in Public Libraries: Statistics for the Digital Age" addressed a wide range of purposes and functions: administration and management; analysis and planning; policy development; and research. These library descriptive statistics reflect varying levels of comparability, consistency and comprehensiveness. However, agreement about and relevant statistical information regarding electronic media resources and services in libraries has yet to emerge. This article raised questions and explored issues related to

library measurement of electronic media and network services, and is primarily focused on public library Internet activity, although general issues are considered. The author also presented new challenges to existing systems, including shared/cooperative library arrangements for electronic services, digital object identifiers, and local and remote access to electronic services in libraries.

Dr. Manoj Kumar Sinha (January, 2011) in his research paper “Design and Development of Digital Public Library Network for Automation, Networking and Digitization of Public Libraries in India: A Proposal” observed that, automation of library operations is gaining momentum because of the availability of digital computers at affordable cost and the promise of creating database, which is easy to retrieve desired information. He mentioned that the introduction of personal computers to library operations has been bringing a new revolutionary changes and new dimensions in different spheres of library and information management and services. He strongly recommended for establishing digital public library networking and automation in India and the region.

Jens Thorhauge (2011) wrote a paper entitled ‘From Classical to Digital Public Libraries’ that dealt with the challenges deriving from the development of digital media for public libraries. The paper discussed the Danish experience till now and presents the ideas of a government report launched this year on public libraries in the knowledge society. The concept of the new library is based on the idea of a library with a scope aiming more at learning and cultural activities than – as is the case today - supporting the needs for a new kind of literacy. The new library has a digital and physical entrance and has services that are more segmented than today. He wanted to find out how partnerships with different kinds of stakeholders are likely to change the way of the library activities and services.

Rashmi Parekh (2011) in her article ‘Collaboration in Public Library’ mentioned that in the past, the general trend for libraries and other cultural institutions was to assume that customers would come to them; but most institutions are now looking at outreach and other ways to be more relevant to their communities and their customers’ daily lives. She explained how the modern technologies have made it easier for libraries. She maintained

by collaborating with other institutions, public libraries can extend the library services up to the last person in the society. The implementation of ICT in the profession of library science has widened the areas of work and extended the library services at the outreach of users' daily lives. The author has special emphasis on collaboration. She highlighted various areas of collaboration policy and the ways in which public libraries could benefit from collaboration.

Surbhi Saini (2011) has written the article "Development of Networking in Public Libraries of North East India" which dealt with the networking in public libraries of India. It touches all the levels of library functions where computerization is successfully utilized. But in case of public library, it is not in progressive stage. The study elaborated on the contribution made by Raja Rammohun Roy Library Foundation's (RRRLF) role in the public library movement. It highlighted the importance of National Policy for Public Libraries (NAPLIS) in the overall development and modernization of public libraries.

Subhajit Choudhury, et. al. (2011), in the research article "Public Libraries as Community Information and Knowledge Centers in Relation to E-governance Projects in India: A Case Study of Madhya Pradesh" has emphasized the significance of e-governance projects for empowering rural communities and making them information-conscious. The research suggests that public library shall act as community information centre/knowledge centre by taking the responsibility of e-governance project as well it will save the manpower and provide better services. The paper also suggests that village libraries should be strengthened with infrastructure so that the e-governance projects may render the services with maximum bridging information divide.

Md. Nasiruddin (2011) in the research article "Vision 2021 and the Public Libraries: Need for an Action Plan to Make Digital Bangladesh", explained that for realizing the dream of digital Bangladesh within 2011, government has given highest priority to science, technology and management education. Public libraries play an important role to establish a knowledge based society by improving the quality of education. The digitization process is spreading slowly in most public libraries in Bangladesh and they

have to go a long way to be digital in the real sense. As of today Bangladesh has 68 government and about 865 non-government public libraries. These are not able to act as exact public libraries. That is why the writer has aptly asked ‘why public libraries in Bangladesh are not able to perform their noble roles?’ The main objective of his study was to conduct a survey to assess the digital initiatives of the public libraries in Bangladesh. The survey carried out as a part of this study would encourage the government and relevant policy makers in Bangladesh to formulate a strategic plan for the public library digitization in Bangladesh in a cohesive manner.

Manoj Kumar Sinha (2011), in his article ‘Design and Development of Digital Public Library Network for Automation, Networking and Digitization of Public Libraries in India: A Proposal’ strongly advocated for the establishment of a digital public library network in India. He observed that, such a network will accelerate the growth of national development and would establish a clear linkage between knowledge and development.

Nafiz Zaman Shuva (2005) in his article ‘Implementing information and communication technology in public libraries of Bangladesh’ explores that ways in which information and communications technologies could accelerate the pace of public library development in Bangladesh. He observed that, it is absolutely necessary for the public libraries of Bangladesh to start using various tools and techniques of ICT.

Vyas, S.D. (2008) in his article “Library Automation and Networking in India: Problems and Prospects” explained the information scene in India during the last decade. Automation and the networking of public libraries are still in their formative stages. The reasons for, prerequisites of, and benefits of networking are given. Networking systems at the national and local levels are described, as are the salient features of INFLIBNET, which has been functioning since 1988. There are also three metropolitan networks, viz., DELNET, CALIBNET, and BONET. The libraries of the three metropolitan cities are already reaping the benefits of networking. The constraints of networking in Indian public libraries are explained. The conclusion was that major information library networks such as INFLIBNET should have a more realistic and time-bound programme.

Bandyopadhyay, Ratna & Majumder, K.P (2009) in their article “Come to your Library”: BLA Project for Promotion of Reading in West Bengal, India discussed the activities of a few public libraries in the districts of Howrah, Kolkata and South 24 Parganas for promotion of reading and use of library. This was a project of Bengal Library Association with financial assistance from Raja Rammohan Roy Library Foundation. It also analysed the problems and needs of the user groups, addressed some of them through their programmes, and discussed the impact of these activities and proposed future programmes covering more libraries.

Nasser Al-Suqri, Khalsa Al-Hinai & Kawther Mohammed Al-Hashmi (2006), in their article “Towards Arab Digital Public Libraries: Opportunities, Challenges, Requirements and Future Trends” drawn on existing literature to highlight the potential opportunities which digital public libraries offer to the countries of the Arab world, and to examine the challenges inherent in their development and how these might best be overcome. The paper concluded indicating that public libraries in many Arab countries are still hindered by a severe lack of resources, trained and experienced staff and adequate infrastructure, and these problems could severely undermine attempts to move towards digitization of libraries. It is the role of the governments, along with commercial organizations, information professionals, academic specialists and other groups to acknowledge the benefits and opportunities offered by digital public libraries and work together to make them a reality in the Arab world.

Conclusion

The literature review revealed that a lot of works have been done on the development of public library automation in global perspective. New ideas are coming out everyday. However, no comprehensive study on this issue has been done in Bangladesh as yet. The present study, therefore, tries to expose the status of public libraries and their automation facilities and attempts to show how they can be best equipped to meet the diverse information needs of the users in the 21st century.

Chapter III

Growth and Development of Public Library Systems and Services in Bangladesh

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Early History

The library development in Bangladesh is closely related with the history of library development in Indian sub-continent. "The history of library movement in Indian sub-continent can be traced from the history of ancient Indian libraries furnished by the travel diary of the famous Chinese traveler Fa-Hien, who visited India in 399 AD" (Misra, 1979: 9). There is no doubt that the idea of establishment of public libraries is essentially western, and the spread of the public library movement in this part of the world is the direct result of the impact of western culture. The British settled and stayed on for nearly two hundred years in Indian sub-continent, initially, for the interest of trading. But, subsequently, they started to establish academic institutions and libraries in a small scale (Kabir, 1987: 6). East India Company started taking interest in education and libraries by the 1770s when it decided to support indigenous schools through grants in-aids.

The first significant year in the development of public libraries in India is 1808 when the Bombay Government initiated proposal to register libraries, which were to be given copies of books published from the 'Funds for the Encouragement of Literature'. By the middle of the 19th century, three presidency towns of Bombay, Calcutta and Madras had their public libraries founded mostly with the active support and initiative of the Europeans for these towns (Kumar, 1970).

Calcutta Public Library was established in 1836. It was not a Government institution. It was running on a proprietary basis. Every person subscribing Rs. 300/- in one payment or three installments was to be considered a proprietor. Poor students and others were allowed to use the library free of charge for a specified period of time. The then Governor General, Lord Metcalf transferred 4,675 volumes from the library of the College of Fort William to the Calcutta Public Library. This and donations of books from individuals formed the nucleus of the library. Prince Dwarkanath Tagore was the first proprietor of the Calcutta Public Library. Both the Indian and foreign books, especially from Britain, were purchased for the library. In the report of 1850 it is found that the library started collecting books in Gujarati,

Marathi, Pali, Ceylonese and Punjabi. Donations were regularly made by individuals as well as by the Government of Bengal and North Western Provinces. The Calcutta Public Library had a unique position as the first public library in this part of the country. Such a well-organized and efficiently run library was rare even in Europe during the first half of the 19th century. Because of the efforts of the Calcutta Public Library, the National Library has many extremely rare books and journals in its collection (Mitra; 1980).

The Imperial Library was formed in 1891 by combining a number of Secretariat libraries. Of these, the most important and interesting was the library of the Home Department, which contained many books formerly belonging to the library of East India College, Fort William and the library of the East India Board in London. But the use of the library was restricted to the superior officers of the Government. Lord Curzon, the then Governor General of India, was the person who conceived the idea of opening a library for the use of the public. He noticed both the libraries -- Imperial Library and Calcutta Public Library -- were under-utilized for the want of facilities or restrictions. So, he decided to amalgamate the rich collection of both of these libraries. He was successful in effecting the amalgamation of Calcutta Public Library with the then Imperial Library under certain terms (Vannevar, 1945).

The library called Imperial Library, was formally opened to the public on 30th January 1903 at Metcalf Hall, Calcutta. The aims and objectives of the Imperial Library, well defined in a Notification in the 'Gazette of India' as -- 'It is intended that it should be a library of reference, a working place for students and a repository of material for the future historians of India, in which, so far as possible, every work written about India, at any time, can be seen and read (Volanath, 1982).

John Macfarlane, the Assistant Librarian of the British Museum, London, was appointed as the first Librarian of the Imperial Library. After his death, the famous scholar and linguist Harinath De took over the charge of the library. After his death J. A. Chapman became the librarian. Mr. Chapman showed keen interest in the affairs of the library and tried hard to improve its status. After his retirement, Khan Bahadur M.A. Asadulla was appointed as the librarian and he continued as the librarian till July 1947 (Varghese, 1985).

After the independence the Government of India changed the name of the Imperial Library as the National Library, with an enactment of the Imperial Library (change of name) Act 1948. The collection was shifted from the Esplanade to the present Belvedere Estate. On 1st February, 1953 the National Library was opened to the public, inaugurated by Maulana Abul Kalam Azad. Sri B.S. Kesavan was appointed as the first librarian of the National Library (Mukherjee: 1970).

In the middle of the 19th Century the establishment of the Calcutta Public Library and the proposed depository library, were just beginning. Gradually, a library movement initiated. Several Europeans and Bengalis were pioneer in these fields. Mr. J. Bailey in Mednipur, Rev James Long in Calcutta, Gopal Lal Mitra in Birbhum, Hodgson Pratt, Kalidas Mitra and Ramlochan Ghosh of Krishnagar were prominent in the library movement of Bengal in British India (Dey; 1955). As a result of their voluntary efforts Public libraries were established in Mednipur, Krishnagar and Jessore now a part of Bangladesh by 1851. The speeches that were delivered by the pioneers in connection with the establishment of libraries were published in a book in 1855. This was the first publication related to librarianship ever published in the Indo-Pak-Bangladesh subcontinent (Country report on public library of India, 2004).

Just one year after the enactment of Public Library Act in UK, the first public library of the Bangladesh was established at Jessore in 1851 (Alam, 1991: 23). Thereafter, three other public libraries—Wood burn Public Library at Bogra, Barishal Public Library at Barisal and Rangpur Public Library at Rangpur were established in 1854 (Khan, 1984: 128). The movement got further impetus with the establishment of Public Libraries at Rajshahi (1871), Dhaka (1874), Comilla (1885), Pabna (1890), Noakhali (1897), Sylhet (1897), Chittagong (1904), Cox's Bazaar (1906), Munshiganj (1908), Rangpur (1909), Kishoregonj (1909), Kushtia (1954), Faridpur (1914), Khulna (1914), Dinajpur (1930) and Mymensingh (1930) and these are still somehow functioning (Alam, 1991: 23).

However, the momentum of this enthusiastic start was not sustained. All of these libraries, mentioned above were generally established by one or more philanthropists and supported by public subscriptions and assisted by small financial grants either from the Government or local zaminders. The condition of these libraries was not

very good. Most of these libraries were housed either rented or loaned quarters. There was no continued and consistent support, either from the Government or local bodies (Khan, 1984: 128). "With the introduction of the Local Government Act in 1885 and its subsequent amendment in 1919, the local Government agencies (like Zilla Board and Municipalities) were entrusted with the responsibility of establishing and managing libraries. Since the task was not mandatory, so there was little concern beyond occasional financial support from such bodies" (Alam, 1991: 23). As a result, even a long established library could not flourish, but managed to survive somehow at that time. Many reasons may be attributed to this slow progress of libraries. The library establishment and organization was not the responsibility of the Government or local council, they were rather voluntary or private enterprises in nature and as such inconsistent in operation. Bangladesh, therefore, had inherited an unorganized library system in its beginning.

Pakistan Period (1947-71)

After the independence of Pakistan on 14th August, 1947 (the eastern wing was called East Pakistan, which is now Bangladesh) lost her share of the collections of the Imperial Library at Calcutta. As a result, it took over a decade to establish only one library in Bangladesh after partition. During the first plan period (1955-60) of the erstwhile Pakistan, efforts were made to develop the public library system in the country on the basis of the recommendations made by an Australian Library consultant Mr. L. C. Key in 1955 (Mannan, 1990: 114).

L.C. Key was the Deputy Librarian of the National Library of Australia. Under the Colombo plan he arrived in Karachi in 1955 to act as a Library Consultant attached to the Ministry of Education. He took a survey of library services in the country and prepared a plan for the future development. L.C. Key stayed for a period of about 1 year. In August 1957, he submitted a plan for library development designed as a 4 year project and involving about 36 libraries. The report was completed in 1956 and was circulated for comments to provincial government, universities and librarians, but was never made public officially. He was the first and only library Consultant to the Government of Pakistan, advised, "The east Pakistan Government has recently taken a commendable step in setting up under the Social uplift Scheme of the East Pakistan Central Public Library with progressive statement of functions" (Khan M. S. 1972).

Key's recommendations also included the setting up of three Divisional Government Public Libraries at Chittagong, Khulna and Rajshahi in Bangladesh, as the first step towards building up a library network throughout the country. In 1958, Bugum Sufia Kamal National Public Library at Dhaka which early name was Central Public Library (CPL) was opened to the public. During the subsequent plan periods the library network was expanded to the divisional level and proposals were made to establish some Government libraries and to improve the sub-divisional libraries as well. The establishment of 100 libraries at Thana headquarters was also proposed in the Third Plan of Pakistan (1965-70). In 1969, the Government set up a committee named East Pakistan Library Development Committee to consider the development of institutional (school, college, etc.) libraries as well. However, whatever efforts were made during that period were stalled by the out break of the war of Bangladesh liberation in 1971 (Mannan, 1990:114).

During the period of 1947 to 1971, about 80 new public libraries were established in addition to 25 libraries established earlier. Moreover, Libraries and Information Centres of the Pakistan Council for National Integration of the Central Ministry of Information in the major districts and the Bureau of National Reconstruction (BNR) of the Provincial Information Department were responsible for circulating mostly Government publications. Till the emergence of Bangladesh, the country had about 175 public libraries and information centres. Most of them were Non-Governmental, situated in Dhaka City or in other district headquarters (Alam, 1991: 24).

Post Liberation Period (1972)

According to UNESCO manifesto issued in 1949 and revised in 1972 the Public Library is a product of modern democracy and practical demonstration of democracy's faith in universal education as a life long process. "It emphasizes that: (a) the public library should be established under the clear mandate of law; (b) it should be maintained wholly from public fund; (c) there should be no direct charge for any of its services; and (d) it should be open for free and equal use by all members of the community, irrespective of age, sex, religion, language, status or level of education" (Rahman, 1993: 171). After the independence of Bangladesh, a new phase of library movement started with new inspiration to achieve UNESCO's manifesto by a group of educationists and social workers. At that time, the country faced numerous

problems which required immediate solution, including reconstruction in every aspect of the national life. In order to systematize the country, the Government had to wait a couple of years before launching the first Five Year Plan in 1973. The organization of the library system was also included in the plan layout. In Bangladesh there are two broad categories of public libraries: (a) Government Public Libraries and (b) Non-Government Public Libraries. As the Government Public Libraries was under the control of the education department of the then Pakistan, so in 1973, for inclusion in the first five year plan (1973-78) of Bangladesh, a broad-based Library Development Committee (divided into a number of sub-committees) was constituted by the Ministry of Education for over-all development of libraries and library services all over the country.

According to Siddique (1985:12-13), "the Public Library Sub-committee, possibly due to paucity of funds, could not recommend all the projects which were recommended earlier by a Advisory Committee for inclusion of a scheme in the Fourth Five Year Plan (1970-75). But the committee recommended only the following projects for implementation as the first phase of the plan:

- Development of five Government Public Libraries;
- Development of ten government aided District Public Libraries;
- Establishment of Library Training Institute at Dhaka;
- Establishment of 4 pilot projects for Rural Library Service;
- Rehabilitation of Bugum Sufia Kamal National public library, Dhaka;
- Construction of a new building for Chittagong Public Library; and
- Establishment of Rajshahi Public Library.

During this first five year plan period (1973-78) of Bangladesh, a National Education Commission was set up to examine all aspects of educational system of the country including libraries. The Commission proposed (October, 1974) the establishment of nation-wide network of public library services as a national target. Recommendations emphasized the public library legislation and the establishment of a Government public library at Rajshahi and the development of existing public libraries at Dhaka, Chittagong and Khulna. It also suggested the expansion of libraries at district, sub-division and thana levels. The report also proposed the establishment of a new office to prepare for the creation of a Library Directorate (Mannan, 1990: 114). So long the

public libraries had been under the Education Directorate, Ministry of Education. Late in 1974, the Education Ministry was bifurcated into (i) Ministry of Education and (ii) Ministry of Sports, Cultural Affairs and Religion. The public libraries also went under the latter Ministry (Siddique, 1985: 13). Meanwhile, in 1977, Bugum Sufia Kamal National Public Library was shifted from the University Campus to its new premises and was opened to the public in 1978. Then, a two year plan 1978-80 was formulated to continue the efforts to reach the first plan targets. But the important issues in previous plan remain untouched except the creation of a post of Chief Librarian of the Bangladesh Central Public Library and allocation of some grants to new government libraries. In 1978-79, the Ministry of Sports and Cultural Affairs and the British Council of Bangladesh under the general supervision of Mr. J Stephen Parker, a UNESCO expert, carried out a survey of public libraries. The survey was evaluated in March 1979 and recommendations were made and compiled in three volumes under the title Bangladesh Public Library Survey: Final Report. This was submitted to the Ministry of Sports and Cultural Affairs in 1981 (Siddique, 1985: 14). This survey covers 176 existing public libraries in Bangladesh and made 31 recommendations for the development of public libraries during the Second Five Year Plan period. Subsequent to the Parker Report, the Government of Bangladesh in collaboration with the British Council sponsored a national seminar on library development in Bangladesh. The seminar recommended that high priority be given for the development of library, documentation, archives and information services, particularly during the Second Five Year Plan period, and further suggested that this development should be coordinated at the national level for formulating, amongst other things, national standards for library, and library legislation (Alam, 1991:24).

Under the Second Five Year Plan period (1980-85) the government took the initiative to complete the remaining works of Central Public Library and also envisaged the completion of Rajshahi Divisional Public Library building, the extension of Khulna Divisional Public Library, development of Thana Public Library-cum-Auditorium and construction of a new building for the Chittagong Divisional Public Library (Rahman, 1992: 23). In this plan, training programme for librarians and book for all libraries also included.

The Ministry of Sports and Cultural Affairs took the responsibility of Public Library sector of the country. On the other hand, information centres of Bangladesh Parishad and Bureau of National Reconstruction (BNR) whose responsibilities included providing book-lending service to the people ultimately amalgamated with the public library sector. However, in 1983, a Department of Public Libraries was established by absorbing the government public libraries of the country including Bangladesh Central Public Library (Rahman, 1993: 174). According to the official source of Department of Public Libraries, up to May, 1998, the department has now in its administrative control some 68 libraries with Bangladesh Central Public Library as its headquarters. This public library network extends in all the district headquarters except two districts, Shariatpur and Narshingdi.

During the Third Five Year Plan period (1985-90), the major programmes in the field of library activities in the country were development of Chittagong Divisional Public Library, development of 17 district public libraries, and establishment of 7 new district public libraries. Training programmes for the librarians were also included (Planning Commission, 1985). Actually the Third Five Year Plan intended to materialize the incomplete task of Second Five Year Plan (1980-85). But unfortunately no significant development was visible through the whole period of plan. Within this plan period, the cultural affairs division formed its own Ministry as Ministry of Cultural Affairs with the Government and Non-Government public libraries.

During the Fourth Five Year Plan period (1990-95) no major library development projects were included except providing grants to the Non-Government public libraries through National Book Centre of Bangladesh and to arrange a training programme of library personnel from Government and Non-Government Public Libraries of the country. During the fifth Five Year Plan period (1995-2000) the following programmes were taken (Siddique, 985):

— Development of Public Libraries Second phase, under which government public libraries would be established at remaining two districts (Shariatpur and Narsingdi) and accommodation and other physical facilities would be created for eight other district government Public Libraries. The plan also included introduction of modern

technology like computers in these libraries and in Bangladesh Central Public Library (Dhaka); and

— Further development of Chittagong Muslim Institute and Chittagong Public Library. The plan included introduction of computers and other facilities in Chittagong divisional library.

A Twenty Years Perspective Plan was also submitted to the government in this period, which includes the (i) development of countrywide public library network up to root level, (ii) enactment of Library Legislation (which is yet to be enacted) and (iii) modernization of Public Library services. Meanwhile a National Book Policy was framed in 1993, which made following recommendations:

- Enactment of Public Library Legislation;
- Expansion of Public Library network up to union level;
- Employment of professionals in the library service;
- Up-grading the service standard of college and university libraries, etc.

Department of Public Libraries in Bangladesh

In 1982, the Bangladesh Parishad was dissolved, and at the behest of the Administrative Reorganization Committee, a Department of Public Libraries was established in 1983 by amalgamating the Bangladesh Parishad with the already-established government public libraries (including the Bangladesh Central Public Library). The broad functions of the Department of Public Libraries are as follows: a). to provide reading facilities for all classes of the reader, b). to act primarily as a reference library with general reading room; corner for ladies; periodical room; research room, manuscript room, c). to build up and maintain a comprehensive book collection as varied as possible with special emphasis on text and reference books, d). to build up and maintain adequate stock of books for juvenile libraries in different residential areas of the city, e). to function as a cultural centre with a carefully designed program of extension lectures, exhibitions, etc. so as to create and foster intellectual interests and reading habits among the general public, f). to shoulder responsibilities of reorganization and development of public libraries in the country, g). to provide advisory service and reference service to scholars and to Government Departments, h). to provide research and reference service to scholars and to

Government Departments, i). lastly, to organize seminars and bring out publications on life, culture and history of Bangladesh.

Mission of the Department

- To build-up & maintain a comprehensive book collection including adequate stock of books for juvenile;
- To function on a cultural center with a carefully designed program of extension services like reading circles, seminar, symposia, book mobilization, etc.
- To provide advisory service & reference service to the readers;
- Create reading habit of the mass people including rural people of the country;
- To provide research & reference service to scholars & the various Government organization;
- To provide special service to the disabled people;
- To develop necessary and appropriate computerized information system/data bases of various reading materials of public libraries for interactive use;
- To provide ICT facilities (e-mail, internet, website etc.) for the readers;
- To provide digital public library services.

Vision of the Department

- To expand public library system throughout the country up to the Union level;
- To establish digital public library system;
- To increase reading habit of all citizens of the country;
- To develop the cultural & educational activities of the country.

This Department runs 68 public libraries at divisions and district headquarters. The Physical and Infrastructural Facilities are as follows:

a) Sufia Kamal National Public Library: Sufia Kamal National Public Library stands at the apex of public library system of the country. The library has been located on 3 acres of land at 10, Kazi Nazrul Islam Avenue, Shahbagh, Dhaka-1000. In the campus, there is a 3-storied library building, a 525 seated auditorium, a staff quarter (8 units), a canteen, and an electric sub-station. The library building with 62,300 sq. ft. of usable floor area accommodates the Sufia Kamal National Public

Library as well as the headquarter of the Department of Public Libraries. There are 4 (Four) reading rooms, namely (i) General reading room (ii) Science reading room, (iii) Reference room, and (iv) Children's section in the library block of the building. Moreover, 3 book stacks, acquisition and processing area and other service areas, are there. The auditorium of the library has been named as "Shawkat Osman Memorial Auditorium" by the Government after the name of renowned litterateur late Shawkat Osman. The auditorium has already been recognized as a centre of cultural life of the city.

b) Divisional Government Public Libraries: There are five divisional public libraries at Chittagong, Khulna, Rajshahi, Barisal and Khulna. All these five libraries are housed in their own buildings. The Chittagong Divisional Public Library has been housed in a 4-storied building with 46,000 sq. ft. floor area at the Chittagong Muslim Institute campus at Andarkilla area of the city. There are four reading rooms, two book stacks, acquisition and processing areas, administrative areas and other auxiliary facilities in the building.

The Khulna Divisional Public Library stands on a plot of land measuring 2.24 acres at Boyra area of the city, the 2-storied library building with a total of 22500 sq. ft. of floor area, consisting of two reading rooms, book stacks, acquisition and processing areas, and other facilities.

The Rajshahi Divisional Public Library stands on a land of 3.80 acres just opposite to Rajshahi Medical College. The library building with 16,720 sq. ft. floor area consists of a big reading room, a reference reading room, book stack, acquisition and processing area, administrative areas, and other auxiliary facilities.

The Barisal Divisional Public Library stands on a land of 0.50 acres just opposite at Barisal B.M. University College. The 4-storied library building with 25,210 sq. ft. floor area consists of two big reading rooms, a reference reading room, book stack, acquisition and processing area, administrative areas, a seminar room and other auxiliary facilities.

The Sylhet Divisional Public Library stands on a land of 0.50 acres, 4-storied library building with 21,525 sq. ft. floor area consists of two big reading room, a reference reading room, book stack, acquisition and processing area, administrative areas, and other auxiliary facilities.

c) District Government Public Libraries: Other than Central and Divisional Public Libraries there are district-level government public libraries at 58 district headquarters. Of these, only 23 have own buildings and the remaining 35 libraries have been functioning in rented houses with lot of limitations.

d) Branch Libraries: There are 4 (four) branch libraries- two at Dhaka city (Mohammadpur and Armanitola), one at Rajshahi city and the other one at Bangladesh Agriculture University campus, Mymensingh.

Reading/Library Materials:

A short account of reading/library materials of the government public libraries under the Department of Public Libraries is as follows:

Table-4: Reading materials of the government public libraries in Bangladesh

	Name of library	No. of Books	No. of periodicals		No of dailies	
			Bangla	English	Bangla	English
a.	Sufia Kamal National Public Library, Dhaka	1,79,913	24	5	16	8
b.	Divisional Public Library, Chittagong	74,505	28	7	38	7
c.	Divisional Public Library, Khulna	95,744	20	2	27	4
d.	Divisional Public Library, Rajshahi	58,296	24	1	16	3
e.	Divisional Public Library, Barisal	47,311	18	1	19	1
f.	Divisional Public Library, Sylhet	47,646	15	1	16	2
e.	58 district government public libraries	10,55,830	10 (each library)	1 (each library)	10 (each library)	1 (each library)
f.	4 branch libraries	39,690	6 (each)	0	8 (each)	1 (each)
	Total	15,98,055				

Sources: official records December, 2010

Library hours:

Government Public Libraries remain open on all working days according to the following time-table:

Table-5: Library hours of the government public libraries

Name of Libraries		Timing	
a.	Sufia Kamal National Public Library Dhaka	i.	General reading room 8 a.m. to 8 p.m. (Sunday-Thursday) Science reading room and Reference reading room 8 a.m.-8 p.m (Saturday-Thursday) (except Friday and others govt. holyday)
		ii.	Children's reading room Saturday – Wednesday:9 a.m. to 5 p.m.
b.	Divisional Public Libraries, Chittagong.	i.	Sunday – Thursday: 8.00 a.m. to 8:00 p.m.
c.	Other Divisional and District Govt. Public Libraries	i.	Sunday – Thursday 10 a.m. to 6 p.m.

Sources: Official records: July, 2010

Daily attendances of users:**Table-6: Daily attendances of the users of the government public libraries**

a	Sufia Kamal National Public Library	Average 1851 per working day
b	Divisional Public Library, Chittagong	Average 1066 per working day.
c	Divisional Public Library, Khulna	Average 1048 per working day.
d	Divisional Public Library, Rajshahi	Average 529 per working day
e	Divisional Public Library, Barisal	Average 690 per working day.
f	Divisional Public Library, Sylhet	Average 1171 per working day.
g	Each District Govt. Public Library	Average 200 per working day.
h	Branch Libraries	Average 116 per working day.

Sources: Official records: July, 2010

Budget Allocations:**Table-7: Budget allocation of the government public libraries**

Major head of expenditure		Budget allocation in financial year 2009-2010
a.	Pay and allowances	2,51,00,000/-
b.	Office rent	18,50,000/-
c.	Municipal tax, land tax, telephone, water and electricity	53,21,000/-
d.	Books and periodicals	2,00,00,000/-
e.	Other contingent expenses	12,00,000/-
f.	Repair and maintenance	8,95,000/-
g.	Acquisition of asset	2,70,000/-

Sources: Official records: August,, 2010

Public Library Extension Services

In Bangladesh mainly 6 divisional public libraries viz, Begum Sufia Kamal National Library, Dhaka; Divisional public library, Chittagong; Divisional public library, Khulna; Divisional public library, Rajshahi; Divisional public library, Sylhet; Divisional public library, Barisal and some other Public Libraries in different district headquarters are performing following extension services:

- (1). Arts Festival: Occasionally these festivals are arranged by public libraries often lasting few days.
- (2). Book Exhibition/ Book Fair/ Book Week: Most of the district public libraries in Bangladesh arranged book exhibition for publicity about all sorts of books and other informational materials are available in the library.
- (3). Film Shows: In Bangladesh very few numbers of public library usually arranged film shows as a cultural part.
- (4). Letting of rooms: Most of the public libraries are letting their auditorium or meeting rooms to other organization on payment of reasonable charges, which is one of the sources of income for public libraries.
- (5). Library Week: It is an important function on which attempt to show the whole range of facilities available in public libraries both locally and nationally. During a library week attention is focused on the library itself, how it works and what it can do for the people of the community.
- (6). Mobile Services: At present, in our country no public library can provide book mobile service truly which is very painful for the people of the country. Most of the public libraries in Bangladesh have been suffering for adequate fund which is the main element to drive this extension services.

Library Legislation

In 1995, a draft proposal of Library Legislation has been prepared and submitted by the Department of Public Libraries to the Government. The proposal is still under consideration. At present Public Library Act is running by national consensus following the National Library Act(s) of the neighboring countries. The Legal Deposit Act of Bangladesh is incorporated into the country's Copyright Law. Since 2005, National Library of Bangladesh is the single depository and repository institution of the country. The copyright clearance centre of Bangladesh is accommodated in the National Library Building. The major change in the Copyright laws held in 2005. The Copyright Act (1978) was amended by a National Committee which recommended incorporation of some provisions for cyber laws, and subsequently adopted by the Jatiya Sangsad (National Parliament) and published on 18th July 2000 as "Law No.: 28 of the year 2000" and published in a Bangladesh Gazette Extra Ordinary on the same day i.e. 18th July 2000. The two copyright acts supersede the 1962 Copyright Ordinance. In June 1986 "A Draft Law on Copyright and Neighboring Rights for Bangladesh" was prepared by the International Bureau of WIPO (World Intellectual Property Organization) and submitted to the Bangladesh Copyright Board, under the Ministry of Culture. Changes and amendments put forth by the National Committee setup by the government and also proposed some new changes and inclusions to the new act. The proposals were subsequently adopted by the parliament and published on 18th May 2005 as "Copyright (amendments) Act 2005" (Ahmed: 2005).

Public Library Finance

The amount of finance at present provided for public libraries in Bangladesh is very low by any standards. Mainly government has been providing finance to 68 district government public libraries through the department of public libraries.

Inter-Library Lending System

The system of inter-library loan is not commonly established in Bangladesh. There is no overall co-ordination of district public library services in Bangladesh and no unified organizational structure. There is no inter lending system in operation at any level and lack of union catalogue makes it almost impossible to discover what books are in stock in which library.

Recent Development Projects of the Department of Public Libraries in Bangladesh

Government of Bangladesh has already fixed its target of achieving 'Digital Bangladesh' by 2021. The scope of Digital Bangladesh is that the government wants to make Bangladesh fully digitized by 2021 through application of third generation information and communication technology (ICT). In the education sector, Digital Bangladesh visualizes that by 2021 all universities, colleges, high schools and primary schools will have computerized connectivity. ICT is intended to be used as teaching-learning aids. After five years of schooling all students should have regular access to computers with internet facilities. The goal is to improve the quality of education. It is recognized that public libraries play an important role for establishing a knowledge-based society. Quality of education of a country is impossible without the modernization of public libraries. With a view to make digital Bangladesh, the present government has given highest priority to the establishment of ICT based public libraries. That is why they have approved some projects on a priority basis and some are under consideration. These project proposals have been designed by the Department of Public Libraries under the Ministry of Cultural Affairs (Official records of the Department of Public Libraries, 2011). These are discussed below in brief:

Establishment of Government Public Libraries at Upazila Level

The Government has realized that it is essential to extend government public library facilities up to Upazila level. It may be noted that, by early 1990s, governmental activities in all important sectors like education, agriculture, fisheries, youth development, social welfare, rural development and co-operatives, etc. have already been extended up to the Upazila level. Since public libraries can provide effective assistance in the activities of other sectors like education, agriculture, fisheries, youth development, public health, etc, it was felt essential to extend the activities of the public library sector up to the Upazila level along with other sectors. The Department of Public Libraries under the Ministry of Cultural Affairs submitted this proposal to the Government of Bangladesh in November 2010. The main objective of the project is to make the government public libraries capable of serving the society effectively. Main targets of the project are to: (i) establish and construct library buildings and other physical facilities for 154 Upazila government public libraries; (ii) introduce application of computers, internet and other ICT facilities to all the government public

libraries; (iii) strengthen technical and service capabilities of the government public libraries through conducting training/study tour etc. The total budget of the project is to 303.80 lacs Taka. This project has already been approved by the ECNEC (Executive Committee of the National Economic Council) of the Government of Bangladesh and it is a 4-year project that will be commenced from July 2011 and will be implemented within June 2015. The first phase of the project will be implemented at 45 district-level government public libraries.

ICT Implementation Project for the Government Public Libraries

The main objective of the project is to create a one-stop research facility by providing online access to a digital book catalogue for easy search and access to internet for accessing external resources for the users of the 68 government public libraries in Bangladesh. With a view to this, computers will be installed in every section of the district public libraries, develop software to automate all the functions of the library with email and internet facilities so that users can access to international databases. The total budget of the project is to 535 lacs taka. This project has been submitted by the Department of Public Libraries to the Government of Bangladesh and it is a 2-year project that will be commenced in November 2011 and will be implemented within October 2013.

Teachers' Motivation Project

The main objective of the project is to motivate the teachers to create reading habit among the community users especially the *Madrasha* (Islamic religious educational institutions) students so that they can contribute in national development. This project will be implemented in 482 Upazila and 6 City Corporation in Bangladesh. By turns, it will cover 64 district and 6 divisional government public libraries. The total budget of the project is to 507.60 lacs taka. This project has been submitted by the Department of Public Libraries to the Government of Bangladesh. It is a 2-year project that will be commenced in July 2011 and will be implemented within June 2013.

Establish Book Corner and supply books in Primary Schools

The main objective of this project is to motivate the primary school students to use the library. With a view to this, the Department of Public Libraries has planned to establish book corners and provide suitable books to create reading habit among the primary school students which will help reduce the number of drop outs. This project will cover 3591 primary schools under 303 Upazilla throughout the country. Another objective of this project is to expand the library networks to the remote areas of the country. The total proposed budget of the project is to 43.60 lacs taka. This project has been submitted by the Department of Public Libraries to the Government of Bangladesh. It is a 1-year project, which will start in July 2011 and will be implemented within June 2012.

Book Review Project

The main objective of this project is to create a learning society in the country. The project will collect the books published in different areas of the country and organize book review programmes regularly. It will encourage the authors as well as readers to gather knowledge. The total proposed budget of the project is to 116.00 lacs taka. This project is under the process of implementation. This 18-months project will start in November 2011 and will be implemented within June 2013.

Expansion of District government public library, Bogra Project

As directed by the Government of Bangladesh, the Department of Public Libraries is going to expand the functions of the District Government Public Library, Bogra by merging it with the Wood Burn Public Library. Wood Burn public library is more than 150 years old public library and has a rich heritage. The total proposed budget of the project is to 99.90 lacs taka. The project is currently under implementation. It is an 8 months project that has been started in November 2010 and will be implemented within June 2011.

Quick Win Project

The Secretary of the Ministry of Cultural Affairs proposed an online library management system for Bangladesh Central Public Library (BCPL), which would provide online access to all bibliographic data of BCPL to its users. Moreover, it would involve equipping libraries with computers and connectivity so that library users can access the internet. The service would primarily involve development of a digital catalogue for the central public library. In addition, the service would also develop a system of online borrow-request and inter-library lending. The main objective of this project is to create a one-stop research facility for students, teachers and citizens by providing online access to digital book catalogue for easy search and access to internet for accessing external resources. The project is currently under implementation at Bangladesh Central Public Library, Dhaka and the District Government Public Library, Norsingdi. It is a 1-year project that has been started in May 2010 and will be implemented within April 2011. The total proposed budget of the project is to 10.24 lacs taka.

Public Private Partnership Projects

Begum Sufia Kamal National Public Library, Dhaka has given the opportunity to use internet facilities to the general users as it has set-up 4 PC with broadband internet connection at the entry gate of the library by the financial support of one of the ISP (Internet Service Provider) company namely KUSIK in Bangladesh. Though a very limited number of users can use these but the library has a plan to establish a complete cyber café very soon. The authority of the public library receives a good response from the user on internet browsing. They want to increase the number of PCs and space of the cyber café.

One of the reputed private mobile phone companies in Bangladesh namely 'ROBI' has proposed to provide financial and technical support to set-up 3 or 4 computers with internet connection for the users of each of the 6 divisional government public libraries. The Ministry of Cultural Affairs has approved the proposal and the work will be commenced in July 2011 and will be implemented within June 2012.

Conclusion

The public library automation system in the country is yet to reach a mature stage and traditional practices are still predominant. As the profession is now attracting people from different social backgrounds and good academic qualifications, it is expected that over the years, this predominantly young group of professionals will be able to organize the entire public library systems of Bangladesh. Public library automation in Bangladesh is essential because the process can avoid duplication in collection building. It will also allow sharing available resources effectively and ensure maximum utilization of information resources while fostering information exchanges, and developing nationwide centralized database on different special field. It also saves the labour, time and money of the information user and ultimately contributes to national development. Sustainability is more important than starting. If we fail to manage sustainable digital public libraries with our own resources, it will be almost impossible to realize the dream of making Digital Bangladesh within 2021. In spite of all its inadequacies, the establishment of the Department of Public Libraries is a proper step in the right direction and this has ensured that at least a sustainable framework of public library service up to the district level has been established. Now it depends on the concerned authorities and the professionals to follow up and improve and upgrade the public library service of the country.

Chapter IV

Status of Automation in Government Public Libraries in Bangladesh: an Overview

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“Library is a growing organization” a core statement made by S.R. Ranganathan is more accurate than what it means. According to Khan (2006:2), the library is the source of information and power of knowledge. The library could be considered also as the knowledge base. The library has particular functions and responsibilities to facilitate the widespread use of learning materials by students, teachers and researchers in the higher learning institute. Large number of literature is growing in such a manner; these groups of library users have faced difficulties in identifying the appropriate literature for their use and consultation in the desired timeframe. Since the ancient time thousands of changes and developments have been making library wider day by day in each sphere of knowledge dissemination world.

During the last two decades, information and communications technology (ICT) has significantly contributed to open the door to the hidden knowledge in a very efficient manner. In the beginning, the ICT was used in developing databases of information resources in the library. The purpose of developing database is to store, retrieve and organize information on different types of publication resources. The ICT has planned us in the electronic environment to help identify, assess, acquire, record, store, organize and disseminated information and information resources as per the need of specific requirements of an organization or an individual. The application of information technology in libraries has enhanced efficiency and effectiveness in all aspects of information acquisition, storage, transfer and dissemination. In keeping pace with the new technologies, the traditional libraries have been modernized to make these as well-equipped and inter-connected with electronic library (Khan, 2006:2).

Libraries have been providing various types of services for their users’ communities since ancient period. Today the nature of service, degree of users’ demand and level and satisfaction of library users, has changed. Several amazing inventions in the field of science and technology have forced libraries do develop new services. Libraries have also made some radical changes in their services using Information

Communication and Technologies (ICT). They are providing traditional library services as well as new services developed using ICT according to users' demand.

Libraries have successfully adopted ICT to design new services and to transform the traditional library services into a newer one. Libraries are still providing reference services, indexing and abstracting services, reading services, and lending services. Using ICT and advanced technologies, the above-mentioned services, libraries are also providing new types of services, which are the ultimate facilities, brought out by ICT. The advanced technologies offer some new types of services like automation of libraries, web portals, full text journal article searching, document delivery services, consortia, information sources freely available on the internet and prompt communication made with the vendors through email and e-fax. With the advanced development of information technologies, government public libraries are in a position to provide a variety of services over a wide range area, which were not possible previously, but now it is possible for invention of new technologies.

Library automation is one of the important aspects of IT-based library services which include web-based integrated library software and other important IT features. IT-based services may contain the following:

Acquisition includes ordering, receiving and payment of books; **processing** consist of classification, cataloguing, data entered into library database, management of bibliographical information of reading materials, control of serial holdings, preparation of library tools; **searching** facilities from **library database**, on-line and off-line (CD-ROMs) **searching** facilities, searching of e-journals through consortium; on-line public access catalogues (**OPAC**) search; **circulation** covers loan services, creating library membership cards, fine generation, blockade system for renewal of library membership cards borrower's status, reading material status, report generation, on-line reservation; **information retrieval** from library database; **computer facilities**, such as **CD and DVD writing** services, **internet services**, pen derive port facilities and services, network printing facilities and services, **document delivery systems through email**, email checking, **colour printing** facilities and services, **scanning** facilities and services; **telecommunication** facilities with services covers land based phone and cell phone services, fax services, Wi-Fi system, WiMAX system, CCTV

monitoring systems and services; **technical** services i.e. security systems of library services with RFID technology, stock verification and photographic reproduction services; television facilities; e-alert services; video conferencing; readers' services covers new arrivals i.e. current awareness services (**CAS**), selective dissemination of services (**SDI**), bibliographic and abstracting services, e-counseling services, electronic dissemination of books image, reference and inter-library loan services, document delivery services, literature search services, virtual library services, Ask a Librarian' **FAQ** (Frequently Asked Question) services, new e-books services; administrative services (e-governance); list server facilities and services; news clipping services; adaptable technology services for the disabled persons; web-based library services; building of electronic achieves; **institutional repository** (IR) services; digital library initiatives and report regeneration of different library activities.

An overview of the above-mentioned library services is given here for measuring the performance of government public libraries surveyed. To prepare an overview, the relevant secondary sources of the study up to December, 2010 have been reviewed and analyzed on the 20 sample libraries under six divisions. It will show the present scenario of the automation/technology used by the government public libraries in Bangladesh. Provision was made in the chapter to gather information on various variables like background information of library, collection of the library, manpower, own or rented building etc. The study has given special emphasis on automation/technologies used by the government public libraries with a view to extricate the automation status in public libraries of Bangladesh.

20 Sample Government Public Libraries are as follows:

Dhaka	Chittagong	Rajshahi	Khulna	Sylhet	Barisal
Begum Sufia Kamal National Public Library, Dhaka	Divisional Government Public Library, Chittagong	Divisional Government Public Library, Rajshahi	Divisional Government Public Library, Khulna	Divisional Government Public Library, Sylhet	Divisional Government Public Library, Barisal
District Government Public Library, Gazipur	District Government Public Library, Cox's Bazar	District Government Public Library, Sirajgonj	District Government Public Library, Jessore	District Government Public Library, Maoluvī Bazar	District Government Public Library, Patuakhali
District Government Public Library, Manikgonj,	District Government Public Library, Comilla	District Government Public Library, Natore	District Government Public Library, Jhenaidah		
District Government Public Library, Narayanganj	District Government Public Library, Brahmanbaria	District Government Public Library, Bogra	District Government Public Library, Magura		

Background information of the government public libraries

(1). **Begum Sufia Kamal National Public Library, Dhaka:** This library is located at the central position (10, Kazi Nazrul Islam Avenue, Shahabag, Dhaka-1000) in the capital city of Dhaka with 3 acres of land. The library building has 62,300 square feet with a 3-storied building. There is one general reading room; one science reading room, one reference reading room, book stacks, one separate reading for child and adolescent, one seminar room and the administrative room with other facilities is available for its users and staffs in the library building. Besides the above, there are 8 residents for its emergency staffs and 2 electric substations (500 KVA) and a big auditorium with 500 seats are available in the campus. The total collection of the library is 162,440 of which the number of books and periodicals in Bengali is 77856, in English-79508 and Others-5076. It collects 19 Bengali and 8 English newspapers daily. Each month the library subscribes to 26 local and 4 foreign journals for its users. The total manpower of the library is 48. Among them, 20 are professional, 16 are semi-professional and 12 are support staff. On an average 1851 users visit the library daily. This library is providing 24 hours services for general readers, 12 hours for reference and recreational services and 8 hours for child and adolescent readers (<http://en.wikipedia.org/wiki/cpl>).

**Some Initiatives for automation of Begum Sufia Kamal National Public Library,
Dhaka**

Computer application in Begum Sufia Kamal National Public Library has been formally introduced in the year of 1994 for maintaining the inter library lending systems. In 1995-1996, a project namely "The Unprocessed Books and Journals of 68 Government Public Libraries need to be processed" launched by the Government under the Development Budget. The target of the project was to include all the holdings of the Begum Sufia Kamal National Public Library and the divisional government public libraries. At the 1st phase of the project the plan was mainly to prepare a bibliographic database on Begum Sufia Kamal National Public Library's resources and at the 2nd phase was to construct another database on government district public library resources. But the 1st phase of the project was abandoned due to bureaucratic tangles between the public works department and the department of public libraries. The authorities then decided to start working on 2nd phase of the project in September, 2003 but it was also faced interruptions on several occasions. The Begum Sufia Kamal National Public Library, Dhaka authority was discussed with public works and tried to continue the work in full swing with a view to complete the project by June 2006. But unfortunately they could not succeed in their attempts. Again the project was stipulated for the fiscal year 2007-2008, which included the construction of a new seminar room, air-conditioning of the reading areas, setting up a cyber café and interior decoration of the building and its auditorium. But the study found that the authorities failed to make notable progress in work. In the fiscal year 2008-2009 again they have planned to construct the seminar room and cyber café in time. The public library authority claimed that the work on the cyber café was being delayed due to technical reasons as they are looking for a consultant but they could not yet find a suitable candidate. Under the project a 250-seat seminar room was built at a cost of Tk. 40 lakh. The work on setting up a cyber café with 15 terminals is estimated to cost Tk 37 lakh is going on. The authorities have a plan to install 41 split air-conditioners in the 19,984 square feet reading area at a cost of Tk 94 lakhs. They will procure new furniture with the cost of Tk. 39 lakh. Work on designing website of the library is going on and will be launched by the end of 2010. Primarily the site will contain basic information about the library and it will be updated gradually adding information about its collection. The website is being designed by following the websites of the world's renowned libraries. The authority of the Begum Sufia Kamanl

National Public Library, Dhaka have another plan to arrange a National Seminar on “Starting the 3rd phase of the project where all the collections of 68 public libraries would be included with the central Database”.

(2). District Government Public Library, Gazipur: This library was established on 29 July, 1986 as a non-government public library by afford of the then local elites. In 1987, Bangladesh Government took one project to expand the public library systems in district level and as a part of this project Government acquired its land and provided fund for its development. Finally, October 25 in 1989 the library was inaugurated as a District Government Public Library the by Government. The library building is 2-storied with 2744 square feet areas. The District Government Public Library, Gazipur is located at Stadium Road, Rothkholo, Gazipur. The total collection is 16716; of which the number of books and periodicals in Bengali is 14900 and in English is 1816. It subscribes to 12 local journals with 11 newspapers daily. There are 5 staffs who provide services to an average of 315 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (Official records, 2010).

(3). District Government Public Library, Manikgonj: The library was established in a 4-storied rented building near the stadium of Manikgonj in 1965 with 1275.37 square feet areas. The District Government Public Library, Manikgonj is located at Sadar Road, Manikgonj. The total collection is 14316; of which the number of books and periodicals in Bengali is 13276 and in English is 1040. It subscribes to 18 local journals with 3 daily newspapers. There are 4 staffs who provide services to an average of 180 users per day. Of the staff, 1 is professional, 2 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

(4). District Government Public Library, Narayanganj: It was established in 1965 in a rented building at 312, New Chasara, Jamtola, Narayanganj with 1934.78 square feet areas. The total collection is 13666; of which the number of books and periodicals in Bengali is 12269 and in English is 1394. It subscribes to 11 daily newspapers and 17 local journals. There are 5 staffs who provide services to an average of 185 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

Status of automation in the Public Libraries of Dhaka Division

Table 8: Year of computer installation in the public libraries under Dhaka Division

Public library system	Year
Begum Sufia Kamal National Public Library, Dhaka	1994
District Government Public Library, Gazipur	X
District Government Public Library, Manikgonj	X
District Government Public Library, Narayanganj	X

Findings: The table shows that Begum Sufia Kamal National Public Library, Dhaka has initiated computerization in the year of 1994 for maintaining the inter library lending systems. However, this system could not be implemented because of financial constraints. The rest of the three district government public libraries such as District Government Public Library, Gazipur; District Government Public Library, Manikgonj and District Government Public Library, Narayanganj are yet to introduce computers to perform their functions.

Table-9: Technology Used in the District Government Public Libraries under Dhaka Division

SL	Name	Computer	CD-ROM	Internet/Email	Typewriter	Telephone	Photocopier	Fax
1	Begum Sufia Kamal National Public Library, Dhaka	Y	Y	Y	Y	Y	Y	Y
2	District Government Public Library, Gazipur	X	X	X	X	Y	X	X
3	District Government Public Library, Manikgonj,	X	X	X	X	X	X	X
4	District Government Public Library, Narayanganj	X	X	X	X	Y	X	X

Findings: The table shows that only Begum Sufia Kamal National Public Library, Dhaka has very limited number of technological facilities in which few computers with CD-ROM facilities, Internet with email-facilities, few type-writers, telephone, photocopier and a fax machine are exists. All of these are used for their official purposes and only a limited number of staffs are allowed to use these. District

Government Public Library, Gazipur and Naranonganj have only telephone facilities, which is also used to official purpose and only the Librarian can use it. In District Government Public Library, Manikgonj, there are no any technological facilities.

(5). Divisional Government Public Library, Chittagong: This library was established in 1963 under the Second Five Year Plan (1960-1965). After the liberation of Bangladesh, the Department of Public Libraries was formed in 1983 based on the recommendations of the Enam Committee for Educational Reform. The Divisional Government Public Library, Chittagong is located at K.C. Dey. Road, Chittagong. In order to expand the library activities one separate 4-storied building with 46,000 square feet areas was constructed from 1983-1989 for Divisional Government Public Library at Chittagong. The total collection is 65,868 (*Official Records: Jan, 2007*). It subscribes to 24 local journals with 11 daily newspapers. There are 26 staffs who provide services to an average of 1066 users per day. Of the staff, 4 is professional, 14 are semi-professional and 8 is support staff (www.publiclibrary.org.bd/).

(6). District Government Public Library, Cox's Bazar: This library launched its formal activities from September 02, 2000. It is located at the Circuit House Road of the Central point in Cox's Bazar district with .31 acres of land. It is a government building which a total space of 3400 square feet. The total collection is 11,565; of which the number of books and periodicals in Bengali is 10, 000 and in English is 1, 565. It subscribes to 11 national daily newspapers and 18 local periodicals. (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

(7). District Government Public Library, Comilla: In a rented building with 1640 square feet spaces, the library is providing services from September 1982. It is located at Sadar Road, Comilla. The total collection is 36602; of which the number of books and periodicals in Bengali is 25, 000 and in English is 11, 102. It subscribes to 10 local periodicals and 11 local newspapers (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

(8). **District Government Public Library, Brahmanbaria:** This library was established in 1964 in a rented 3-storied building with 1525 square feet spaces at Sadar Road, **Brahmanbaria**. The total collection is 12521; of which the number of books and periodicals in Bengali is 11, 000 and in English is 1, 521. It subscribes to 15 national daily newspapers and 10 local newspapers (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (*Official records, 2010*).

Status of automation in the Public Libraries of Chittagong Division

Table 10: Year of computer installation in the Public Libraries under Chittagong Division

Divisional Government Public Library, Chittagong	1998
District Government Public Library, Cox's Bazar	X
District Government Public Library, Comilla	2006
District Government Public Library, Brahmanbaria	X

Findings: This table shows that in the year of 1998, Divisional Government Public Library, Chittagong and in the year of 2006, District Government Public Library, Comilla have introduced computer for performing library functions. District Government Public Library, Cox's Bazar and District Government Public Library, Brahmanbaria is still operating all of their library functions manually as they have not taken any initiative to introduce computer to their libraries.

Table-11: Technology Used in the District Government Public Libraries under Chittagong Division

SL	Name	Computer	CD-ROM	Internet/ Email	Typewriter	Telephone	Photocopier	Fax
5	Divisional Government Public Library, Chittagong	Y	Y	Y	Y	Y	Y	Y
6	District Government Public Library, Cox's Bazar	X	X	X	Y	Y	Y	X
7	District Government Public Library, Comilla	Y	Y	Y	Y	Y	Y	X
8	District Government Public Library, Brahmanbaria	X	X	X	Y	Y	Y	X

Findings: In Divisional Government Public Library, Chittagong and District Government Public Library, Comilla, the number of computers is quite few and most of the computers are old. Internet, email, telephone, photocopier, typewriter and fax machine are also used for official purposes. There is no technological equipment for public use in any public library in Chittagong division. Technological facilities at District Government Public Library, Cox's Bazar and District Government Public Library, Brahmanbaria is very poor.

(9). Divisional Government Public Library, Rajshahi: Since 1983 this library has been providing services for the users but formally it was inaugurated on December 08, 1993 in the government building with an area of 3.8 acres of land and 16,720 square feet spaces. It is located at Medical College Road, Rajshahi. The total collection is 48148; of which the number of books and periodicals in Bengali is 38, 000 and in English is 10, 148. It subscribes to 21 national daily newspapers and 18 periodicals. (*Official Records: Jan, 2007*). There are 20 staffs who provide services to an average of 529 users per day. Of the staff, 4 is professional, 8 are semi-professional and 8 is support staff (www.publiclibrary.org.bd/).

(10). District Government Public Library, Sirajgonj: The library was established in 1984 and as of today it is in a rented building located at central Sirajgonj. It is located at Sadar Road, Sirajgonj. The total collection is 10977; of which the number of books and periodicals in Bengali is 8, 000 and in English is 2977. It subscribes to 9 national daily newspapers and 15 local newspapers (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Of the

staff, 1 is professional, 3 are semi-professional and 1 is support staff (*Official Records: Jan, 2007*).

(11). District Government Public Library, Natore: This is also a rented building with 1139.47 square feet spaces which started operation since 1998. It is located at Sadar Road, Natore. The total collection is 3,981 of which the number of books and periodicals in Bengali is 2,000 and in English is 1981. It subscribes to 8 national daily newspapers and 8 periodicals (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

(12). District Government Public Library, Bogra: Though the library was established in 1982 by the effort of the local elites, the government acquired the land and renovated the library building in 2004. The **District Government Public Library, Bogra** is located at Thana Road, Bogra. The total collection is 24,596 of which the number of books and periodicals in Bengali is 20,400 and in English is 4,596. It subscribes to 11 periodicals and 12 national newspapers (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Among the staff, 1 is professional, 3 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

Status of automation in the Public Libraries of Rajshahi Division

Table 12: Year of computer installation in the Public Libraries under Rajshahi Division

Divisional Government Public Library, Rajshahi	1998
District Government Public Library, Sirajgonj	X
District Government Public Library, Natore	2006
District Government Public Library, Bogra	2006

Findings: Divisional Government Public Library, Rajshahi has introduced computer in 1998 whereas District Government Public Library, Natore and District Government Public Library, Bogra started to use computer in 2006. District Government Public Library, Sirajgonj has no computer facilities.

Table-13: Technology Used in the District Government Public Libraries under Rajshahi Division

SL	Name	Computer	CD-ROM	Internet/ Email	Typewriter	Telephone	Photocopier	Fax
9	Divisional Government Public Library, Rajshahi	Y	Y	Y	Y	Y	Y	X
10	District Government Public Library, Sirajgonj	X	X	X	X	X	X	X
11	District Government Public Library, Natore	Y	Y	X	X	X	X	X
12	District Government Public Library, Bogra	Y	Y	X	Y	Y	Y	X

Findings: Except District Government Public Library, Sirajgonj, Divisional Government Public Library, Rajshahi, District Government Public Library, Natore and District Government Public Library, Bogra have computer facilities for their staffs and users. There are no facilities for using internet and email for either the staff or the users. Other technological facilities and services are also very poor all over the Rajshahi division.

(13). Divisional Government Public Library, Khulna: The Divisional Government Public Library, Khulna is located at Boyra in the centre point of the Khulna city with a 2-storied building of total 30,660 square feet spaces. It was established on 25 June, 1964. The total collection is 87,080 of which the number of books and periodicals in Bengali is 80,000 and in English 7,080. It subscribes to 24 local periodicals and 8 local newspapers (Official Records: Jan, 2007). There are 13 staffs who provide services to an average of 1048 users per day. Of the staff, 2 are professional, 5 are semi-professional and 6 are support staff (www.publiclibrary.org.bd/).

(14). District Government Public Library, Jessore: The library was established on 1st September, 1982. Before 1971, its name was "Information Centre" under the Ministry of Information and Radio. In 1982, Bangladesh Government renovated the building as a public library and brought it under the Ministry of Cultural Affairs. It is located at Gorib Sha Road, Jessore. The library has 3,500 square feet spaces and 50 seats for readers. The total collection is 17,389 of which the number of books and periodicals in Bengali is 14,000 and in English 3,389. It subscribes to 11 national daily newspapers and 9 periodicals (Official Records: Jan, 2007). There are 4 staffs

who provide services to an average of 200 users per day. Among them, 1 is professional, 2 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

(15). District Government Public Library, Jhenaidah: The library was established in 1982 in a rented building with 3,411 square feet spaces. The library is located at Thana Road, Jhenaidah. The total collection is 12,278 of which the number of books and periodicals in Bengali is 10,000 and in English 2,278. It subscribes to 7 national daily newspapers and 6 periodicals (*Official Records: Jan, 2007*). There are 4 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 2 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

(16). District Government Public Library, Magura: The library building was established in 1999 on .33 acres of land which has a space of 3,400 square feet. It is located at Sadar Road, Magura. The total collection is 16,439 of which the number of books and periodicals in Bengali is 13,000 and in English 3,439. It subscribes to 11 national daily newspapers and 16 periodicals (*Official Records: Jan, 2007*). There are 4 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 2 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

Status of automation in the Public Libraries of Khulna Division

Table 14: Year of computer installation in the Public Libraries under Khulna

Division

Divisional Government Public Library, Khulna	1998
District Government Public Library, Jessore	X
District Government Public Library, Jhenaidah	X
District Government Public Library, Magura	X

Findings: Except Divisional Government Public Library, Khulna, no district public libraries in this division has introduced computer as yet. It is indicative of the poor scenario of library automation in Bangladesh. Divisional Government Public Library, Khulna introduced computer in 1998 for library functions in a very small scale.

**Table-15: Technology Used in the District Government Public Libraries under
Khulna Division**

Sl.	Name	Computer	CD-ROM	Internet/Email	Typewriter	Telephone	Photocopier	Fax
13	Divisional Government Public Library, Khulna	Y	X	X	Y	Y	Y	X
14	District Government Public Library, Jessore	X	X	X	Y	Y	X	X
15	District Government Public Library, Jhenaidah	X	X	X	Y	Y	X	X
16	District Government Public Library, Magura	X	X	X	Y	X	X	X

Findings: Only Divisional Government Public Library, Khulna has computer but it has no internet facilities even for their staffs. There are few type-writers and telephone facilities are exists for using internal staffs.

(17). Divisional Government Public Library, Sylhet: On 15th April, 2002, the then Finance Minister declared that the government has a plan to establish one divisional public library in Sylhet and accordingly they have chosen the site near the stadium of the Sylhet city. In December, 2005, on behalf of Bangladesh Government, the Finance Minister inaugurated the 4-storied building on .50 acres of land. The total collection is 41,124 of which the number of books and periodicals in Bengali is 31, 000 and in English is 11,124. It subscribes to 7 national daily newspapers and 15 periodicals (*Official Records: Jan, 2007*). There are 9 staffs who provide services to an average of 1171 users per day. Of the staff, 2 are professional, 4 are semi-professional and 3 are support staff (www.publiclibrary.org.bd/).

(18). District Government Public Library, Maoluvı Bazar: This library has been functioning since 1 September 1982 in a building rented by the Maoluvı Bazar Municipality. The total collection is 11,827 of which the number of books and periodicals in Bengali is 9, 000 and in English is 2,827. It subscribes to 5 national daily newspapers and 9 periodicals (*Official Records: Jan, 2007*). There are 4 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 2 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

Status of automation in the Public Libraries of Sylhet Division

Table 16: Year of computer installation in the Public Libraries under Sylhet Division

Divisional Government Public Library, Sylhet;	2002
District Government Public Library, Maoluvi Bazar;	X

Findings: In 2002, Divisional Government Public Library, Sylhet has initiated computerization for library functions. No library except the divisional one has availed themselves of this opportunity.

Table-17: Technology Used in the District Government Public Libraries under Sylhet Division

Sl.	Name	Computer	CD-ROM	Internet/Email	Typewriter	Telephone	Photocopier	Fax
17	Divisional Government Public Library, Sylhet	Y	Y	Y	Y	Y	Y	X
18	District Government Public Library, Maoluvi Bazar	X	X	X	Y	Y	Y	X

Findings: The secondary data revealed that only the Divisional Government Public Library, Sylhet has computer, internet and other technological facilities whereas its district public library is still far behind in using any technology for their internal and external users.

(19). **Divisional Government Public Library, Barisal:** The library was first established in 1965. With the up-gradation of Barisal as a Division in 2002, the library was converted into the Divisional Government Public Library on 16 May, 2005. The Divisional Government Public Library, Barisal is located at College Road, Barisal. The total collection is 40,994 of which the number of books and periodicals in Bengali is 35,000 and in English 5994. It subscribes to 15 national daily newspapers and 9 periodicals (*Official Records: Jan, 2007*). There are 11 staffs who provide services to an average of 690 users per day. Of the staff, 2 are professional, 5 are semi-professional and 4 are support staff (www.publiclibrary.org.bd/).

(20). **District Government Public Library, Patuakhali:** The District Government Public Library, Patuakhali was established on 1 November, 1982. Subsequently, the government acquired .34 acres of land and renovated the building on 6 June, 2002 to ensure its proper functioning. This library is located at Circuit House Road, Patuakhali. The total collection is 22,967 of which the number of books and periodicals in Bengali is 18,000 and in English 4967. It subscribes to 11 periodicals and 14 newspapers (*Official Records: Jan, 2007*). There are 5 staffs who provide services to an average of 200 users per day. Of the staff, 1 is professional, 3 are semi-professional and 1 is support staff (www.publiclibrary.org.bd/).

Status of automation in the Public Libraries of Barisal Division

Table 18: Year of computer installation in the Public Libraries under Barisal

Division

Divisional Government Public Library, Barisal	2002
District Government Public Library, Patuakhali	X

Findings: Divisional Government Public Library, Barisal started using computer for performing official functions in 2002 whereas other district public libraries in Barisal have no computer facilities.

Table-19: Technology Used in District Government Public Libraries under Barisal Division

SL	Name	Computer	CD-ROM	Internet/ Email	Telephone	Typewriter	Photocopier	Fax
19	Divisional Government Public Library, Barisal	Y	X	X	Y	Y	Y	X
20	District Government Public Library, Patuakhali	X	X	X	Y	X	X	X

Findings: The technological facilities are very limited in Divisional Government Public Library, Barisal and the District Government Public Library, Patuakhali. Though only the Divisional Government Public Library, Barisal has received computers, these are yet to be connected with internet. District Government Public Library, Patuakhali has only telephone facilities. Other technological facilities are almost the same in both libraries which have no significant impact on automation.

Existing status of IT based services in government public libraries

Table-20: Existing status of IT-based services in government public libraries in Bangladesh

Libraries		BSKNPL	Gazipur	Manik gonj	N'gonj	DPL, C	Cox's Bazar	Comilla	B'baria	DPL, R	Sraj gonj	Natore	Bogra	DPL, K	Jessore	Jhenaidah	Magura	DPL, S	MaoluvBz	DPL,B	Patuakhali
Services																					
Automation Software		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Acquisition	Ordering	Yes (tailored)	X	X	X	Yes	X	Yes	X	Yes	X	Yes	Yes	Yes	X	X	X	Yes	X	Yes	X
	Receiving	Yes(tailored)	X	X	X	Yes	X	Yes	X	Yes	X	Yes	Yes	Yes	X	X	X	Yes	X	Yes	X
	payment	Yes(tailored)	X	X	X	Yes	X	Yes	X	Yes	X	Yes	Yes	Yes	X	X	X	Yes	X	Yes	X
processing	Classification	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Cataloguing	Yes (tailored)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Data entry	partly	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Preparation of library tools	partly	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Searching facilities	On-line searching	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Library dbase	partly	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Off-line searching	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	E-journals through Consortium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	OPAC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Yes= available, X= Not available

The above mentioned table shows us four major features of IT-based library services which are described below:

Library Automation Software

Automation is the use of computer-assisted systems to undertake repetitive jobs leaving staff free to accomplish other duties (Harrod, 1995:48). All the public libraries under this survey have no automated software. Only Begum Sufia Kamal National Public Library, Dhaka is under the process to automate some of their library functions using customized library software. Book processing and circulation services are very important jobs of automation; these two jobs are maintained partially by 9 libraries namely Begum Sufia Kamal National Public Library, Dhaka; Divisional Public Library, Chittagong; District Public Library, Comilla; Divisional Public Library, Rajshahi; District Public Library, Natore; District Public Library, Bogra; Divisional Public Library, Khulna; Divisional Public Library, Sylhet; Divisional Public Library, Barisal. These libraries are using customized software which is not recognized at all although a few of them are using Microsoft Access database particularly processing, circulation and reference services.

Acquisition

Acquisition is a process of obtaining books or other reading materials for the library. It is basically involved with identification and selection of reading materials, issuance of order, receiving of books as per order and payment of the same in favour of the respective vendor. Till now, no public library in Bangladesh covered by this survey has developed any online acquisition systems, which could be linked with the library software. The total acquisition activities of the government public libraries are mostly done manually. However, some librarians are using mainstream application software like MSWord and MSEXcel to perform some of the acquisition functions. No public library, except Begum Sufia Kamal National Public Library, Dhaka is yet to develop any module of acquisition systems. However, it has been observed that 8 libraries, namely, Divisional Public Library, Chittagong; District Public Library, Comilla; Divisional Public Library, Rajshahi; District Public Library, Natore; District Public Library, Bogra; Divisional Public Library, Khulna; Divisional Public Library, Chittagong Sylhet; Divisional Public Library, Barisal partially perform their acquisition functions using the MSOffice Suite.

Processing

Processing comprises sealing; making accession; classification; cataloguing; data entry; determining subject headings, management of bibliographical information of reading materials; control of serial holdings; pasting date due slip, book card and book pocket and preparation of library tools. Some of the libraries under this survey processed their reading materials using both manual and technological systems. Full-fledged computer based classification systems is absent in all government public libraries in Bangladesh but Begum Sufia Kamal National Public Library, Dhaka is using technology to perform classification activities as data entry is done by the library staffs with a view to launch automation in future.

Searching Facilities (On-line and off-line services)

Databases produced by commercial firms, government departments; professional bodies, research organizations, etc. are usually made available via host. Facilities for browsing and searching of CD-ROMs, books, journals, encyclopedias, etc. using micro-computer are very restricted in all libraries except a few. No computers are used for the purpose of online journal searching in the public libraries of Bangladesh.

Consortium

‘Minimum cost and maximum services’ is the motto of consortium. At present, there is a consortium named Bangladesh INASP-PERI Consortium (BIPC). This consortium is coordinated by Bangladesh Academy of Sciences (BAS). Some academic and special libraries in Bangladesh are members of this consortium but unfortunately public libraries in Bangladesh did not show any interest to be its member as of today. That’s why, a larger number of users fail to access online journal’s services of BIPC. Currently there are more than 22 databases that are being maintained by the consortium.

OPAC

OPAC is one of the important tools for searching books from library. If OPAC is available in public libraries, users may have an opportunity to search books online. If they have internet connection, the books can be found from the desktop of office, from home or from anywhere. Public libraries in Bangladesh do not have this option, so users of these libraries are dissatisfied with the present services.

Table-21: Existing status of IT-based services in government public libraries

Libraries	BSKNPL	Gazipur	Manikgonj	N'gonj	DPL, C	Cox's Bazar	Comilla	B'baria	DPL, R	Siraj gonj	Natore	Bogra	DPL, K	Jessore	Jhenaidah	Magura	DPL, S	Maokvi Bz	DPL, B	Patua khali	
Services																					
Circulation	Loan services	Yes (tailored)	X	X	X	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Membership cards	Yes(tailored)	X	X	X	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Fine generation	Yes(tailored)	X	X	X	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Blockade systems for renewed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Borrower's status	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Reading materials status	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Report generation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	On-line reservation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Information Retrieval	Yes (tailored)	X	X	X	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Computer facilities with services	CD & DVD writings	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Internet services	Yes (tailored)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Pen drive port facilities and services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Network, printing facilities and services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Document delivery systems through email	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Email	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Color printing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Scanning	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Telecommunication facilities with services	Land based phone	under process	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Cell phone	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Fax services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Wi-Fi systems	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Wi-Max systems	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	CCTV monitoring systems and services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Yes= available, X= Not available

The above mentioned table includes automated library services; such as circulation, information retrieval, computer facilities with services and telecommunications facilities with services. These services are partly offered by the Begum Sufia Kamal National Public Library, Dhaka and the Divisional Public Library, Chittagong among the libraries under this survey.

Circulation

Circulation module consists of loan services, creating library membership cards, fine generation, blockade system for renewal of library membership cards, borrowers' status, reading materials status, report generation of circulation activities and on-line reservation etc. Out of the 20 libraries under this survey, reading materials loan services are provided partly through using MSOffice suite by only Begum Sufia Kamal National Public Library, Dhaka and the Divisional Public Library of Chittagong. Very recently, these two libraries have started to generate library membership cards and auto fine through computers just for their staffs only. The blockade system for renewal cards, Borrower's status, Reading materials status, Report generation and Online reservation services through computers are absent at all the libraries under this survey.

Information Retrieval

To retrieve information from any full text or bibliographical database through online or off-line is called information retrieval. It could be done through manually or electronically. Information retrieval system is not available at all libraries covered by the survey except Begum Sufia Kamal National Public Library, Dhaka and Divisional Public Library, Chittagong. It is learned that at present searching facilities and information retrieval services are very limited in these two libraries as these services are not open for all users. It needs to be mentioned here that most of the libraries are suffering a lot for having no computers, so they have not these opportunities at all.

Usually, CD and DVD writing services are not available in any public libraries under this survey. But Begum Sufia Kamal National Public Library, Dhaka provides this service on request basis to some potential users of the library especially to the government officials and researchers in their own department. Internet is an amalgamation of inter-related computer networks permitting electronic communication on a global scale (Harrod, 1995:342). This is the age of internet. But unfortunately, no users of public libraries except Begum Sufia Kamal National Public Library, Dhaka provides this service. Begum Sufia Kamal National Public Library, Dhaka has started this service very recently for a limited number of users. But it has a plan to increase the number of computers as they are receiving a very good response from the users. Pen drive port facilities and services, Network printing facilities and

services are completely absent in all the libraries under this survey. Document delivery systems through email are found in only Begum Sufia Kamal National Public Library, Dhaka. It sends documents to the relevant ministry based on the demand of the government officials. General users are yet to enjoy this service. Scanner and colour printing facilities are not available in any of the libraries under this survey. Only Begum Sufia Kamal National Public Library, Dhaka has this equipment which can be used by the top management of the library. Rests of the libraries do not have such kind opportunity at all.

Telecommunications Facilities with Services

Land based phone services, Cell phone services and Fax services are not available at any libraries covered by this survey. Though a few divisional public libraries have fax machine, these are being used to maintain communication for their official purposes. Wi-Fi is a system by which Internet can be accessed wirelessly. Wimax is also a digital communication system, also known as IEEE 802.16 which is intended for wireless Metropolitan Area Network (www.wimax.com/education). Wi-Fi and Wimax systems are not available in public libraries under this survey. Closed Circuit Television (CCTV) is one of the important devices for ensuring security of the library. The system helps library staff to monitor equipment, reading materials and inside activities of the library. This system also helps to reduce theft of valuable reading materials from the library. No public library under this survey has installed the system as yet.

Table-22: Existing status of automation in government public libraries Dhaka University Institutional Repository

Libraries	BSKNPL	Gazipur	Manikgonj	N'gonj	DPL. C	Cox's Bazar	Comilla	B'baria	DPL. R	Sirajgonj	Natore	Bogra	DPL. K	Jessore	Jhenaidah	Magura	DPL. S	Maoluv Bz	DPL.B	Paraukhali	
	Services																				
Technical Services	Security systems of library services (e.g. RFID technology)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Stock verification	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Photocopy services	Yes	X	X	X	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Television facilities with services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
E-alert services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Video Conferencing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reader's services	New arrivals	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	E-dissemination of book cover's image	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	CAS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	SDI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Bibliographic and Indexing services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	E-counseling	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Reference services	Yes	X	X	X	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Document delivery services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Inter-library loan services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Literature search services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FAQ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
E-book services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Yes= available, X= Not available

The table 22 mentioned above describes the status of technical services, television facilities, e-alert services, video-conferencing and reader's services of the government public libraries under this survey.

Technical services

Technical services comprise the functions of security systems of the library services with Radio Frequency Identification (RFID) technology, stock verification and photographic reproduction. Security system of library services with RFID technology was not available in any public libraries under this survey. RFID technology is not offered by any libraries as the system is very expensive. Stock verification (inventory) services were done manually by all the government public libraries under this survey except the six divisional public libraries. The six divisional public libraries performed their stock verification using computer-based customized database. As an apex organization, BSKNPL is procuring books centrally and decentralizing the collection throughout the district government public libraries. Therefore, Begum Sufia Kamal National Public Library, Dhaka has to maintain a comprehensive database for stock verification. Photocopy machine are not available in all the government public libraries under this survey except Begum Sufia Kamal National Public Library, Dhaka; Divisional Public Library, Chittagong; Divisional Public Library, Rajshahi; Divisional Public Library, Sylhet; Divisional Public Library, Khulna and Divisional Public Library, Barisal. These libraries provide limited photocopy services and they do not allow photocopying of complete books. Users are responsible complying with copy right Act. All the public libraries under this survey were much conscious and aware about the copyright act. Photocopy system and services help us to reduce the system loss of libraries in terms of pilfering and cutting pages of books.

Television facilities and services

If any user is interested to learn something through various types of learning programme of television, that can be made possible by having television in public libraries. Among all public libraries under this survey; it was found that no one had the facilities in their library.

E-alert services

E-alert service is an electronic communication by which attention can be drawn of users on any library services. Electronic dissemination of contents of journal could be treated as e-alert services. This communication can be made by email. The service may provide occasionally, not regularly. Unfortunately no public libraries in Bangladesh provide such kind of services.

Video conferencing

The simultaneous connection, via telecommunications link coupled with video display of remote locations to allow conversation of issues on pre-agreed topics. Exclusive systems are being supplemented by video and audio attachments to PCs (Harrod, 1995:670). Video conferencing is one of the largest interventions of information, communication and technologies (ICT). It is such system by which a group of people can hold meeting and conferences from remote areas. At present there is no video conferencing system in any government public libraries under this survey in Bangladesh.

Readers' services

Readers' services cover new arrivals, electronic dissemination of book cover's image, Current Awareness Services (CAS), Selective Dissemination of Information (SDI) services, Bibliographic and Indexing services, e-counseling services, reference services, inter-library loan services, document delivery services, literature search services, virtual reference services, FAQ (Frequently Asked Questions) services and e-book services.

New arrivals mean the reading materials, which are newly arrived, listed in the library and disseminated among users through different mechanisms, are called new arrivals. Newly arrived book covers are scanned by scanner producing images of the book covers and these images are disseminated among users through email, this is called electronic dissemination of books' image. The newly arrived reading materials, which are prepared for notifying and disseminating among users through different mechanisms, are called current awareness services (CAS). When a specific library service is provided for specific person is called selective dissemination of information (SDI) service. Computer based new arrival services are provided by only BSKNPL. Electronic dissemination of books' image services were not offered by any of the public libraries under this survey.

The facilities, procedures and devices which are engaged to produce a bibliography consisting of a continuing series of publications or bibliographical information (Harrod, 1995:61). This is called **Bibliographical services**. Indexing service is a

periodical publication which systematically indexes the contents of periodicals and sometimes other forms of publications, either on a general nature or within specified subject fields. This is called indexing services (John, 19995:316). Computer based bibliographical and indexing services are not offered by any public libraries under this survey in Bangladesh.

Sometimes library personnel are asked to provide counseling services through electronic communications. This is called **e-counseling**. This type of service is not offered by any public libraries under this survey in Bangladesh.

Where service is provided on the basis of information received from internet is called computer based **reference services**. This service is offered by two public libraries namely Begum Sufia Kamal National Public Library, Dhaka and Divisional Public Library, Chittagong. They provide it for their own staff members not for the users. Based on the demand of the relevant ministry and government officials of the department of public libraries, they provide this service. Most of the time they have to use Google Search engine or other free search engine of internet to provide this service.

A book or other item lent between two libraries, which is being performed by electronic means is called computer based **inter-library loan services**. This service was not offered by any public libraries under this survey.

When the document is available on request; as essential items; through fax, -e-fax and email is called **document delivery services**. This service was not offered by any government public libraries under this survey in Bangladesh.

Literature search services

Literature search is a systematic and exhaustive search for published materials on a specific topic (Jenifer, 1995: 394). Usually the users are involved with research they need latest information published in journals for their research work. These services might be available through on-line or off-line, but users prefer to have this type of information through on-line. Therefore, they want to have this information just after the publication of journals. No public libraries under this survey in Bangladesh provide this type of services due to limitation of IT-based facilities.

Virtual library services

Sophisticated computer simulations techniques can be used to provide users with library and information services by electronic means, with network document delivery and access, as it forms a real library but without physical existence (John, 1995: 671). This service was also not available in libraries under this survey.

FAQs (Frequently Asked Question) services

On network news and Usenet, the questions; which are asked frequently, especially by new users; these are called FAQ. In anticipation of this, many Network groups have lists of frequently asked questions in an effort to block discussion (Harrod, 1995: 271). This service was not available in all libraries under this survey in Bangladesh.

E-books services

E-book means electronic book. It indicates that hardcopy of any book is not e-book. It should be product of electronic publishing (Harrod, 1995: 225). E-book services were not found in any public libraries under this survey in Bangladesh.

Table-23: Existing status of IT-based public library services in Bangladesh

Libraries	BSKNPL	Gazipur	Manik gonj	N'gony	DPL, C	Cox's Bazar	Comilla	B' bana	DPL, R	Sirajgonj	Natore	Bogra	DPL, K	Jessore	Jhenaidah	Magura	DPL, S	Mao'uvibz	DPL,B	Patuakhali
Services																				
Administrative services (e-governance)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
List server facilities	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
News Clippings	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Adaptable technology for disabled people	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Web-based library services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Electronic archive	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Institutional Repository (IR)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Digital Library Initiatives	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Report generation of library activities	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Yes= available, X= Not available

Table 23 includes administrative services (e-governance), list server facilities and services, news clippings, adaptable technology for disabled people, web-based library services (services available on library's own website/webpage), electronic archives, institutional repository (IR), digital library initiatives and report generation of library activities.

Administrative services (e-governance)

Administrative service is governed by electronically is called e-governance. The Director of the public library usually performs administrative services on the highest level. Administrative services include administering budget, planning library development, creating policies, training and supervising staff, maintaining relation with the officials of the department of public libraries and the ministry of cultural affairs, writing memorandum, conducting surveys and analysis of services, maintaining records of recommending promotions, participating in library conferences and professional associations, maintaining financial records and etc. All these activities require permission from the top management of the Ministry of Cultural Affairs, Government of the People's Republic of Bangladesh for easy management and administration of the public libraries. These types of activities can be done through email. Full-fledged paperless administration or e-governance system was not found in any of the government public libraries under this survey. Hard copy filling system was found in all public libraries under this survey. Though the present government has a vision to make "Digital Bangladesh" within 2021 but as of today e-governance system was not found in any public libraries in Bangladesh.

List server facilities and services

It supports e-mail discussion group. There is only one platform that exists in Bangladesh named LISBD. This is a professional platform by which professionals, those who are members of LISBD group, may know many things on professional development. Many young library professionals of Begum Sufia Kamal National Public Library, Dhaka; Divisional Public Library, Chittagong; Divisional Public Library, Rajshahi; Divisional Public Library, Khulna; Divisional Public Library, Sylhet and Divisional Public Library, Barisal are the personal members of the group. Several issues were discussed through this group. This facility was not found in any public libraries under this survey.

News-clipping services

Newspapers comprise an important source of information as they include the latest information in the form of news with updating. Being aware of their importance, libraries have been providing news-clipping services in various ways to their users since newspapers were invented. In the beginning manual methods of marking,

cutting and pasting the useful news items were used, but today's libraries have automated this service by using information technology. This certainly has improved the access, delivery and searching of news clippings in a web-based network environment for remote users (Matoria, 2008). Computer based news clipping services were not available in any public libraries under this survey. But manually this service was maintained in most of the divisional public libraries in Bangladesh.

Adaptable technology services for the disabled people

Every public library should have the provision to create learning environment for the disable people. At the same time public libraries should have flexible technology library services for the disable people of the society. But unfortunately there were no such services available for them in all public libraries under this survey.

Web based library services

The library services are provided by the help of web, this is called web based library services. The public library should have its own web server by which it allows users to get access to its resources. The server should be kept open for 24 hours, so that user can have access to the library resources from remote areas. These kinds of services are on-line public access catalogue; access to electronic resources, on-line reference services; book reservation systems and availability of digital publications through institutional repository, etc. All the services mentioned above were not found in any public libraries in Bangladesh. Only Begum Sufia Kamal National Public Library, Dhaka is under process to start these services whereas the rest of the divisional public libraries have future plan to launch these services.

Building of electronic archives

Electronic archive is a set of electronic files stored on a publicly accessible server, available for download by way of a file transfer protocol (FTP) programme (bcs.bedfordstmartins.com). The electronic archives for preservation of electronic journals, CDs and other electronic resources have not yet been maintained by any public libraries under this survey in Bangladesh.

Institutional Repository (IR) services and digital library initiatives

Institutional repository (IR) and digital library (DL) both are, to some extent, new concept in Bangladesh. Many of library professionals of Bangladesh understand, recognize and realize the importance of establishing institutional repository and digital library in Bangladesh. But now there are lots of challenges, difficulties, budgetary constraints and other limitations in establishing institutional repository and digital library in Bangladesh. In spite of that there are some research organizations and institutions making efforts to build institutional repository and digital library in Bangladesh. But the public libraries are far behind from these services.

Report generation of different library activities

There are several tasks to be performed by the library in order to fulfill smooth library services. Sometimes library administration needs various types of statistics of different library activities. Library automation is one of the important mechanisms for providing these types of services. If the library is automated, report generation of different library activities could be done easily. If the system is not automated, it becomes very difficult to get the job done manually, which is eventually time consuming also. No public libraries under this survey in Bangladesh have this facility. Automation system is very much helpful for library administration.

CD-ROM services

In Bangladesh, not all public library services have taken advantage of CD-ROM technology. Only 4 divisional public libraries namely Begum Sufia Kamal National Public Library, Rajshahi Divisional Public Library, Chittagong Divisional Public Library and Khulna Divisional Public Library out of 20 that participated in the survey provide their users with access to CD-ROM-based information services and products within a very limited extent. CD-ROM-based resources being provided by the libraries include educational CD-ROM resources such as the Banglapedia on CD-ROM; full-text collections and UNESCO CD-ROMs on education. Libraries that have taken initiative to automat their acquisition functions, such as Begum Sufia Kamal National Public Library, Chittagong divisional public library, Rajshahi divisional public library and Khulna divisional public library are also using CD-ROM tools for book acquisitions/selection. Begum Sufia Kamal National Public Library use CD-ROM for children's; Rajshahi Divisional Public Library for staffs and teachers of the different educational institutions; Chittagong divisional Public Library and Khulna divisional Public Library use CD-ROM for their staffs only.

Cyber café facilities

No public libraries in Bangladesh under the survey provide this service. Begum Sufia Kamal National Public Library has a future plan to make a cyber café for its users if they receive fund from the government. They have submitted the proposal to the Ministry of Cultural Affairs with a full-fledged automation project where they mentioned clearly to establish a cyber café in the separate room in public library building for its user.

Library Web sites

Unfortunately, no public libraries have their websites with their own domain. As the public libraries of Bangladesh are under the Ministry of Cultural Affairs, so in the Ministry web site they use the link <http://www.moca.gov.bd/> with a short description of public libraries. Information provided on this Web site is mainly similar to that found in library brochures, such as the services offered, opening hours, general library information, and contact details.

Internet Access

Some divisional public libraries such as Begum Sufia Kamal National Public Library, Dhaka; Chittagong Divisional Public Library, Chittagong and Rajshahi Divisional Public Library, Rajshahi have these opportunities just for their limited number of high officials/librarians.

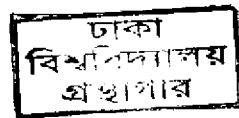
Conclusion

Most of the public libraries are providing services in a hybrid manner; i.e. the public libraries under this survey perform their functions following both manual and technological systems. Through the survey it has been observed that all library professional realized the importance of automation in providing library services. It was found that only Begum Sufia Kamal National Public Library has started their functions with the help of information technology to some extent. The tremendous growth of Information and Communication Technologies has opened the door for libraries to effectively use technological facilities for the betterment of their services. However, public library both government and non-government public libraries are yet to establish a full-fledged division of Information Technology. For this reason, users are not fully satisfied because they need more up-to-date and instant information that can be obtained by using IT tools and techniques.

Chapter V

Findings of the Study

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Chapter V

Findings of the Study

This chapter assesses the existing situation of automation in 20 selected government public libraries of Bangladesh along with the performance of library professionals, needs and expectations of users regarding information and public library services in Bangladesh. An individual study on “User opinion on Government Public Library Services in Bangladesh” had also been completed to examine the exact situation of public libraries. With a view to this, the author has designed a separate questionnaire for six divisional public library users. The required data have been collected through questionnaire method, supplemented by informal discussions with the users. Questionnaire consisting on 15 questions have been designed to elicit opinions from the selected groups of users of the divisional public libraries including students, community people and children. During the survey of each sample library, the researcher found the user in the library. Questionnaire was distributed among 90 users in six libraries to respond instantly. However, only 60 users responded. Additional data regarding the public library, its development and collection, growth and service facilities were collected and verified from some office records. The findings of the survey are presented below.

Sample

The success of any investigation depends for the most part on a well-controlled and well represented sample. This is a major problem of the researcher before starting any investigation. The size of sample should neither be excessively large nor too small. It should be optimum. An optimum sample is one that fulfils the requirements of efficiency, representative’s reliability and flexibility. In qualitative studies, sampling does not resort to numerical boundaries to determine the size of the sample (*Ajuha, 2003, p.185*). Generalizations are primarily concerned with quality rather than with quantity. The analysis proceeded on the research data collected from 20 government public libraries out of 68 under six divisions which is most significant.

In the process of analysis one of the major difficulties encountered was non-furnishing of relevant information under certain variables by the respondents with regard to financial resources, services offered, steps for automation, share of automation in the library budget, available hardware and software details, etc. The

analysis, therefore became a bit difficult in some cases where the data revealed little about the magnitude of their various possible relationship, besides in drawing an appropriate picture of the situation relating to those facets where information found were inadequate. In spite of all these, all efforts have been made to make the analysis comprehensive, statistically treated and compared.

Methodology

The study has applied both qualitative and quantitative method. In qualitative method, the study has used following tools: i). sample survey using structured questionnaire with users; ii). analysis of secondary sources; and iii). observations. In quantitative method, the study has used followings tools: i). Semi-structured questionnaire for librarians; ii). discussion with library staffs, library consultants, external service providers, IT experts; iii). direct personal interview with library non professional's administrators.

Government Public Libraries included in the survey

Data/information have been collected from twenty public libraries (4 libraries from each of the old divisions - Dhaka, Chittagong, Rajshahi, and Khulna and 2 libraries from each of the new 2 divisions - Sylhet and Barisal), which constituted the major database for the present investigation. Hence, the size of the sample remains 29.41%. These libraries have been chosen randomly and brought under investigation based on the availability of data and their geo-physical location from six divisions but these are the representative of the public library systems and services in Bangladesh. The following are the government public libraries which have been taken as samples and covered six divisions of Bangladesh:

Table-24: Distribution of public libraries under the survey with year of establishment and address

Sl. No	Name of the Public libraries	Year of Establishment.	Address
1	Begum Sufia Kamal National Public Library, Dhaka	1958	Shahabag, Dhaka
2	District Government Public Library, Gazipur	1986	District Head Quarter
3	District Government Public Library, Manikgonj	1965	District Head Quarter
4	District Government Public Library, Narayangonj	1965	District Head Quarter
5	Divisional Government Public Library, Chittagong	1963	Chittagong District Head Quarter
6	District Government Public Library, Cox's Bazar	2000	District Head Quarter
7	District Government Public Library, Comilla	1982	District Head Quarter
8	District Government Public Library, Brahmanbaria	1964	District Head Quarter
9	Divisional Government Public Library, Rajshahi	1983	District Head Quarter
10	District Government Public Library, Sirajgonj	1984	District Head Quarter
11	District Government Public Library, Natore	1998	District Head Quarter
12	District Government Public Library, Bogra	1982	District Head Quarter
13	Divisional Government Public Library, Khulna	1964	District Head Quarter
14	District Government Public Library, Jessore	1982	District Head Quarter
15	District Government Public Library, Jhenaidah	1982	District Head Quarter
16	District Government Public Library, Magura	1999	District Head Quarter
17	Divisional Government Public Library, Sylhet	2002	District Head Quarter
18	District Government Public Library, Maoulvi Bazar	1982	District Head Quarter
19	Divisional Government Public Library, Barisal	1965	District Head Quarter
20	District Government Public Library, Patuakhali	1982	District Head Quarter
Total =20 Public Libraries			

Table 24 shows that the survey covered 20 selected government public libraries in Bangladesh. The choice of libraries included in the survey was made in consultation with the supervisor of the research based on their location and the availability of data. Altogether, twenty libraries participated in the survey by completing and returning the survey questionnaires. Unfortunately, some public libraries that were included in the survey – in Dhaka, Rajshahi, Chittagong, Khulna, Barisal and Sylhet divisions – could not participate fully for various reasons such as their telephone facilities were found unreliable; email facilities were very restricted and as such.

Survey questionnaire

Two sets of structured survey questionnaire (reproduced in **Appendix I & II**) seeking data on the use of automation/information and communication technologies were developed and distributed to the selected public libraries and their users. During the preparation of the survey, it was established that very few of the librarians in the selected public libraries had access to electronic mail. Out of 20 selected libraries very few used free web-based email system such as Hotmail or Yahoo! Most of these had no opportunity to use the email. This being the case, a decision was made to visit the sample libraries with the questionnaires for collecting data with direct personal interview method. The distribution and return of questionnaires through direct communication proved to be very reliable and fast but not cost-effective as every district had to be visited frequently.

The survey questionnaire requested information to the librarians on the following variables a). General information of the libraries which cover *physical structure*, collection, current journals subscriptions, library budgets, human resources, flow of visitors, etc. b). Automation facilities in the libraries, hardware specifications, plan to purchase more computers and printers, distribution of ICT facilities in, software application, etc. c). Library automation services which cover information on number of automated libraries (partial or full), year of using library system, reasons for automation (if any), and knowledge about library automation systems and CD-ROM services. d). Internet connectivity with cyber café facilities (if any), free internet access, IT training and library websites, etc. Besides these, additional information on how automation strategy and policy can be developed considering the existing barriers was also sought from the librarians.

Findings and Discussion

The results and discussion presented below are based on an analysis of the responses to the questionnaires sent to the twenty libraries.

Physical structure/Space of Public libraries

The 5th law of library science, “Library is a growing organism” propounded by Dr. S. R. Ranganathan is an accepted biological fact that clearly speaks about the vital and lasting characteristics of the library as an institution, besides enunciating a fundamental principal that should govern the planning and organization of libraries. A library, like an adult grows in its entire ramification such as in size, collection, readers, staffs, and services. Thus the physical structure plays a crucial role for any functional library to perform its obligations towards its readers and to provide better services as the real facilitator of information. A Public library therefore is not an exception to such benefits. Keeping the above objective in mind and to ascertain the current structure available for these Public libraries in Bangladesh in the study, the librarians under this survey were asked to mention the type of physical structure/space in which they have housed their libraries; separate building/rented or own. The resultant data elicited from that respondent is depicted below:

Table-25: Distribution of public libraries by status of physical structure

SL. No	Name of the Public libraries	Own Building	Rent
1	Begum Sufia Kamal National Public Library, Dhaka	√	
2	District Government Public Library, Gazipur	√	
3	District Government Public Library, Manikgonj		√
4	District Government Public Library, Narayanganj		√
5	Divisional Government Public Library, Chittagong	√	
6	District Government Public Library, Cox's Bazar	√	
7	District Government Public Library, Comilla		√
8	District Government Public Library, Brahmanbaria		√
9	Divisional Government Public Library, Rajshahi	√	
10	District Government Public Library, Sirajgonj		√
11	District Government Public Library, Natore		√
12	District Government Public Library, Bogra	√	
13	Divisional Government Public Library, Khulna	√	
14	District Government Public Library, Jessore		√
15	District Government Public Library, Jhenaidah		√
16	District Government Public Library, Magura	√	
17	Divisional Government Public Library, Sylhet	√	
18	District Government Public Library, Maolovi Bazar	√	
19	Divisional Government Public Library, Barisal	√	
20	District Government Public Library, Patuakhali		√
	Total =20 Public libraries	11	9

Table 25 shows that, out of 20 libraries only 11 have their own building but the other infrastructural facilities are very poor. Among the rest, nine public libraries are housed in rented buildings. These buildings have found to be unsuitable for libraries. Lack of space and equipment, most of the libraries are now in a deplorable situation. The Public libraries which have own building apparently have more advantages over those who have taken rent for providing proper library services to their users. The public library authorities should, therefore, have their positive thinking to make own

building for the respective libraries in order to fulfil the objectives of the public library as the current space and structure of these libraries in which they operate is still in utter dismay. Such a poor and discouraging infrastructure of public libraries, perhaps are either due to (i) lack of vision and professional decision; and (ii) non-availability of fund for providing and independent building to their respective libraries.

Collection

The volume of collection in a library plays a significant role towards meeting users need. Book collection still holds an important position in any library in spite of the growing demand for a variety of online and electronic resources. The respondents were, therefore, asked to furnish information pertaining to their respective collections. The resultant data are depicted in Table-26 for necessary statistical interpretation:

Table-26: Distribution of public libraries by status of resources as of 30 December 2009

SL. No	Name of the Public libraries	Collection
1	Begum Sufia Kamal National Public Library, Dhaka	1,62,440
2	District Government Public Library, Gazipur	16,716
3	District Government Public Library, Manikgonj	14,316
4	District Government Public Library, Narayanganj	13,666
5	Divisional Government Public Library, Chittagong	65,868
6	District Government Public Library, Cox's Bazar	11,565
7	District Government Public Library, Comilla	36,602
8	District Government Public Library, Brahmanbaria	12,521
9	Divisional Government Public Library, Rajshahi	48,148
10	District Government Public Library, Sirajgonj	10,977
11	District Government Public Library, Natore	3,981
12	District Government Public Library, Bogra	24,596
13	Divisional Government Public Library, Khulna	87,080
14	District Government Public Library, Jessore	17,389
15	District Government Public Library, Jhenaidah	12,278
16	District Government Public Library, Magura	16,439
17	Divisional Government Public Library, Sylhet	41,124
18	District Government Public Library, Maoluvī Bazar	11,827
19	Divisional Government Public Library, Barisal	40,994
20	District Government Public Library, Patuakhali	22,967
	Total =20 Public libraries	

Table-27: Distribution of public libraries by range of resources

Sl. No.	Range	# of Libraries	%
1	Below 20,000	11	55
2	20,001-40,000	3	15
3	40,001-60,000	3	15
4	60,001-80,000	1	5
5	80,001-100,000	1	5
6	100,001-above	1	5
	Total	20	100

Table 26 shows the total number of collection individually and Table 27 shows the percentage (%) of libraries having different range of their collection. The above table further transpires that, 11 (55%) out of 20 sample libraries were having less than 20,000 books, which is not encouraging in a public library producing a good generation of the country. The reason for such poor state of collection in 55% of the public libraries of Bangladesh under this survey is perhaps due to their recent origin, yet these libraries should take every possible step to boost their respective book collection. The above table also shows further that, only 3 libraries were having collections in the range of 20,001-40,000 volumes constituting 15% of the total; similarly there are 3 libraries included in the survey have a collection between 40,001 and 60,000 volumes, which also constitutes 15% of the total. In the range of 80,001-100,000; there are only 2 libraries, which constitute 5% of the total have more than 1 lac volume of collections that is quite moderate and encouraging.

It is needed to mention here that centrally the public libraries of Bangladesh procure books and other collections for all division and district public libraries. With regard to the acquisition policy, the decision of the Begum Sufia Kamal National Public Library, Dhaka is final. During the survey, it has also been observed that the authority gives little attention to the community user demand when they collect or procure books. Even the user demand survey for enriching the collection of the public libraries is quite absent. As a result, most of the district public libraries of Bangladesh failed to create positive reflection or good effect by their library services.

Public library budget

Library budget desires the total amount of money, which is available for various purposes after an estimate of anticipated needs, approved by the appropriate authority. It depends a lot on the budget for the development of a truly functional library. The statistics of the budget were analyzed to state the discrimination of the budget from one divisional library to another.

Table-28: Distribution of public libraries by status of Budget in Taka

Year	Dhaka	Chittagong	Rajshahi	Khulna	Sylhet	Barisal
2008-2009	3,45,00,000	30,50,000	20,25,000	16,00,000	900,000	950,000
2007-2008	3,30,06,050	27,59,300	17,36,300	15,77,850	800,000	900,000
2006-2007	2,00,00,000	29,99,308	15,17,200	13,95,710	700,000	650,000
2005-2006	195,00,000	28,32,600	14,61,500	15,02,060	4,50,000	4,80,000
2004-2005	180,00,000	30,12,900	17,94,625	15,89,160	2,40,000	2,40,000
2003-2004	175,00,000	28,42,800	16,31,915	15,93,125	200,000	2,00,000

In regard to the exclusive budget earmarked for the library, it is found that Begum Sufia Kamal National Public Library has the highest budget allocation for its library with an annual budget provision of Tk. 3 core 45 in (2008-2009) lacs where Chittagong is only 31 lac, Rajshahi is 21 lac, Khulna is 16 lac, Sylhet is less than 1 lac, Barisal is also less than 1 lac. Since majority of the public libraries have not furnished information pertaining to the library budget, it is difficult to make a critical and comparative analysis of fiscal conditions of these libraries.

At Present allocation is very poor for 68 public libraries for bearing all the expenditure. In 2008-2009 fiscal years the total budget was 430.25 Lacs for the expenditure of all personnel's of the 68 libraries. Salary, house rent for the library, staff allowances, and other expenditure were included in it. Since all of the public libraries suffer too much from financial crunch, government should pay more attention to providing adequate funds.

Human Resources in Public libraries

The development of a library depends much on its human resources. It is not only the quantity but the quality of human resources that play vital role in proper functioning of any library. The distribution of staff members among different service units, in most of the libraries is not properly maintained. Most of the public libraries are understaffed and do not have computer trained staffs. Respondents were asked to mention the human resources available in their respective libraries. Table 29 below reveals the resultant data pertaining to human resources in the public libraries of Bangladesh.

Table-29: Distribution of public libraries by status of human resources

Sl.No.	Name of Public Libraries	# of professional	# of Semi Professional	Adm.	System analyst	Program Officer	Dou. Officer	Library Assist	Data entry operator	Other	Total
1	Begum Sultia Kamal National Public Library, Dhaka	10	15	7	0	0	0	6	0	10	48
2	District Government Public Library, Gazipur	1	2	0	0	0	0	1	0	1	5
3	District Government Public Library, Manikgonj	1	1	0	0	0	0	1	0	1	4
4	District Government Public Library, Narayanganj	1	2	0	0	0	0	1	0	1	5
5	Divisional Government Public Library, Chittagong	4	6	5	0	0	0	3	0	8	26
6	District Government Public Library, Cox's Bazar	1	2	0	0	0	0	1	0	1	5
7	District Government Public Library, Comilla	1	2	0	0	0	0	1	0	1	5
8	District Government Public Library, Brahmanbaria	1	2	0	0	0	0	1	0	1	5
9	Divisional Government Public Library, Rajshahi	4	6	3	0	0	0	2	0	5	20
10	District Government Public Library, Sirajgonj	1	2	0	0	0	0	1	0	1	5
11	District Government Public Library, Natore	1	2	0	0	0	0	1	0	1	5
12	District Government Public Library, Bogra	1	2	0	0	0	0	1	0	1	5
13	Divisional Government Public Library, Khulna	2	4	2	0	0	0	1	0	4	13
14	District Government Public Library, Jessore	1	1	0	0	0	0	1	0	1	4
15	District Government Public Library, Jhenaidah	1	1	0	0	0	0	1	0	1	4
16	District Government Public Library, Magura	1	1	0	0	0	0	1	0	1	4
17	Divisional Government Public Library, Barisal	2	5	0	0	0	0	2	0	4	11
18	District Government Public Library, Patuakhali	1	1	0	0	0	0	1	0	1	4
19	Divisional Government Public Library, Sylhet	2	2	0	0	0	0	2	0	3	9
20	District Government Public Library, Maoulvi Bazar	1	1	0	0	0	0	1	0	1	4

The above study reveals that the total number of staffs working in public libraries ranges from a minimum of 4 staff members to maximum of 48. As per government norms, there should be a minimum of one librarian, two assistant librarians, four library assistants and two library attendants for each public library. However none of these public libraries except the three major divisional public libraries in Bangladesh included in the study seems to have followed government rules or any such standard till data for this investigation was collected. So, each public library should be provided with minimum staff members as per the government rule in order to ensure proper library and information services to their clientele. In this electronic age, library professionals act as intermediary between information technology and information users. The library professionals should, therefore, be properly trained to provide a variety of information service to their readers with the rich resources, different online databases and full text e-journals.

Ratio of library staff to library users

The number of library users or target populations served, also appearing in table 30 shows that only divisional libraries are catering for a substantially large number of people. Therefore, it is obvious that the use of ICTs in divisional public libraries need to go a long way towards enhancing the provision of efficient and fast access to various digital information resources and services. Bangladesh Central Public Library is also best placed to serve as national and universal access points to global information in the communities.

Table-30: Distribution of public libraries by ratio of staff to users

Public libraries	Library/Information staff	Users per week	Ratio
Begum Sufia Kamal National Public Library, Dhaka	48	13,000	1 : 271
District Government Public Library, Gazipur	5	1000	1 : 200
District Government Public Library, Manikgonj	4	1000	1 : 250
District Government Public Library, Narayanganj	5	1000	1 : 200
Divisional Government Public Library, Chittagong	26	8,000	1 : 307
District Government Public Library, Cox's Bazar	5	1000	1 : 200
District Government Public Library, Comilla	5	1000	1 : 200
District Government Public Library, Brahmanbaria	5	1000	1 : 200
Divisional Government Public Library, Rajshahi	20	3500	1:175
District Government Public Library, Sirajgonj	5	1000	1 : 200
District Government Public Library, Natore	5	1000	1:200
District Government Public Library, Bogra	5	1000	1:200
Divisional Government Public Library, Khulna	13	7,000	1:538
District Government Public Library, Jessore	4	1000	1:250
District Government Public Library, Jhenaidah	4	1000	1:250
District Government Public Library, Magura	4	1000	1:250
Divisional Government Public Library, Barisal	11	4,200	1:321
District Government Public Library, Patuakhali	4	1000	1:250
Divisional Government Public Library, Sylhet	9	5,000	1:500
District Government Public Library, Maolubi Bazar	4	1000	1:250

Table 30 shows the ratio of library staffs with library users which are not encouraging. In a situation where one librarian has to serve nearly five hundred library users, coupled with the fact that in most public libraries information resources and equipment are inadequate, working in public libraries in Bangladesh is undoubtedly a big challenge.

Year first computer was used

Table-31: Distribution of public libraries with the year of first computer installation

Public library system	Year
Begum Sufia Kamal National Public Library, Dhaka	1994
District Government Public Library, Gazipur	X
District Government Public Library, Manikgonj	X
District Government Public Library, Narayanganj	X
Divisional Government Public Library, Chittagong	1998
District Government Public Library, Cox's Bazar	X
District Government Public Library, Comilla	2006
District Government Public Library, Brahmanbaria	X
Divisional Government Public Library, Rajshahi	1998
District Government Public Library, Sirajgonj	X
District Government Public Library, Natore	2006
District Government Public Library, Bogra	2006
Divisional Government Public Library, Khulna	1998
District Government Public Library, Jessore	X
District Government Public Library, Jhenaidah	X
District Government Public Library, Magura	X
Divisional Government Public Library, Barisal;	2002
District Government Public Library, Patuakhali	X
Divisional Government Public Library, Sylhet	2002
District Government Public Library, Maoluvi Bazar	X

Of the public library services that participated in the survey, the earliest use of computers was in 1994 at the Begum Sufia Kamal National Public Library, Dhaka. Overall picture as shown in table 31 reveals that three libraries started using computers in the 1998s, two in the 2002s, and three in the 2006s. The remaining eleven libraries of the sample have no access to computers yet.

Access to computer facilities

Table-32: Distribution of public libraries by access to computer facilities

Public libraries	Servers	PCs	Laptops	Laser	Ink-jet	Dot-matrix
Begum Sufia Kamal National Public Library, Dhaka	1	30	2	5	2	1
District Government Public Library, Gazipur	0		0	0	0	0
District Government Public Library, Manikgonj	0	0	0	0	0	0
District Government Public Library, Narayanganj	0	0	0	0	0	0
Divisional Government Public Library, Chittagong	0	5	0	0	0	2
District Government Public Library, Cox's Bazar	0	0	0	0	0	0
District Government Public Library, Comilla	0	1	0	0	0	1
District Government Public Library, Brahmanbaria	0	0	0	0	0	0
Divisional Government Public Library, Rajshahi	0	5	0	0	0	1
District Government Public Library, Sirajgonj	0	0	0	0	0	0
District Government Public Library, Natore	0	1	0	0	0	0
District Government Public Library, Bogra	0	1	0	0	0	1
Divisional Government Public Library, Khulna	0	3	0	0	0	1
District Government Public Library, Jessore	0	0	0	0	0	0
District Government Public Library, Jhenaidah	0	0	0	0	0	0
District Government Public Library, Magura	0	0	0	0	0	0
Divisional Government Public Library, Barisal	0	2	0	0	1	0
District Government Public Library, Patuakhali	0	0	0	0	0	0
Divisional Government Public Library, Sylhet	0	2	0	0	0	1
District Government Public Library, Maolubi Bazar	0	0	0	0	0	0

Table 32 shows that maximum public libraries included in the survey had no access to computers, not even personal computers. Only Begum Sufia Kamal National Public Library, Dhaka has 1 server but even in 2010 it is not working well as the LAN was yet to be put in place. The survey found that 25 computers were purchased under the

BANSLINK project in 2000. Due to some technical problems (specially fund crisis), the work was not completed. Some other divisional public libraries have a limited number of computers, which are not capable of automating all the library services. One major observation regarding access to computer facilities is that some public libraries have very poor number of computers and most of the district public libraries do not have adequate computer facilities.

Table-33: Distribution of public libraries by status of type of personal computers used

Public Libraries	Pentium IV	Pentium III	Pentium II	Pentium I	486	Others
Begum Sufia Kamal National Public Library, Dhaka	√	√	X	X	X	X
District Government Public Library, Gazipur	X	X	X	X	X	X
District Government Public Library, Manikgonj	X	X	X	X	X	X
District Government Public Library, Narayanganj	X	X	X	X	X	X
Divisional Government Public Library, Chittagong	√	√	X	X	X	X
District Government Public Library, Cox's Bazar	X	X	X	X	X	X
District Government Public Library, Comilla	X	X	√	X	X	X
District Government Public Library, Brahmanbaria	X	X	X	X	X	X
Divisional Government Public Library, Rajshahi	√	X	√	X	X	X
District Government Public Library, Sirajgonj	X	X	X	X	X	X
District Government Public Library, Natore	X	√	X	X	X	X
District Government Public Library, Bogra	X	√	X	X	X	X
Divisional Government Public Library, Khulna	√	√	X	X	X	X
District Government Public Library, Jessore	X	X	X	X	X	X
District Government Public Library, Jhenaidah	X	X	X	X	X	X
District Government Public Library, Magura	X	X	X	X	X	X
Divisional Government Public Library, Barisal	√	√	X	X	X	X
District Government Public Library, Patuakhali	X	X	X	X	X	X
Divisional Government Public Library, Sylhet	√	√	X	X	X	X
District Government Public Library, Maolubi Bazar	X	X	X	X	X	X

Table 33 shows that only 6 divisional library services and 3 district libraries out of 20 public libraries used a combination of different Intel Pentium-based personal computers. They range from 486-based PCs to Pentium IV, in some cases with specifications of a 1.8 GHz processor, 128 MB RAM, 30 GB hard disk capacities and a CD-ROM drive. 11 Libraries indicated that they have no such options as they have no access to computers. Overall, the survey found that only divisional public libraries have access to personal computers, which have been purchased for the purpose of automation of the library functions. But as there are no other infrastructure facilities, they could not start full-fledged automation services in the libraries.

Library automation scenario

The following table shows the scenario of partially automated libraries in Bangladesh:

Table-34: Distribution of public libraries by status of partial automation

Public Library Service	Acquisitions & budgets	Cataloguing	Circulation	Serials control	Inter-library loans	Others
Begum Sufia Kamal National Public Library, Dhaka	Yes	Yes	Yes	Yes	Yes	Yes
District Government Public Library, Gazipur	No	No	No	No	No	No
District Government Public Library, Manikgonj	No	No	No	No	No	No
District Government Public Library, Narayanganj	No	No	No	No	No	No
Divisional Government Public Library, Chittagong	Yes	Yes	No	No	Yes	Yes
District Government Public Library, Cox's Bazar	No	No	No	No	No	No
District Government Public Library, Comilla	Yes	Yes	No	No	Yes	Yes
District Government Public Library, Brahmanbaria	No	No	No	No	No	No
Divisional Government Public Library, Rajshahi	Yes	Yes	No	No	Yes	Yes
District Government Public Library, Sirajgonj	No	No	No	No	No	No
District Government Public Library, Natore	Yes	Yes	No	Yes	Yes	Yes
District Government Public Library, Bogra	Yes	Yes	No	Yes	Yes	Yes
Divisional Government Public Library, Khulna	Yes	Yes	No	No	Yes	Yes
District Government Public Library, Jessore	No	No	No	No	No	No
District Government Public Library, Jhenaidah	No	No	No	No	No	No
District Government Public Library, Magura	No	No	No	No	No	No
Divisional Government Public Library, Barisal	Yes	Yes	No	No	No	Yes
District Government Public Library, Patuakhali	No	No	No	No	No	No
Divisional Government Public Library, Sylhet	Yes	Yes	No	No	No	Yes
District Government Public Library, Maoluvī Bazar	No	No	No	No	No	No

Apart from Begum Sufia Kamal National Public Library, Dhaka, no divisional and district public libraries automated their major library functions. The six divisional libraries are in the process of implementing automation as per commitment of the present government to implement Digital Bangladesh. The Central Public Library located in the heart of the capital city in Bangladesh has automated some of its library

located in the heart of the capital city in Bangladesh has automated some of its library functions. The respondents said that five divisional library services such as Chittagong Divisional Public Library, Rajshahi Divisional Public Library, Khulna Divisional Public Library, Sylhet Divisional Public Library and Barisal Divisional Public Library are going to receive fund from the government to automate some of their basic library functions and they would be integrated with Begum Sufia Kamal National Public Library, while other district public libraries like Gazipur Public Library, Manikgonj Public Library, Narayangong Public Library, Brahmanbaria public library, Sirajgonj public library, Jessore public library, Jenaidah public library, Magura public library, Patuakhali public library, Maoluvī Bazar public library and Cox's Bazar public library are under consideration in the next phase to automate their library functions.

The libraries which have not yet automated any of their functions, and those using computers on only a small scale, have plans to automate in future, with the exception of district public libraries in Barisal, which does not have immediate plan to do so. The reasons given for this are that their existing manual systems are adequate and automation would bring no significant service improvement to users; they have unreliable power supplies, so an automated system dependent on this weak power supply could seriously jeopardize the library's operations; and no funds are available to meet the high cost of initial software and future updates. The major reason given for automating functions only at the main or central library was a lack of funds to extend automation to all the libraries within the system. Other reasons given were a lack of ICT experts and inadequate supporting infrastructure. For example, there are no continuous electricity and telephone facilities where district libraries or service points were located.

Barriers to automation

The introduction of automation in public library services in Bangladesh is being hampered by a number of factors. Most of the cases presented in this study indicate that lack of adequate funding and, in some cases, lack of commitment from parent organizations are the two major barriers to the deployment of automation. Public library services are generally poor funded, and as a result, government is now looking for external assistance and funding for the implementation of automation.

Table-35: Percentage distribution of public libraries with barriers of automation

Barrier	Number	%
Inadequacies of existing automation resources	15	75
Lack of budget for automation	18	90
Skill levels of library staffs	10	50
Lack of automation qualified staff in the library	10	50
Difficult to recruit or retain ICT-qualified staff (lack of applicants/prohibitive salaries)	2	10
Reluctance among staff to use IT	5	25
Library lacks updated automation strategy	8	40
Lack of commitment by institutional management	4	20
Difficulties in training library staff in appropriate ICT skills	6	30

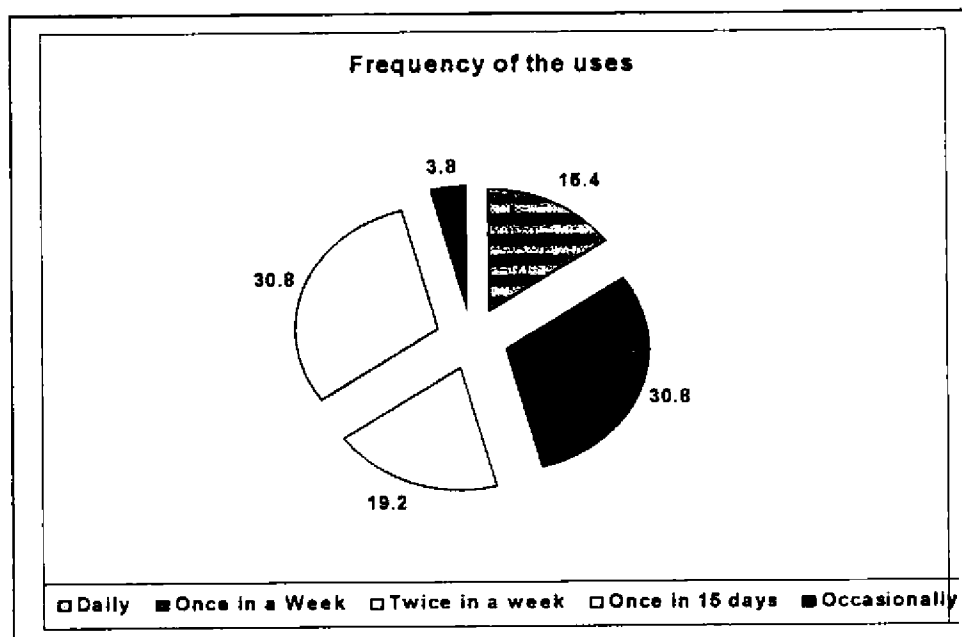
The librarians of the sampled 20 libraries were asked to indicate their opinion regarding the impact of the barriers listed in **Table 35** on their use or implementation of automation. The responses show that lack of funding (90%) has the greatest impact on the use and implementation of automation in public libraries; inadequate existing automation resources (75%); skill levels of library staffs (50%); lack of ICT qualified staffs (15%) and the lack of an up-to-date automation policy (40%) also had a significant impact. It is not surprising that the lack of budget for automation (i.e. funds) received the highest score as the factor having a large impact on the implementation and use of automation in public libraries. Most public library services in Bangladesh do not have any budget for automation.

Survey of User Satisfaction

An individual study on “User opinion on Government Public Library Services in Bangladesh” had been completed to examine the exact situation of public libraries. With a view to this, the author has designed a separate questionnaire for six divisional public library users. The required data have been collected through questionnaire method, supplemented by informal discussions with the users. Questionnaire consisting of 15 questions have been designed to elicit opinions from the selected groups of users of the divisional public libraries including students, community people and children. During the survey of each sample library; the researcher found the users in the library. Questionnaire was distributed among 90 users in six libraries to respond instantly. In turn, only 60 users responded. Additional data regarding the public library, its development and collection, growth and service facilities were collected and verified from some office records. The analysis and interpretation of the same are presented in the following passages:

Use of Public Library

Figure-1: Percentage distribution of users’ visit to the library



It is evident from figure 1 that the majority of the users visit library once in a week and once in 15 days to meet their information needs. 19.2% of the users visit twice in a week. The number of users who visit the library occasionally is negligible. This shows that the users frequently visit public library.

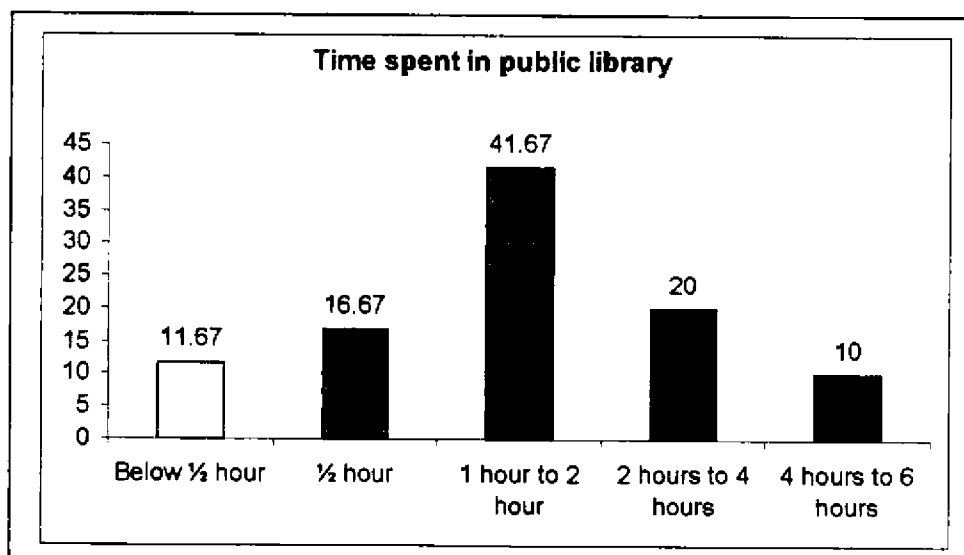
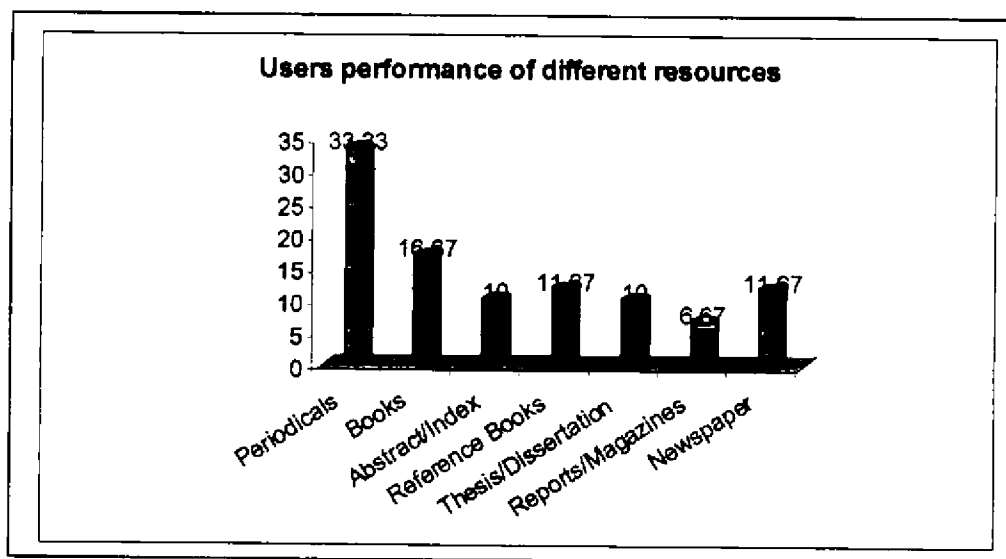
Time spent in the public library by the users on each visit**Figure-2: Percentage distribution of time spent in the public library by the users on each visit**

Figure 2 demonstrates that majority of the users (representing 41.67%) spend 1 to 2 hour in the library during each visit. About 16.67% of the users spend ½ hour of their time in the library. The users who spend 2 to 4 hours per visit account for 20% of the total respondents. The number of users who spend below ½ hour and more than 4 hours is very small. This analysis reveals that although the users visit public library quite often, they spend considerably less time in the library. The users who visit the library with learning and other purposes spend little time in consulting basic references and other current literature.

Use of the Public Library Resources

The knowledge/information is being published in a variety of forms such as books, periodicals, reports, thesis, journals, and newspapers, etc. Since the public library is called the People's University, all types of resources are very important. Users consult these resources to meet their diverse information needs.

Figure-3: Percentage distribution of user's performance of different resources

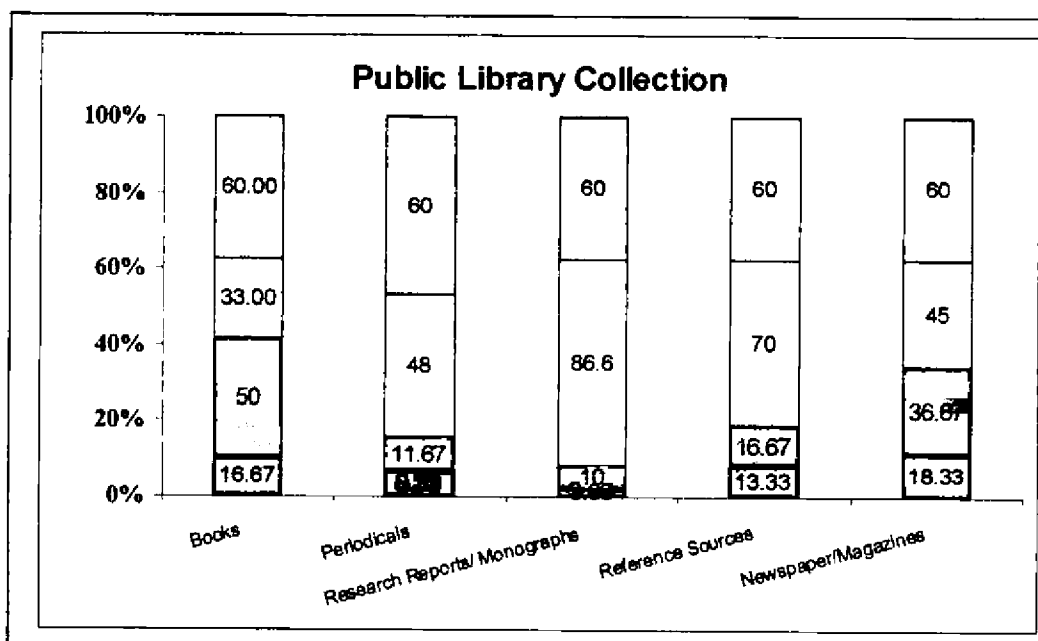


The analysis of the responses furnished by the respondents in respect of their preference to various kinds of information resources indicates that among other, periodicals are the major types of sources most preferred by the majority of the users (33.3%) followed by books (16.67%). Next in order are the reference books and newspapers. Thesis/dissertation and abstracts/indexes are the next preferred resources followed by reports. Report as an information resource has taken a low profile among various kinds of information sources. While periodicals and books occupy the highest 1 & 2 preferences, the least preferred types of documents are old reports and old magazines.

Library Collection

Regarding reference documents, majority of the users have expressed that the number is inadequate. They opined that, the number of some reference sources such as encyclopedias, dictionaries, handbooks, yearbooks, directories and bibliographies needs to be increased. Based on this observation the public library authorities should take suitable measures for improving the existing collection of the library's reference resources to meet the information needs of the users.

Figure-4: Percentage distribution of public library collection



As evident from figure 4, the analysis of the data supplied by the users indicates that 50% of the user's expressed that books are partially adequate to meet their information needs. Whereas periodical literature is concerned, the data show that the available periodicals are totally inadequate. Hence, the development of periodical literature/collection calls for serious attention from the library authorities. Similarly, reports, conference proceedings are inadequate and efforts are needed to develop the collection of reports and conference proceedings.

Sources other than public library to meet the information need

After knowing the adequacy of library collection for study/research, it is necessary to know the sources other than public library to meet the information requirements of the users. A single library can not meet all the requirements of users. And as such, the client has to depend on other sources to meet their information requirements.

Figure-5: Percentage distribution on sources books and journals

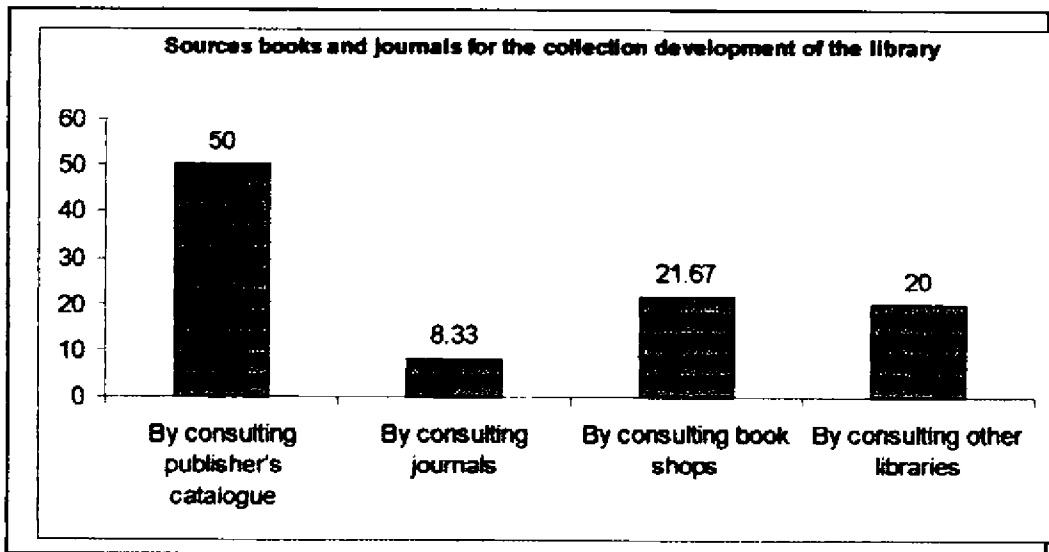
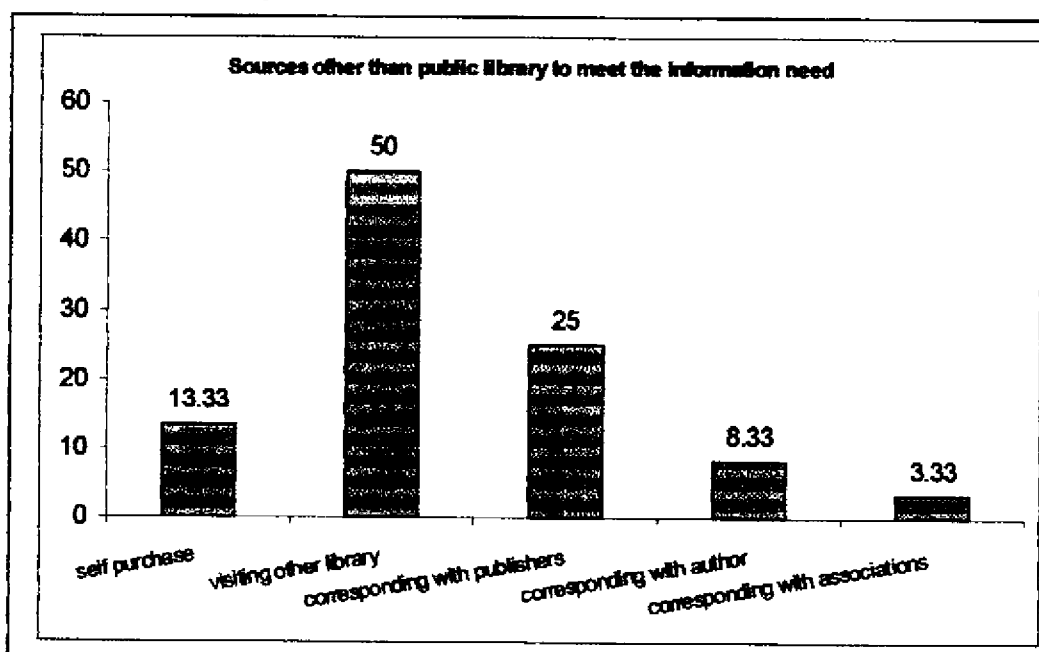


Figure 5 demonstrates that out of 60 users, 50% consult publishers' catalogue. 21.67% users suggest buying books by visiting bookshops, 20% by consulting other libraries for desired information and another 8.33% users consult journals to make suggestions for the procurement of books and journals.

Sources other than public library to meet the information need

Figure-6: Percentage distribution on sources of information



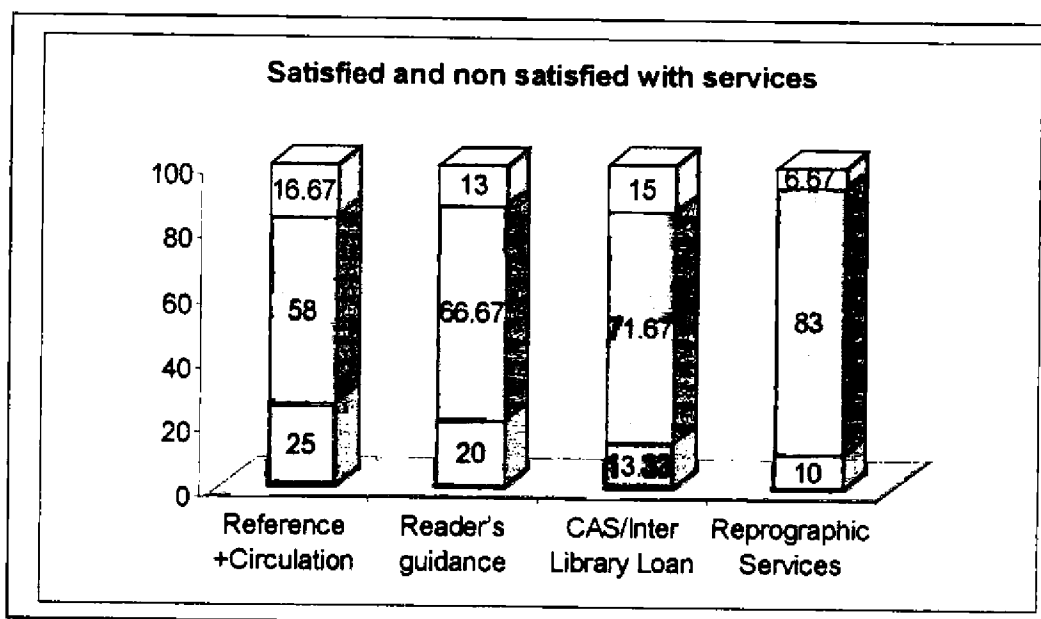
It is evident from figure 6 that the majority of the users (50%) meet their information needs by visiting other libraries. About 25% users meet their requirements by corresponding with publishers and 13.33% by self purchase of needed documents. A few users meet their information needs by corresponding with authors and professional associations.

The above analysis reveals that majority of the users depend on other libraries if they fail to get needed information in the public library. Required documents can also be obtained by corresponding with authors, publishers and professional associations. If the public library has to serve its users better, it should add latest literature to its collection. The latest collection will help the users update their knowledge in the respective fields. To get the right information at the right time in a right way the user should have access to current bibliographical tools.

Public Library Services

The prime objective of the public library is to facilitate the community to fully exploit and harness the resources of the library for their maximum use. To this end, the public library invites the readers, guides them and provides them with literature. The public library should provide planned services to make its stock easily accessible and conveniently usable following the readers' needs. Hence, it's essential to evaluate such techniques and services from the point of view of the users.

Figure-7: Percentage distribution of users' satisfaction and non satisfaction on public library services

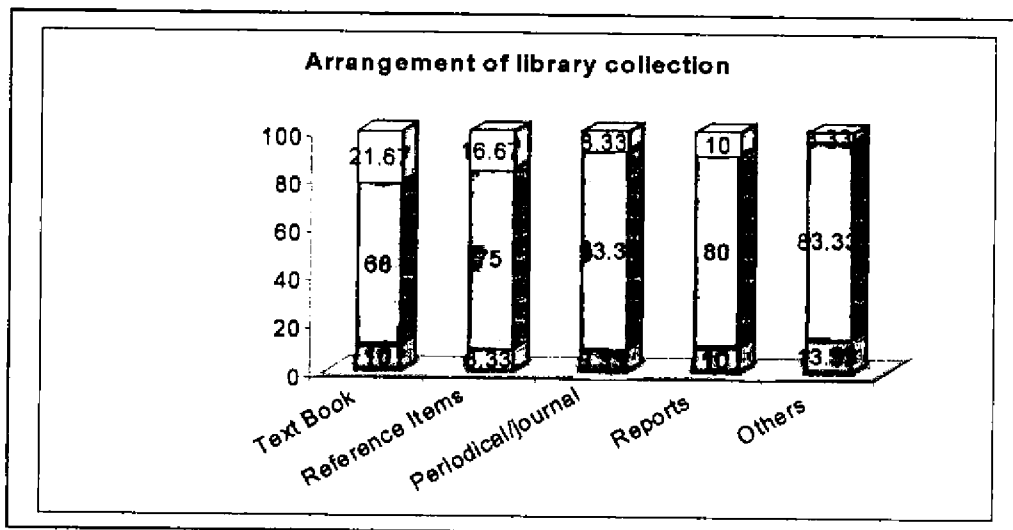


As evident from Figure 7, majority of the users have expressed their opinion that the information services such as reference, circulation, reprographic, readers' guidance/assistance services etc. are not satisfactory to meet their needs. Further analysis shows that CAS, Inter library loan, and reprographic services need further improvement.

Arrangement of library collection

Public library has a special responsibility to collect and disseminate reading materials appropriate for everyone in the community. However, merely acquiring materials is not enough, they should be arranged in a proper order, so that the users of a community can get required documents easily. Graph 8 indicates the user opinion regarding the arrangement of library collection in the public library:

Figure-8: Percentage distribution of users' satisfaction on arrangement of library collection



It is clear from the statistical details furnished in the above graph that a large number of users have expressed their dissatisfaction about the arrangement of different types of documents in the divisional public libraries.

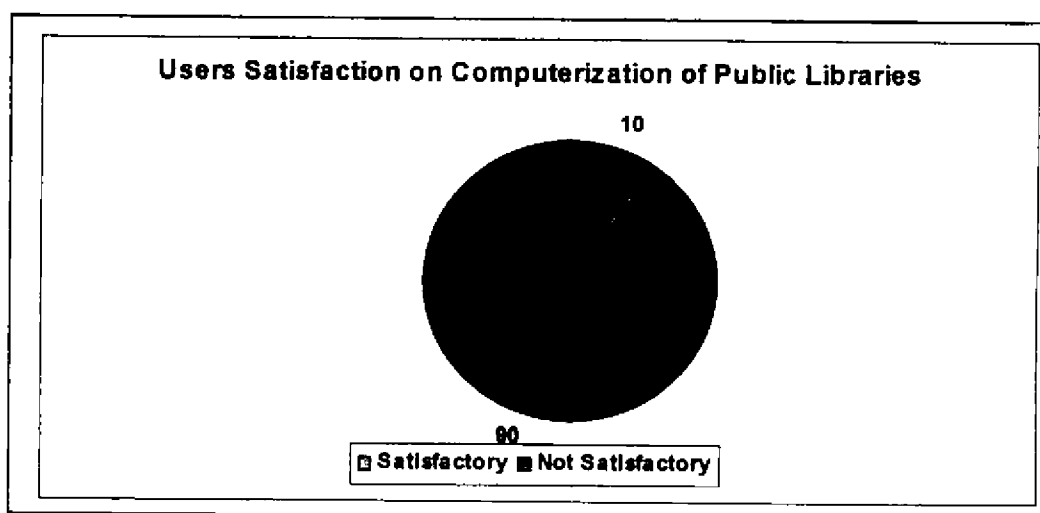
Library Facilities

The library has to maintain cleanness, ventilation, and space for reading, drinking water and toilet facilities in its premises. These are equally important in the use of library resources in an effective manner. Through informal discussion with the users, the researcher ascertained that in most cases, the space for reading is not satisfactory. As expressed by majority of the users, ventilation, equipment, and toilet facilities also are not satisfactory. Thus the overall opinion as expressed by users is that, the existing library facilities are not satisfactory enough and therefore needs to be improved by the library authorities.

User Satisfaction with Library Computerization

Users are the keys to any library service. A library is never judged by its magnificent building, huge collection of an alluring budget, but judged only by the extent to which its resources are used. User's satisfaction, therefore, can make or mar the reputation and popularity of a library. Any service introduced in a library is intended for users only. Thus, in order to ascertain the extent to which the users of Public Libraries are satisfied with the current status of computerization, 60 users representing 6 divisional public libraries included in the study were asked to candidly express their opinion on their respective libraries. The resultant data obtained through a separate questionnaire from these 60 users are depicted in figure 9 for analysis and necessary statistical interpretation.

Figure-9: Percentage distribution of user's satisfaction on computerization of public libraries



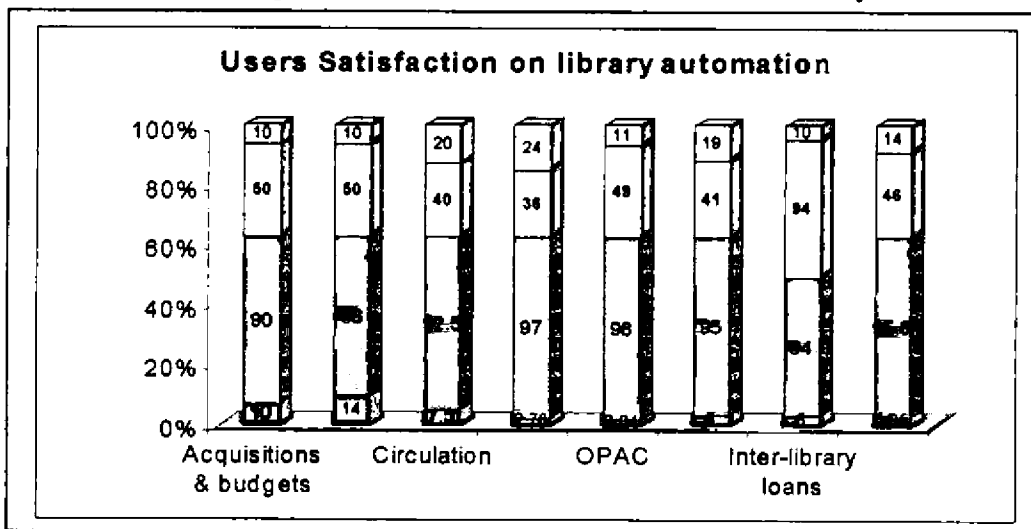
Out of 60 target users, all have responded to this question. The analysis clearly shows that, only 10% of the total respondents have expressed satisfaction over the current situation of computerization. It is needed to mention here that at the divisional level public libraries, users have expressed their satisfaction, while the remaining 90% have express their dissatisfaction regarding computerization. The connotation is that computerization in the public libraries has not reached the desired level for the majority of the users. Though computerization has started in most of the public libraries and the libraries are extending some important computerized library services to the users, yet the standard of computerization is far below the level expected by most users. It is evident that, whatever computerization endeavour has been taken, has

failed to satisfy the users. The study, therefore, suggests that a much stronger effort needs to be taken to raise the level of computerization in the public libraries. The reasons for this below par performance of computerization, be it paucity of fund or negative attitude of the authority, needs to be analyzed and appropriate steps should be taken to provide standard, up-to-the-mark computerized services to the maximum satisfaction of the users.

Satisfaction level of the user on the automation services

Apart from Dhaka Central Public Library, no divisional public libraries automated their major library functions. Even the Central Public Library has automated only some of their library functions. The six divisional libraries are in the process of implementing automation as per commitment of the present government to make Bangladesh digital within 2021. Very soon, the six divisional libraries, namely Dhaka Divisional Public Library, Chittagong Divisional Public Library, Rajshahi Divisional Public Library, Khulna Divisional Public Library, Sylhet Divisional Public Library and Barisal Divisional Public Library will receive fund from the government to automate some of their basic functions and they will be integrated with the central public library. Figure 10 reveals the level of user satisfaction on existing library automation:

Figure-10: Percentage distribution of user’s satisfaction on library automation



It is observed from figure 10 that out of 50 respondents the majority of the users (90%) are not satisfied with acquisition and budget control services and 86% are unhappy with cataloging services as most of these services are being provided

existing web mail services which they use very often. Users are not aware of File Transfer Protocol (FTP) and Online Databases as the divisional public libraries did not launch these services yet. The connotation is that the Internet Service in the Public Libraries needs to be strengthened to ensure higher user satisfaction in the future.

Suggestions by the users for improvement of the public library automation

Success of a library depends a lot on the users, particularly the scholars who are involved in research. They usually have better understanding of knowledge and information related to their respective fields. Their wisdom can play a vital role for the improvement of the library services as well as automation. With this objective in mind, the users of Public Libraries covered by this study were asked to offer suggestions, which they feel vital for the improvement of library automation. It is observed that, out of 60 sample respondents, 10 did not offer any suggestions and the remaining 50 have offered their valuable suggestions as depicted in Table 36.

Table-36: Percentage distribution of users' suggestion for improvement of the public library automation

Sl. No.	Keywords of the Suggestion offered	Size of sample	# Respondents	# not Respondents	# users offered	%
1.	Full automation	60	50	10	7	14.00
2.	Introducing LAN	60	45	15	5	11.11
3.	Provision of Online Jobs	60	30	30	1	3.33
4.	User friendly service	60	50	10	1	2.00
5.	Provision of more computers	60	50	10	2	4.00
6.	Bar-coding of Library materials	60	25	35	1	4.00
7.	New arrivals on line Info.	60	30	30	1	3.33
8.	Access through websites	60	45	15	4	8.89
9.	On-line catalogue service	60	35	25	1	2.86
10.	Good software	60	40	20	1	2.50
11.	Circulation control	60	50	10	1	2.00
12.	Users training	60	50	10	1	2.00
13.	Increase trained manpower	60	52	8	8	15.38
14.	Provision of more funds	60	50	10	6	12.00
15.	Increase Internet facility	60	47	13	4	8.51
16.	Introducing e-libraries	60	50	10	1	2.00
17.	Network with other libraries	60	45	15	3	6.67
18.	Provision of more space	60	55	5	2	3.64
19.	Acquisition Control	60	50	10	1	2.00
20.	Collection Development	60	53	7	2	3.77

It is observed from the above table 36 that; altogether 20 popular suggestions have come out. Out of 52 respondents, the highest 8 suggestions (15.38%) have come out in the form of "increase of trained manpower". So, it is evident that to improve library automation the first and foremost work that need to be done is to provide trained manpower so that maximum benefit could be reaped from the library collection and services.

The next suggestion is "full automation" which has come from 7 respondents (14.00%) out of 50. They want their libraries to be automated fully with state-of-the-art technologies. In order to get the libraries computerized, a considerable amount of fund is required at the primary stage; otherwise the project can not succeed. The suggestion "provision of more funds" for library computerization came as third choice as 6 suggestions (12%) out of 50 came from this category. The other suggestions include: (a) Introduction of LAN, (b) provision of online journals, (c) provision of more computer facilities, in the library, (d) use of good software and (e) increase of Internet facility.

Major Findings

Public library services do not have adequate budget for automation and this is the major barrier on the way of automation in public libraries. In most cases, funding for the acquisition of automation services is not provided by the government. Only the Central Public Library is being benefited from government funding.

Public libraries are going to establish Internet connectivity, some divisional public libraries are going to provide computers for Internet access by library staffs, and some have been trying to develop library Web sites. However, the provision of library and information services via the World Wide Web has not yet taken place.

Central public libraries have a plan to set up Cyber Café as a way of providing access to automation facilities to their communities, and also as means of raising funds to sustain the Internet connectivity.

The study has also observed that due to lack of adequate financial support, physical facilities and skilled manpower, libraries attached to different organizations are not functioning well. This reflects the absence of organized library and information systems in the country and slow progress of resource-sharing activities. There is no difference of opinion about the importance and priorities of library automation. Information revolution on the one hand, and high cost of information resources on the other, leave no other alternative than to reap the benefits of information networking not only within the country, but globally. However, there exist various constraints in implementing any library automation plan in Bangladesh. The constraints like lack of clear conception, sufficient budget, willingness of the authorities concerned, qualified and trained staff, commitment of the library professionals, modern technological facilities, adequate information resources, physical and infrastructural facilities of the libraries and library standardization are the reasons for slow progress of library and information network in the country.

In spite of all unfavorable conditions, sincere efforts need to be taken to establish real and active online library and information networks in the country. It needs concerted and integrated efforts of administrators, politicians, academicians, researchers and information professionals for the planning and implementation of information

network of libraries and information centers so that information resources of one organization is accessible to others. After all, the ultimate aim of library automation is to provide the right information expeditiously to the users as and when required.

With this study, it is hoped that the problems and prospects of public libraries of Bangladesh - including the present state of automation – will be projected in their proper perspective. This study not only analyzes the myriad problems associated with the public library systems, but also suggests possible corrective measures to overcome these problems in a sustainable way. Such an analysis would benefit not only the public libraries of Bangladesh but also similar libraries of the country that face the same problems. Besides, the overall findings, recommendations and the established experience of this study could act as a model for similar interventions.

Chapter VI

Model Plan of Government Public Library Automation Systems

Chapter-VI

Model Plan of Government Public Library Automation Systems

Introduction

The golden jubilee of the independence of Bangladesh would be observed in 2011. The country has already fixed its target of achieving 'Digital Bangladesh' by that time. If this could be realised, then country can expect to claim an honourable place among the technologically advanced countries in the world. When a country goes digital, its activities of governance, commerce, education, agriculture etc. are powered by computer and Internet. In the education sector, Digital Bangladesh visualizes that by 2021 all universities, colleges, high schools and primary schools will have computer connectivity. ICT is intended to be used as an effective teaching-learning aid. After five years of schooling all students should have regular access to computers with internet facilities. The goal is to improve the quality of education. It is recognized that public libraries play an important role for establishing a knowledge-based society. It is impossible to ensure quality education without modernization of libraries. The public library, the local gateway to knowledge, provides a basic means for lifelong learning, independent decision-making and cultural development of the individuals as well as social groups. Public library is the local centre of information, which makes all kinds of knowledge and information readily available to the users. Four decades have passed since the independence of Bangladesh. Although considerable developments have been made in various sectors, unfortunately, public libraries received little attention. The use of ICT in public libraries is yet to spread all over the country and they have to go a long way to be use automation for perform their activities. It can be said that, the government public libraries of Bangladesh are not able to act as public libraries in the truest sense of the term. No public library has reached the level of development required to effectively support education, research and socio-economic development. To meet the international standard, the public libraries of Bangladesh need to be automated. Besides, the process of digitization must also be started. In view of this, an attempt has been made to prepare a suitable plan for establishing modern public libraries in Bangladesh in terms of infrastructural facilities, economic change, social development, technological innovations, environmental impacts, effective use of e-resources, staff development, knowledge transfer, resource planning, quality issues and overseas links (McNicol, 2005:504).

Objectives

The main points of the measures can be summarized as follows:

- To reinforce the responsibility and function of public library radically;
- To systemize all district public libraries in one connected network;
- To standardized the processing method of bibliographic data and to get highly skilled in data use ability.

Vision Statement

Public library automation systems will provide selected bibliographic and digital access to information in a variety of formats including print, magnetic film, optical and digital forms. The general users will have convenient, 24 hour access to on-line digital library resources and services. They will be enabled with tools and competencies to access, retrieve, evaluate and use of information. Recognizing that library staffs are key to delivering services, this model plan will enable and empower staff with computers, communications and competencies, enabling them to provide quality services and accomplish public library goals. The model plan will provide timely and responsive technical support services to develop and maintain user services and library operations.

Facilities to be considered for Public Libraries

The government public libraries in Bangladesh should envisage various types of facilities and services for their users. Following facilities could be considered in this perspective:

- Infrastructural facilities
- ICT facilities
- Environmental facilities

Infrastructural facilities

The government public libraries should have their own buildings and should create all types of facilities for providing services to the users' community. With a view to ensure the highest level of quality services and facilities all possible infrastructural

installation is a must. The infrastructural facilities for the government public libraries are described below:

- Library should have separate building, reading room, study room study space, quiet study room, group study room, discussion room, children room, separate working space for staffs members according to hierarchy, supply of safe drinking water for users, cultural room, new arrival display area, special sitting arrangements for physically disabled people, separate washroom for male and female, separate wash room for staff members, whole library should be air-conditioned and should have plenty of lights, several fire extinguishers and first aid box, storage area for back issues etc.
- All kinds of furniture such as circulation desk, book shelf area, book shelves, file cabinet, books trolleys, CD and DVD cabinets, study carrels, conference tables, study tables, chairs for users, news clipping sections, reference area, newspaper corner, maps and atlas corner, new arrival display board, journals shelves etc.

ICT facilities

All libraries, whatever their sizes are, would need to incorporate ICT and on-line services. For providing these, all kinds of technical equipment should be made available in the library to facilitate IT based library services.

These includes photocopier, one colour photocopier, electric typewriter, IT area and server room, PCs, UPS, Laptop, image scanner, laser printer, one colour printer, card printer, separate cyber corner for users, internet connection with sufficient bandwidth, LAN, WAN, metropolitan Area Network, E-mail services, provision of direct dialing system from telephone in meeting the emergency requirements, fax, e-fax, hub, several terminals for OPAC search, Institutional Repository (IR) system, library website, multimedia facilities, web cam, RFID systems, Wi-Fi and Wi-Max technology, networked computer and workstations with uninterruptible power supply, etc. Most of the ICT facilities described here are available now in Bangladesh.

Environmental Facilities

The total library environment can be categorized into two parts. One is working environment and another one is reading environment.

Working environment

Good working environment should be ensured for the greater interest of smooth operation of the library. Function wise responsibilities should be assigned to each staff member for performing their task duly. Interpersonal relationship skill among all staff members should be strengthened. All logistic support should be provided to all staff members including IT facilities. Understanding among all staff members is one of the important factors for enjoying working environment. In order to make decent working environment, all staff should have job satisfaction. Team work acts as a vital tonic for making a good working environment.

Reading environment

In order to have a good reading environment the library should have all types of reading materials and all types of library services. It includes good-looking circulation desk for check in and check out, separate working space for the staff, adequate space for any user of the library, study table, cyber corner for searching on-line journals and library database, separate display area, study chairs, open access to the shelves and silent inside the library.

Description of the Model Plan

1). Develop processing format to standardize bibliographic data

The standardization of processing method is essential to establish and utilize database in cooperation. Specially, because the standardized data formats are the most important factors to automate library due to the complexity of bibliographic data, so it is the priority of this model plan to standardize the format, which is basic means of bibliographic data depending on the current collection of the BSKNPL, Dhaka and others divisional public libraries which have computers. The model plan will see first the current practice of data format of the BSKNPL, Dhaka as it is an apex organizations of the government public libraries in Bangladesh. The study already found that no standardized system has yet been launched there. Therefore, the model has a plan to establish the MARC format (using WORD 6.0 or any format) for its resources to standardized bibliographic data process. It will also set the formats for books, serials and non-book materials as Bangladeshi Standard (BS) and plan to setup the database in a standardized system by including other formats.

2). Develop and distribute software to automate the library operation

To automate operations of all divisional government public libraries in Bangladesh in standard format and to cut down the budget and manpower to develop programmes separately, BSKNPL, Dhaka needs to develop an integrated software for acquisition, technical processing, lending, searching, data management and various statistics in the total system. Following are the important library software available in the Southeast Asian region. Their suitability to various operations of different types of libraries are also indicated against each:

Table-37: Different aspects of major library software are available in South East Asia

Sl. No.	Name of Software	Working Environment	Developed/Marketed	Application Possible	Suitability for Libraries
01	CDS/ISIS	MS-DOS Windows-95 LAN-UNIX	NISSAT, New Delhi	OPAC	Small & Medium Libraries
02	MINISIS	MS-DOS Windows-95 LAN, UNIX	SNDT Women University, Mumbai	OPAC	Small & Medium Libraries
03	Dynex	MS-DOS Windows-95	AIT, Thailand	OPAC+ 10 Modules	All Types of Large Libraries
04	Horizon	Windows-98 LAN, WAN, UNIX	AIT, Thailand	OPAC+ 10 Modules with integrated library systems	All Types of Large Libraries
05	BASIS PLUS	UNIX	NIC, New Delhi	OPAC+ Acquisition, Circulation, Serials & Management Control	All Types of Large Libraries
06	ILMS	MS_DOS	NISSAT, New Delhi	OPAC+ Acquisition, Circulation, Serials & Management Control	All Types of Large Libraries
07	INNOPAC	Windows-95	AIT, Thailand	OPAC+ 10 Modules with integrated library systems	All Types of Large Libraries
08	LIBSYS	MS-DOS Windows-95	Libsys Corporation, New Delhi	OPAC+ 10 Modules with integrated library systems	All Types of Large Libraries
09	LIBRIS	MS-DOS Windows-95 LAN, WAN, UNIX	Frontier Institution Hyderabad	OPAC+ 10 Modules with integrated library systems	All Types of Large Libraries
10	OASIS	Windows-95 LAN	Softlink, India	OPAC+ 10 Modules with integrated library systems	All Types of Large Libraries

Source: Vannevar: 1994

As the study has availed the opportunity to survey the existing public libraries in Bangladesh, so based on the different major issues like collection, capacity, user satisfaction, manpower, the current infrastructure, country context, financial capability, need for integrity of the district public libraries with the focal point (BSKNPL, Dhaka) etc., the study would like to suggest for installing "Horizon Software" which is quite user friendly for BSKNPL, Dhaka. **A question may be raised why the study has chosen Horizon software. The study has good reasons for it. Below are the details of the software:**

Horizon is one of the automated library software systems used in the large libraries. It was developed since 1983 with Basic Language and LIBNETS. It is designed from PICK (Operation control system) and runs under UNIX (operating systems) with universe for database management. Horizon is a multi-use and multi task. Therefore, every sub-task relatively works all the time. Its database is called RDMBS (Relational Database Management Systems). It means that each task has its own small database and share the same with main database is called Bibliographic database (Fisher: 1995). Thus data in each sub database of each system will be online updated with the main database over the time. Then many users can obtain update data as needed, such as when an acquisition librarian orders book through Acquisition Module, user can reserve that book through OPAC module without waiting for classification. Furthermore, Horizon also allows data transfer, such as CDS/ISIS, CD-ROM, including the developed database through ASCII file, to process into Horizon and also transfers Horizon Data to other programmes, so one can exchange his/her data with other information sources.

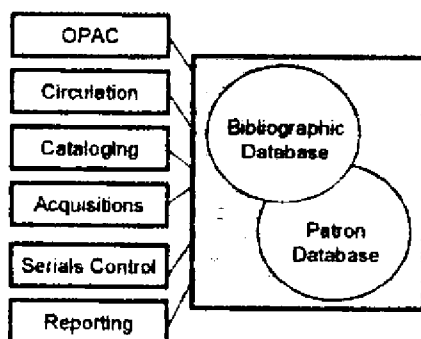
Horizon includes 10 modules as Cataloguing, Acquisition, Serial management, Circulation Control, On-line Public Access (OPAC), Media Booking, Journal Citation Indexing, Community Resources, Reserve Book Room and Home bound Subsystems.

The brief details of each module:

Acquisition is a Module functioning on information resource acquisition. With this module, acquisition librarian can investigate, control, follow the purchasing process, including create order from letter and account and payment system such as budget investigation, discount circulation, etc., including control of invoice and receipt, in

order to make this process, more quickly. Moreover, this model also allows the online communication between library and publisher in abroad via Electronic order with BISAC Standard.

Figure 12:- Automation of Library Functions



(Source: Minamiguchi: 2001)

Cataloguing is a Module for classification. Horizon provides two formats of bibliographic encoding. One is US MARC which is the international standardization and facilities for data exchange with other programmes. Another one is Horizon format which is contributed by the company. Data records are arranged by type of information resources and book or audio-visual materials. Data can be recorded without limitation of its number and length; it depends on database size and hardware. Furthermore, there is an Authority file helping librarian to be able to investigate and control evident data to be standardization and not to be repeated, such as Authority file of Author, Cooperate-author series, Title and Subject, Including selecting data from CD-ROM, CD MARC, Laser Quest to use with the task.

Circulation Control is a Module working with borrows and returns through barcode. Barcode reader will automatically record the detail of user's borrow and return into database of this module. It decreases the mistakes that will be occurred and saves times of filling data by staff and user. This module also stores and controls member registration, data and volume calculation, divided by status of member, investigation of information resources status as borrow, booking, renew, so users can examine by their own. The process runs when user comes with materials, first the systems records the user details of borrow volume and date-due into member file, whereas the materials are recorded as frequency. Theses data can be used when there is a consideration of additional acquiring or weeding. Moreover, when the user returns

some books after the date-due, the system can distribute a warning letter and calculate a fee. It also provides the interlibrary loan services by this module.

Online Public Access (OPAC) is a Module assisting users to retrieve information from the database through author, title, and keyword, ISBN, ISSN, and Classification etc. with Boolean Logic and browsing. Furthermore, users can check their own status of borrow on this screen too.

Community Resource is a Module to gather information in community such as list and address of various offices, university calendar or event as exhibition, seminar or discussion. In addition, librarian can use this module for indexing the journal article. Users can search journal index via OPAC, including questioning the problems concerning library service through this module.

Reserve Book Room is a Module concerning the provision of reserve books for the lecture who wants to control reading materials. This process includes updating, withdrawal, and borrows.

The process of Horizon also allows all kinds of output as statistics or report as needed. When there is any problem among the library staff, they can directly mail the issue to the Company staff to solve the problem. This system runs on Windows so it is a user friendly by presenting menu of each function according to the difficulty level, including command line. There is also Security function and it defines authorized access level with password. There are six levels of user as System administrator, Administrative assistance, Supervisor, Clerk, Trainee and Public Access. Each level is allowed to work as password.

There are many libraries in South East Asia use this system, such as India, Thailand, Malaysia, and Srilanka. So, the public library of Bangladesh can use this system and when the allocation of the government will be increased for the development of the district public libraries throughout the country, it can be introduced then for maintaining integrated automation systems.

Reasons for proposing Horizon Integrated software for the automation of BSKNPL

Horizon integrated library system is provided by the world's leading provider of library automation solution – SirsiDynix. It is one of the most widely used library automation software in the world and this is one of the reasons why this software has been proposed as the ideal library automation solution for BSKNPL.

Another very important reason is that, over the years, Horizon has been proved to be very suitable for automating the libraries of the developing countries. The library staff who have some knowledge or experience of using CDS/ISIS, the most widely used information storage and retrieval system in Bangladesh (developed by UNESCO), will find the user interface of Horizon quite familiar. This is one reason why hundreds of libraries in Eastern Europe, Africa and Asia have chosen Horizon as an ideal library automation solution. Since CDS/ISIS is taught as the 'software of choice' in almost every stage of library science education in Bangladesh, the user interface and fundamental operation of Horizon software will look and feel familiar to the staff of BSKNPL. Moreover, Horizon is easy to use and provides many options for retrieving information, both for staff and users.

Over the years, SirsiDynix has taken a number of efforts to keep Horizon up-to-date and meet the needs of library staff and users. Bearing the hallmarks of an ideal library automation solution, Horizon is fully integrated client/server library management system, and offers the functionality and standards required for an open system, including Web access, Z39.50 standard for information exchange, the TCP/IP communication standard, UNIX and Windows NT for portability.

Therefore, considering the similarity of Horizon interface with that of CDS/ISIS, its ease of use, wide popularity in every part of the world, especially in the developing countries, and because of the reason that it has been developed by one of the most reputed ILS vendors in the world, the researcher firmly believes that Horizon would be an ideal choice for the BSKNPL.

3). Establish Central Union Bibliographic Database

There is a need to prepare and control the central union bibliographic database by classifying it into bibliographic data, collection data and authority control data which would be established by the libraries participating in library network in the Shared Catalogue System. At this stage, the project will setup a central database provided by BSKNPL, Dhaka. This model plan will develop and test the Shared Cataloguing System and will operate the system on a public library scale within one year of the project. The project will add all the reading materials of the BSKNPL, Dhaka and other five divisional public libraries (both books and non-book items) data in the bibliographic database of domestic and foreign books and then it will plan to make it as a central database.

4). Use and support computer equipment

To establish the public library network, every divisional and district public libraries connected to the network should be equipped with computer of proper capacity to fulfill its function. In spite of the fact that focal point of the public library network should be equipped with main computer, it is very difficult for the BSKNPL, Dhaka to keep its own main computer due to the present infrastructure. So, based on setting up the server, physical infrastructure must be developed.

In the second stage of the project, it should be supported 1 focal point (BSKNPL, Dhaka) out of 6 divisional public libraries with main computer and need to equip the rest of the divisional public libraries with the main computers.

Table-38: Computer equipment needed to automate in the BSKNPL, Dhaka

Equipments	Capacity/Quantity	Specifications
CPU	256 MB DUAL	256MBX2
Disk	48 GB	2 GBX 24
M/T Unit	2 Unit	1600/6250 BPI
C/T Unit	2 Unit	38,000 BPI
Terminal	130 Unit	PV 486 DX 2
Printer	40 Unit	Laser
CPU	64 MB DUAL	32 MB X 2
Disk	6 GB	1 GB X 6
M/T Unit	2 Unit	1600/6250 BPI
Terminal	50 Unit	PC 486 X SX
Printer	20 Unit	Laser

Table-39: Computer equipment needed to automate in each of the five divisional public libraries

Equipments	Capacity/Quantity	Specifications
CPU	128 MB	64 MB X 2
Disk	3.2 GB	1.6 GB X 2
M/T Unit	1 Unit	1600/6250 BPI
C/T Unit	1 Unit	38, 000 BPI
Terminal	20 Unit	PC 386 SX
Printer	11 Unit	Laser

5). Operating network

The model plan will operate the network in one-way system as follows: the computer equipped with five divisional public libraries would be connected to the computer of the focal point (BSKNPL, Dhaka) in on-line system to search and download the bibliographic database of BSKNPL, Dhaka so that they can utilize the data in building up their own library database. At the mid-term of the project there will be developed and used the Shared Cataloguing System so that the project will be able to operate the network in two-way system to establish and to utilize the bibliographic database among the central and divisional public libraries of Bangladesh.

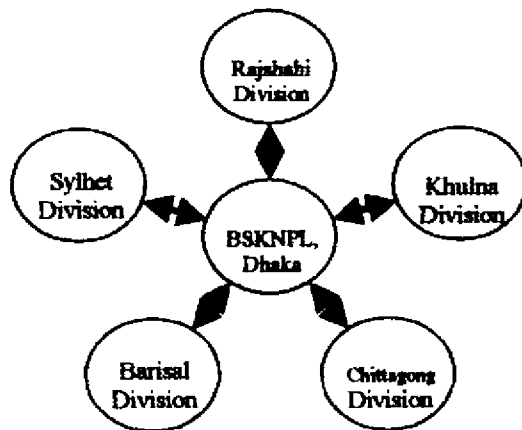
Proposed Network configuration of Public Libraries in Bangladesh

In this model plan the network topology for all divisional networks have been designed as WAN (Wide Area Network) on the basis of the physical location of the public libraries in the country and data flow requirements. Since HORIZON software is popular in the world now, considering the existing availability of hardware and other facilities in the public libraries, it can be introduced to the Bangladeshi public libraries. It is expected that initially all focal points of the divisional networks and gradually all the nodes of the networks will have access to other international databases through the internet. The interaction among the nodes of the proposed networks will be both non-directed and directed. It is proposed that each node of the network will have access to any of the nodes of the network directly or through the focal point. But the main function of the focal point of the proposed networks will be coordination and development of the networks.

In the first phase the following 5 Divisional Public Libraries may join the network:

- Divisional Government Public Library, Rajshahi
- Divisional Government Public Library, Chittagong
- Divisional Government Public Library, Khulna
- Divisional Government Public Library, Sylhet
- Divisional Government Public Library, Barisal

Figure-13: Configuration for Divisional Public Library Network



Where BSKNPL, Dhaka is the Focal Point (FP) and 5 divisions and others are Node(N). In the second phase district public libraries of Dhaka Division may join the network.

Figure-14: Network with District Public Libraries of Dhaka Division

In the second phase District Public Libraries Network with Dhaka Division:

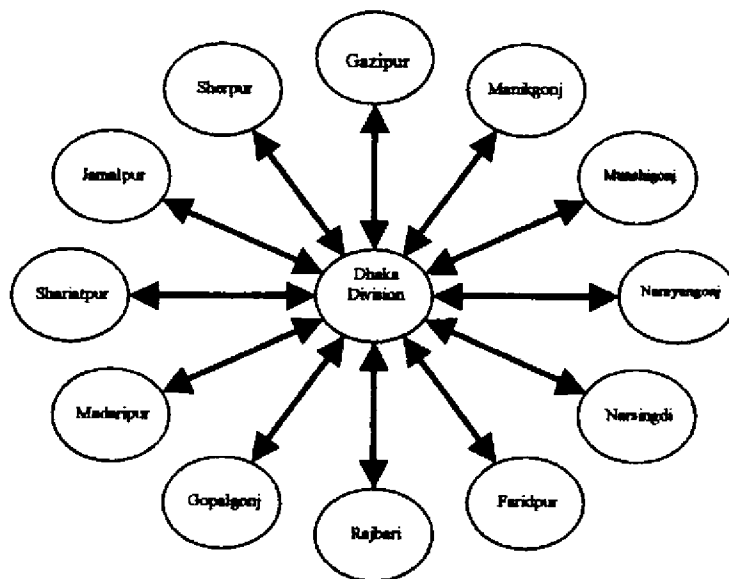
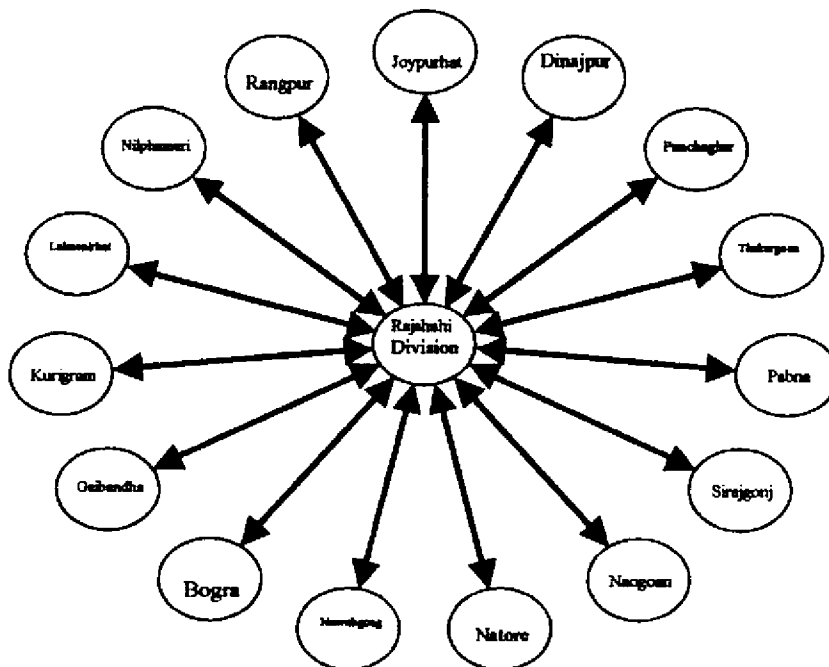


Figure-15: Configuration for Network of Rajshahi Division:

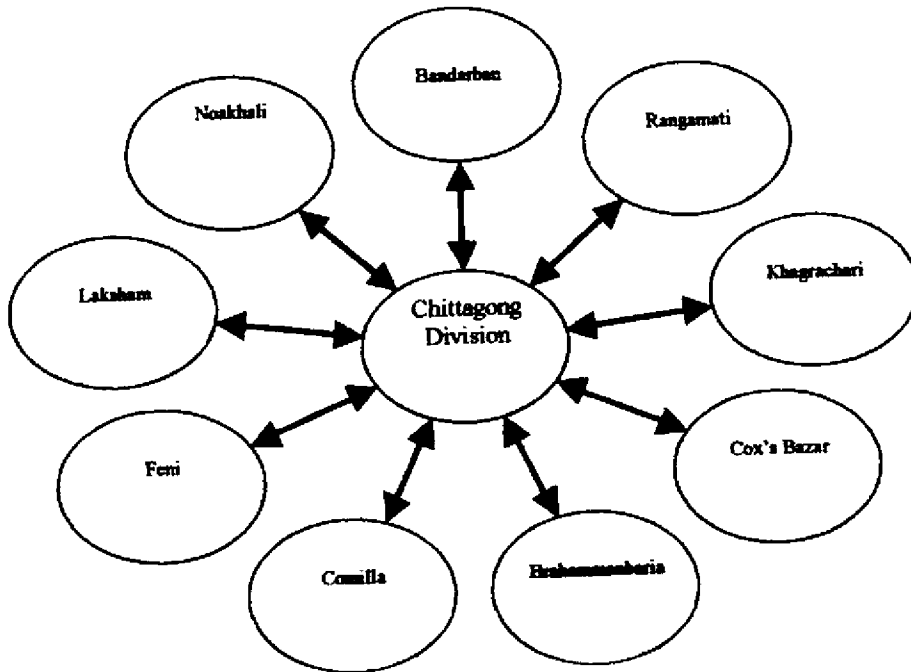
In the third phase District Public Libraries of Rajshahi Division may join the network.



Where Rajshahi Divisional Public Library is the Focal Point (FP) and others are node (N).

Figure-16: Network with District Public Libraries of Chittagong

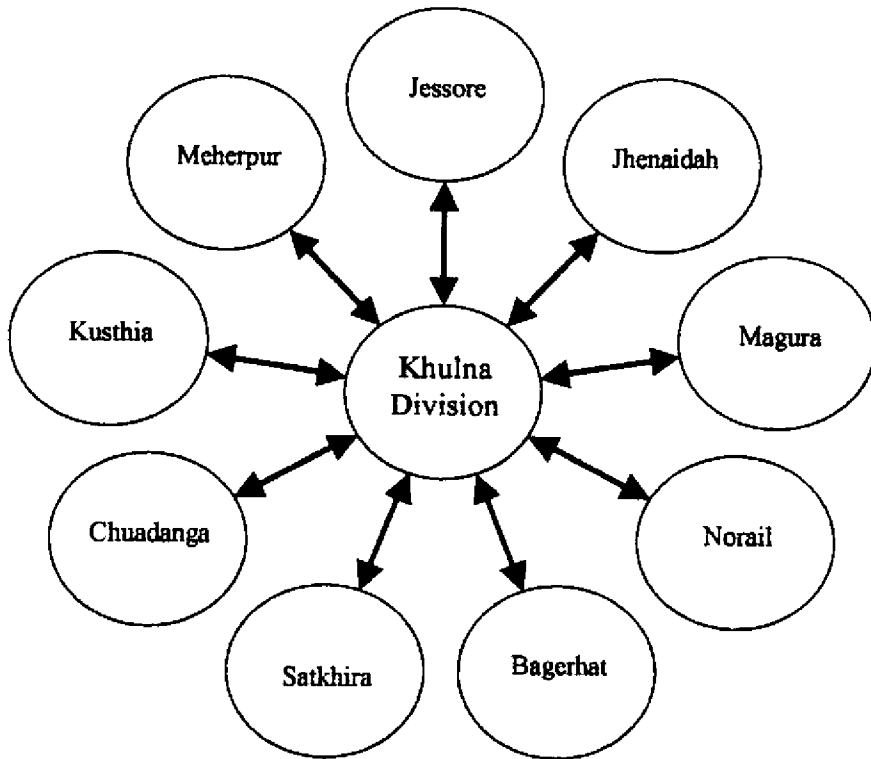
In the fourth phase District Public Libraries of Chittagong Division may join network.



Where Chittagong Public Library is the Focal Point (FP) and others are node (N).

Figure-17: Network with District Public Libraries of Khuina Division

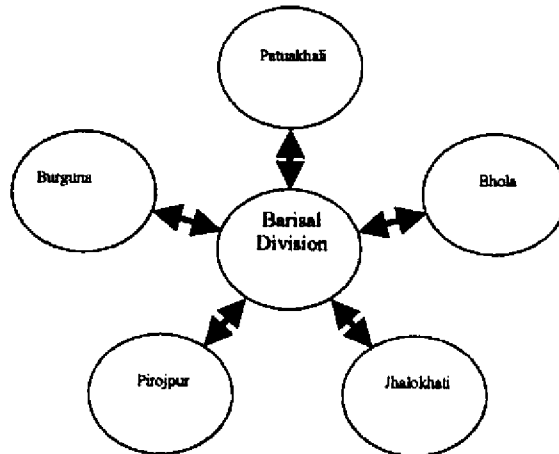
In the fifth phase District Public libraries of Khulna Division may join the network.



Where Khulna Divisional Public Library is the Focal Point (FP) and others are node (N).

Figure-18: Network with District Public Libraries of Barisal Division

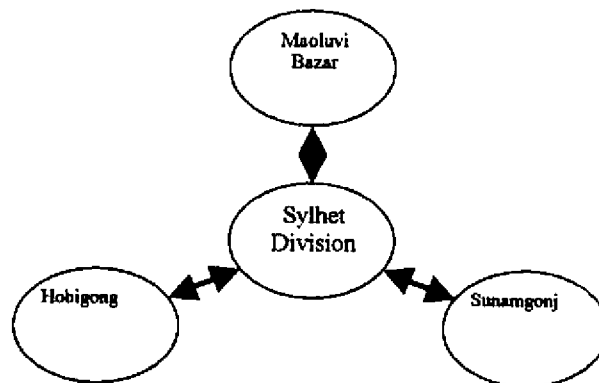
In the sixth phase District Public libraries of Barisal Division may join the network



Where Barisal Divisional Public Library is the Point (FP) and others are node (N).

Figure-19: Network with District public libraries of Sylhet Division

In the seventh phase District Public libraries of Sylhet Division may join the network



Where Sylhet Divisional Public Library is the Focal Point (FP) and others are node (N).

Factors that have been considered while proposing network configurations

- Present situation of the public library systems and services of the country;
- Cost effectiveness;
- Possible modes for information transfer; and
- Area of specialization in material collection.

Implementation

The proposed network can be implemented phase by phase as follows:

- First of all, each participating divisional public libraries should be designated with a unique collection. These should concentrate on their core collections. This needs a detailed survey of a collection and its use.
- All Focal Points should immediately take up the compilation work of the Union Catalogue of collections.
- All important tools required for networking will have to be ascertained. Some of them should be acquired and compiled according to need.
- Cooperative acquisition under the present administrative set up will not be possible at this stage. However, cooperation among network members for preparation of acquisition lists/catalogue cards and their distribution could be initiated. Accordingly, in the first phase all divisional networks will be formed and made functional with minimum network activities. Depending on the success of phase one, an integrated network should be developed by combining the focal points of all divisional networks.

Action plan of the project with proposed budget

The model plan may be implemented within 3 years if government and donors come forward with an action plan through a project by carry out the following tasks:

Project Name: Automation of Government Public Library Systems in Bangladesh

Project Duration: January 2011 to December 2013 (Three Years)

Project Location: Dhaka, Rajshahi, Chittagong, Khulna, Sylhet and Barisal

Funding Source: Government and Donors.

Table-40: Activity Plan of the project with tentative budget

From –To	Tasks	Tentative Budget in Taka
January-March 2011	Feasibility study on the infrastructures for setting up computer equipment in focal point and divisional public libraries	20,00,000/=
April-June 2011	Prepare bibliographic database of the total collection of BSKNPL	10,00,000 /=
July-December 2011	Purchase of suggestive equipment with software for focal point and divisional public libraries	30, 00, 000 /=.
	Prepare union catalogue and transfer data into software	10, 00, 000/=
January-December 2012	Bibliographic database and Union Catalogue shared through software for networking	30, 00, 000 /=
January-March 2013	Networking with focal point and its 5 divisional public libraries	20, 00, 000/=
	Networking with focal point and its district public libraries	20, 00, 000/=
April-June 2013	Networking with other divisional and their district public libraries	20, 00, 000 /=
July-December 2013	Training of the Librarians, Monitoring and Evaluation of the of the systems	20, 00, 000/=
Duration: 3 Years	Total cost	180,000,000,00/=

Functions of the proposed Model Plan

The proposed model plan can perform the following functions:

- All house keeping operations and networking of the country-wide government public libraries will be automated which will include full-fledged services of acquisition comprising identification and selection of reading materials, issuance of order, receiving of books as per order and payment etc. in an automated way. Automated processing comprises sealing, making accession, classification, cataloguing, data entry, determining subject headings, management of bibliographical information of reading materials, control of serial holdings, pasting date due slip, book card and book pocket and preparation of library tools etc.

- E-mail and internet systems will be implemented in the government public libraries in Bangladesh.
- Searching facilities both on-line and off-line will be available for the community users and information can be retrieved very easily through central catalogue using integrated databases.
- Literature search services, news clipping services, web based library services and building of electronic archives would also be automated by using this proposed model plan.

Manpower required for the model plan

Library is a service giving organization. Its success mainly depends upon adequate professionally qualified manpower. At present there is no automated government Public library in Bangladesh. The model plan has been made to automated government public libraries in Bangladesh. To implement the project a total number of 30 manpower would be required.

List of the proposed manpower (based on National Pay Scale-2009) is given below:

1. Project Director	Grade-5	1
2. Consultant	Grade-5	1
3. Engineer	Grade-6	1
4. ICT specialist	Grade-9	5
5. Data Entry Operator	Grade-11	20
6. Accountant	Grade-11	1
7. MLSS	Grade-20	1

Total- 30 (Thirty persons)

Automated system is not a substitute for human resources. It is just a tool for managing library activities in faster way. Success of automated system depends upon how effectively it is used by the people in performing their activities. These people should be trained properly. A very good system might be collapsed due to mishandling of the systems. Without appropriate personnel output cannot be maximized. In fact before procuring or developing automated system people working in libraries should become familiar with computers and automated database system. This familiarity will help the library to procure or develop and install appropriate system. The system then can be run with very little disturbance. Sustainability of the

system is very important than starting. Sustainability depends on efficient, effective and skilled manpower. Of course, appropriate and logical salary and status should be ensured to have skilled staff members are required for managing smooth automated library services.

Cost Benefit Analysis of the Proposed Model Plan

The cost benefit analysis has not been taken into consideration during the development of the proposed model plan. Furthermore, the technological aspects for implementation of the model plan have also not been taken into account due to resource constraint. More studies on users of the government public libraries would have exposed a better picture.

Weaknesses of the Public Library Automation in Bangladesh

During the survey it has been found that the existing condition of the public libraries of Bangladesh regarding infrastructural facilities is not encouraging. While only the 6 divisional libraries have personal computers but they do not have enough trained personnel required for networking. Only BSKNPL, Dhaka has CD-ROM and e-mail facilities and a few are connected with the internet. Six Divisional Public Libraries have photocopying facilities and even no one has microfilming facilities. BSKNPL, Dhaka started to compile its database but still it is unfinished. No union catalogues or accession lists are available at present. Almost all libraries suffer from acute financial problems, the outlook of relevant authorities (both government and institutional) is not encouraging

Limitations

There are some limitations of automated system that may still remain in spite of best efforts taken in the development process. Information Technology is growing very fast. So even the most advanced system may bear some risk of becoming outdated. Though flexibility is an important characteristic of automated system yet it takes some effort to change the system. So it might put some obstacles to any change process in the organization. Innovativeness and intuition of persons based on experience are very important for development. But computer lacks this ability which is the hallmark of a successful person. The other limitation of automation is data entry which is a slow manual operation. In spite of all the progress made in the field of information technology, we are still away from truly paperless office (Mishra, 2000). The library

automation makes us faster to provide speedy and accurate information and services. The process is still running to accommodate more state-of-the-art techniques for making more digital library in Bangladesh.

Conclusion

In modern times, any developing nation cannot afford to neglect the existence and advancement of Information Technology. New technological developments in the form of computers, telecommunications, electronics, reprography and micrographs have been adopted in libraries bringing new concept to library systems. They have incorporated all new techniques, which were suitable and useful for them in improving and making library services effective to the user community. In Bangladesh some of the big industrial organizations are automated for using the computer network and maintaining communication for resource sharing purposes, which enables participating library to obtain not only bibliographic details from other library's collection but also makes it possible to obtain full list in the form of indexes, abstracts, of the required articles and even facsimile copies of the required page of the document by using computer terminal attached to the system (Misra & Phadke, 1995:23). Still, the country has to go a long way to catch up with some of the developing countries, especially in such areas as advanced and real time computer applications, computer networks, hardware manufacture, and advanced research and facilities. Various pilot schemes are under way to extend the level, sophistication and coverage of computerization in the country for the optimum use of and access to information at national and regional levels. It is hoped that as various efforts are made towards the implementation of the National Informatics Policies, automation will contribute to the country's social and economic progress and help reduce the existing digital divide/ technological gaps with other developing and developed countries.

The development of model plan for automation implies how it will function. Whatever the plan has been designed, it can be changed or modified any time according to the need based. This is important that if the model plan can be introduced successfully, our public library systems will be modernized and it will achieve every objective of automated library systems. Following are some of the suggestions emerging out of the findings of the present study for smooth implementation and operation of automation:

- An exhaustive survey by the Government (either by the local Experts or by the Expatriates) should be carried out to identify the existing capacity of the Begum Sufia Kamal National Public Library infrastructural facilities and users needs.
- The Government should take necessary administrative and financial measures for the automation.
- As the district public libraries are not fully equipped with the resources and technological facilities, Government should take special care about it.
- An agreement has to be reached in all aspects among the public libraries for smooth operation of the automation and network.
- A user education and orientation programme should be arranged periodically to inform all automated functions.
- Training programmes should be arranged and manuals should be developed to upgrade the knowledge and skills of the staff on automation on basic library work, in the computerization of the library activities, information processing, repackaging and for dissemination of information.
- An effective communication system among the participants of the network should be developed through union catalogues, bibliographies, current awareness services, indexing and abstracting services, news letters etc. for efficient utilization of information sources and services.
- Steps should be taken to gradually build up a pool of skilled and trained personnel, adequate computer/technological, reprographic and translation facilities among the staffs.
- To facilitate the access to information all major national and international databases on CD- ROMs should be made available on on-line among the network participants through telecommunication facilities.
- Adequate infrastructural facilities should be developed and holdings of the public libraries should be computerized using common communication formats, to ensure successful implementation of the automation.

Chapter VII

Conclusions
&
Recommendations

Chapter-VII Conclusions & Recommendations

Public library service is a long standing tradition in Bangladesh. Large majority of Bangladeshis live in the rural areas where it is difficult to provide library services. In many parts of the country, public libraries began with groups of working people who initiated private subscription collections to strengthen their knowledge for employment and business purposes. Eventually, the government took over some of the funding and operational responsibilities and opened the libraries up to the general community. There are now about 1603 Government and Non government public libraries in Bangladesh (Directory of 2008-2009 of NBC). The majority of these serve small communities. Public libraries are the most extensively used of all government-supported cultural institutions. However, recent surveys show that two-thirds of Bangladeshis are not aware about public library functions.

Public libraries in Bangladesh are not offering public Internet access as yet. The government has vowed to transform Bangladesh into the “the most connected country in the world” by the year 2021. Increasingly, Bangladeshi people are turning to their public libraries for access to governmental and other information.

Bangladesh has 6 divisions and 64 districts. Most of these jurisdictions do not have their own buildings for public libraries. In most of the jurisdictions of Bangladesh, core library services are, by law, free of charge.

Before discussing constraints and recommendations, it is needed to compare the public library systems and services of Bangladesh in relation with UNESCO manifesto.

Public Library system and services in Bangladesh in Relation with UNESCO Manifesto

[Note: Text of the UNESCO Public Library Manifesto [1994] is *italicized*. And the Bullet Points are the position of Begum Sufia Kamal National Public Library, Dhaka].

Freedom, prosperity and the development of society and of individuals are fundamental human values. They will only be attained through the ability of well-informed citizens to exercise their democratic rights and to play an active role in society. Constructive participation and the development of democracy depend on satisfactory education as well as on free and unlimited access to knowledge, thought, culture and information.

The public library, the local gateway to knowledge, provides a basic condition for lifelong learning, independent decision-making and cultural development of the individual and social groups.

This Manifesto proclaims UNESCO's belief in the public library as a living force for education, culture and information, and as an essential agent for the fostering of peace and spiritual welfare through the minds of men and women.

UNESCO therefore encourages national and local governments to support and actively engage in the development of public libraries.

The public library is the local centre of information, making all kinds of knowledge and information readily available to its users.

- Though it has been working since 1954, Begum Sufia Kamal National Public Library (BSKNPL, Dhaka) has failed to fully act as a local centre of information for the citizens of Bangladesh.

The services of the public library are provided on the basis of equality of access for all, regardless of age, race, sex, religion, nationality, language or social status. Specific services and materials must be provided for those users who cannot, for whatever reason, use the regular services and materials, for example, linguistic minorities, people with disabilities or people in hospitals or prison.

- Begum Sufia Kamal National Public Library provides equal access with books and other reading materials but it does not make any special efforts to ensure that people from all cross-sections of the community receive their desired information. The Library's Collection Development system states that all users, including children, have full access to the collections.

All age groups must find material relevant to their needs. Collections and services have to include all types of appropriate media and modern technologies as well as traditional materials. High quality and relevance to local needs and conditions are fundamental. Materials must reflect current trends and the evolution of society, as well as the memory of human endeavor and imagination.

- The collection development system of the public library authority explicitly supports purchase of materials that are relevant to the needs of this community.

- A review of demographic changes in the community is not being maintained on a regular basis in order to facilitate the designing of new strategic plans for library uses in future.
- Begum Sufia Kamal National Public Library strives to balance the needs of today, in the form of multiple copies of highly popular materials, with the needs of the community for significant retrospective materials, but it does not maintain any balance on electronic, print, and other formats. It fails to maintain a balance between its recreational and educational roles.
- Begum Sufia Kamal National Public Library does not respond to increasing local public demand for any resource material.

Missions

Creating and strengthening reading habits in children from an early age.

- Although programs and services of children are given high priority, the authority of the library has failed to ensure that completely. Occasionally, some programs are initiated for the children which are not effective enough.

Both individual and self-conducted education as well as formal education at all levels.

- Begum Sufia Kamal National Public Library does not conduct special programs for Nursery school and elementary school students that would support formal education of children through class visit.
- School students do not find the desired variety of co-curricular materials in the print and audiovisual collections. Very recently, the authority of public libraries has given their attention towards collection of Audio Visual Materials (AVM). In Dhaka and Chittagong divisional public libraries, there are some AVMs. But the library users seldom receive any AVM services from these libraries.
- Situated in a unique location, Begum Sufia Kamal National Public Library could serve as the "Virtual University Library" for Dhaka University, BUET, Dhaka Medical College and other important educational institutions as a focal point for the sharing of resources. But this

opportunity has never been explored and there is no document delivery system.

Providing opportunities for personal, creative development.

- The public library does not provide well-selected collection of materials to support the personal and creative development of individuals.

Stimulating the imagination and creativity of children and young people.

- The present public library services are not appropriately oriented to children and their families.
- Its collections and services are not specifically aimed at the creation of positive change.
- Though a well-selected collection of books, audiovisual materials, and electronic resources is the foundation of the library's service to children, unfortunately all of these are absent in Begum Sufia Kamal National Public Library, Dhaka.

Promoting awareness of cultural heritage, appreciation of the arts, scientific achievements and innovations.

- In Bangladesh, public library could not set any special example by collecting and preserving the heritage of the country.

Providing access to cultural expressions of all performing arts.

- Audio-Visual Aids, multimedia CD-ROM, and Compact Disc collections and public Internet access etc. are mostly absent in the public libraries of Bangladesh.

Fostering inter-cultural dialogue and favoring cultural diversity.

- The public library in developed countries collaborates with community agencies and other public libraries to provide videos and books but this has not happened in Bangladesh.

- Because up to 80,000 visitors visit the Begum Sufia Kamal National Public Library monthly, it is placed in a suitable position to foster inter-cultural dialogue and cultural diversity. It seems that the Library is not fully aware of this opportunity.

Ensuring access for citizens to all sorts of community information.

- Begum Sufia Kamal National Public Library, Bangladesh encourages and publicizes community events like short films, drama, etc. on library premises as there is an additional auditorium in the public library campus. Large number of spectators visit these programs and many of them become library users subsequently. However, the library does not have any special arrangement for providing community information from a common access point or one-stop centre.

Providing adequate information services to local enterprises, associations and interest groups.

- There is neither the infrastructure, nor any initiatives at the Begum Sufia Kamal National Public Library, Bangladesh to cater to the needs of special interest groups, trade bodies or professional organisations.

Facilitating the development of information and computer literacy skills.

- The authority of the public library has given special emphasis on the computer literacy of its staff members. Keeping this view in mind, it has organized some training programs for its staff. However, specific programs targeted at enhancing information literacy skills of the staff as well as the users is still absent.

The public library shall in principle be free. The public library is the responsibility of local and national authorities. It must be supported by specific legislation and financed by national and local governments. It has to be an essential component of any long-term strategy for culture, information provision, literacy and education.

- Begum Sufia Kamal National Public Library provides free service. Fees are charged only for late returns of circulating items and for consumable items.

To ensure nation-wide library coordination and cooperation, legislation and strategic plans must also define and promote a national library network based on agreed standards of service. The public library network must be designed in relation to national, regional, research and special libraries as well as libraries in schools, colleges and universities.

- In Bangladesh, public libraries do not usually participate in any resource-sharing program and do not offer full inter-library loan services in accordance with the national and international inter-library loan protocols.

Operation and management

A clear policy must be formulated defining objectives, priorities and services in relation to the local community needs. The public Library has to be organized effectively and professional standards of operation must be maintained.

- The public library has an approved plan to the Fifth Five Year Plan, stating its mission, its principles of operation, and its priorities and objectives for the period.
- The plan is kept under continuous review by the library authority. This review, as well as the development of new rules and regulations, occurs under the leadership of the Ministry of Cultural Affairs, Government of the People's Republic of Bangladesh with formal Terms of Reference (ToR).

Additional Comments

The most recent survey of community perceptions of public library services was conducted by the researcher and it shows the weaknesses of the public library system to be:

- Poor relevance to and less importance on the "Digital Age".
- Low regard for the staff and their role in assisting people to use computers.

- Less importance of the library's services to children and to lifelong learning in the community.

The survey indicated the following to be in need of improvement:

- Collections – newer items and latest editions required
- The use of technology must be enhanced.
- Number of trained manpower must be increased.
- Sufficient budget is required.

Public Library Automation in Bangladesh in Relation with Southeast Asian Countries

As the study intended to represent the problems of government library automation systems in Bangladesh and expected to visualize the present picture of library automation, a comparative analysis is required to make a clear understanding about Bangladesh's position and its digital divide with other developing countries. With a view to this, a survey has been conducted based on literature review and direct visit of some of the countries in South Asian regions. A concise and precise description has been given below:

The countries in the South Asian region display a wide range of disparities, which add to their socioeconomic problems. Unemployment, poverty, illiteracy, inflation, regional inequality etc. are the lingering problems of South Asian countries, which cast their shadows on the growth and development of library and information infrastructure in these countries. Even the largest and most advanced country in the region - India has not so far adopted any national policy on library and information systems. Even the National Library of India has not fully implemented library automation and networking. There are wide variations between and within the countries and institutions in this region. There is perceptible gap between rural and urban settings as far as the provision of library and information resources and services are concerned. However, whereas there is a substantial number of library schools in India, in Bangladesh the situation is far from satisfactory. Nepal, Bhutan, and the Maldives have no library schools to create trained manpower required for meeting the growing information needs of their people.

The position of academic and special libraries is much better than those of school, public and government libraries in Bangladesh. Lack of resources and political will are the main hindrances in the establishment, development and maintenance of public libraries in Bangladesh. Even in India, so far, only ten States out of 26 have enacted library legislation to provide comprehensive public library service to the urban and rural folks. Meanwhile the concept of library automation and networking is being adopted by the academic, particularly university libraries and special libraries in Bangladesh. There is an immediate need to coordinate and consolidate the resources and services of different types of libraries in south Asia to enhance people's access to quality information in this region. In fact, there is a clear trend towards public library automation and networking in Bangladesh, India, Pakistan and Sri Lanka. The by-products of information technology are now visible in the form of indigenous databases and there is also a trend towards electronic publishing. BANSDOC, Dhaka University in Bangladesh have really made perceptible progress in developing their resources and services. Similar work is being done by ICDDR,B. Though in public libraries of Bangladesh, a modern technological information system has yet to be realized; even then the planning, coordination and formation of an effective library and information system for the country are the mandatory functions.

The position of public library infrastructure in Pakistan, Sri Lanka, and Bangladesh is perceptibly better than in Nepal, Bhutan and the Maldives. Lack of trained manpower, insufficient funds, and inadequate materials are the basic hindrances in the expected development in public library services in all the south Asian countries. In fact, globalization is a complex phenomenon which has resulted in a complicated interaction between "globalism" and "localism", where huge corporations are selling products across national boundaries and creating a globally homogeneous culture of consumption. In this context, the slogan propagated by the ALA is very significant. All the developing countries in general, and the South Asian countries in particular must formulate their public library policies and develop adequate infrastructure to provide real time access to their citizens in a cost-effective manner. Efforts must be made to strengthen the SAARC Documentation Centre (SDC) New Delhi and develop connections with the East Asian countries. The international bodies, such as IFLA, FID, Unesco, IDRC, and World Bank must expand their activities in the South Asian region. Internet connectivity must be ensured in all the countries in this region. Efforts

must be taken to develop local contents in indigenous languages and these should be made available across the national and regional boundaries. Education and training, and resource consolidation and sharing via various networks are necessary prerequisites for enhancing users' access to global information resources and services. Otherwise, concepts like 'globalization' and the 'global electronic village' will mean nothing for the vast majority of the people of South Asia and the real benefit of globalization and technological advances will remain restricted within the industrial countries. Real globalization can play a central role in our collective future by its potential to enhance individual freedom, widen opportunities for countries in the South, and increase democratic participation. In fact, the real global electronic village is that where there is equity in resources and equality of access for everybody. For this, there is an immediate need to change the mindset of the 'haves' and 'have nots'.

A developing country in Southeast Asia, Bangladesh presently has a very large rural population of approximately 80% of the total population of 145 million (Economist Intelligence Unit, 2010). As a consequence of past development strategies, which mainly focused on general economic growth and national security, Bangladesh has made overall progress, but nevertheless faces serious problems. The present context is characterized by an unequal distribution of benefits from economic growth, rural-urban disparities, poverty, inadequate public services, deterioration of environment, and depletion of natural resources (EIU, 2009).

Although a recent report shows that the poverty rate in Bangladesh has been rapidly declining over the years, poverty has become increasingly concentrated in rural areas, particularly among agricultural workers and uneducated dwellers. Between 1971 and 2000, the proportion of the poor living in rural areas has increased from 50% to 80%, while poverty in urban areas has been declining significantly (ADB, 2001).

As is the case with other basic public services, access to public library and information services in district areas is quite limited. Public libraries, as major providers of information, have a crucial role in the process development by providing appropriate information to the majority of people who reside in rural and suburban areas. However, the public libraries of Bangladesh are far from fulfilling that role.

Constraints found in Government District Public Libraries in Bangladesh

Since the study was aimed at exploring the automated service delivery patterns, only 20 public libraries have been taken into consideration under the survey. Under the Begum Sufia Kamal National Public Library system, district public libraries are located in the district town centers and function mainly to support education. Learning centers and village reading centers serve to extend services to communities at the grassroots level. All service patterns under the public library system reflect a large number of constraints in terms of organizational structure, funding, and human resources. Despite good leadership and commitment to the community, certain factors have contributed to the ineffectiveness and slow development of public library service at the District levels. These include: lack of good planning and management; lack of adequate budgets and of professionally trained personnel; and inadequate library resources.

The bookmobile service, part of a public library extension program, has proved to be a very successful program in other countries; but in Bangladesh the scenario is deplorable. Most policies have not been successfully implemented because of weak and insufficient infrastructure, bureaucratic complexities and a severe shortage of necessary resources. Nonetheless, success could be seen when policy directives are conducive to local involvement (such as mobilization of local resources, and institutional cooperation), and when the implementation of policies take local concerns and structures (as exemplified by some learning centers and village reading centers) into consideration.

The success of the bookmobile service and the combined library also highly rely on effective implementation of two policies: mobilization of local resources and cooperation between institutions. In many cases, despite having adequate resources, services have been found ineffective when there is a low level of community participation and involvement. It should also be noted that the success of book mobile services largely depends on Public Library Staffs. The policy regarding the application of information technology has received a high priority by the current public library administration. Different types of information technologies have been used to deliver educational and library services (e.g., village news broadcasting

stations, slides, video, television, satellite communication, and computers). However, due to the enthusiasm and exclusive attention toward computer technology, public libraries are yet to exploit the capacity of low-cost and simple technology. Current use of microcomputers has not been carefully planned and implemented.

Administrators assigned to plan and supervise public libraries are usually educators and not trained or educated in library and information science. Despite their commitment and enthusiasm, they lack a professional understanding of planning and management of library systems and services. They equate "literacy promotion" to "library promotion," and thus concentrate efforts and resources on educational activities. Librarians and other library staff feel that they are not appropriately assigned to work according to their professional training. With low status, dim career prospects, and low morale, they feel overwhelmed by too many responsibilities. However, they work with a commitment to the communities and express their needs for more training programs that will help update their knowledge and skills.

On the contrary, the special and academic libraries are managed by professionally trained librarians and staff. Librarians are highly satisfied and enthusiastic with their jobs.

The analysis also identifies the information needs of the common people on agriculture, occupations, employment, land rights, citizenship, education, health, local politics, current news and events, and recreation. From the information providers' perspective, however, there are many kinds of information that users are not aware of, such as health education, drug prevention, sex education, parenting information, and environmental conservation.

Both public library administrators and staffs realize that services and resources are still inadequate. However, use and circulation statistics as well as observations indicate low use and low demand for library services. This, according to public library service providers, is caused by the absence of information awareness and good reading habits among the people of Bangladesh especially in district areas. But, from the community perspective, low use and non-use are caused by inadequate access to library services, unavailability of appropriate reading materials, preference of other media, particularly television, and lack of time because people are struggling for their economic survival.

Problems/findings in General

From the above discussion it is clear that automation of public libraries in Bangladesh is still in its infancy. A number of problems contribute to the low level of automation utilization in the libraries in Bangladesh. From the field visits and personal interviews of librarians and information specialists, who had automation related experience, a number of problems were identified.

(a) Lack of Funds

Lack of funds was the most commonly cited problem and reflects the difficult financial problems of the country. Consequently the most chronic problem which libraries face is the constant shortage of funds. Besides, libraries are often excluded from the process of financing for automation. Sometimes the parent organization allocates funds for the purchase of a computer, but not for its maintenance or for software/system.

(b) Lack of Technically trained staff

Library personnel in Bangladesh in general have inadequate knowledge about the potential of computer and its exploitation in library and information work. The lack of suitably trained library staff in computers and their use in libraries hinder the way of computerization of the libraries. Some library staffs are not professionally trained in library and information science. Most of them have little or no computer skills and have a general tendency of shying away from technology. Even many of those who have earned degrees in library and information science, have little computer skills because, barring the two universities who offer library and information science courses, almost all other institutions do not have any computer at all.

(c) Psychological barriers

It is acknowledged that there is resistance from the library personnel because they are not aware of library automation or about its importance. There is fear of the unknown and feelings that computer use would result in the loss of jobs of a large number of employed staff.

(d) Standardization Problems

Another major problem hinted at is that computerization efforts of different libraries appear individualized. Every library approaches the task in its own way and there is lack of cooperation. Bangladesh has no national automation models or standards for the libraries to follow. Some systems have been created without the essential infrastructure and without due regard to inter-library loan.

(e) Under utilization

Another problem hinted with computer installations in most libraries is under-utilization. In some libraries the computer is essentially used in low-level jobs, replacing mainly clerical work. The main causes of under-utilization are purchasing without proper planning and little consideration to meet both present and future needs.

Some of the problems discussed above revealed a lack of awareness or familiarity with developments in the computer field. The cost of computer system has fallen drastically, its power, speed and capabilities have risen sharply, thus enhancing their cost justification and applications. There are small computer systems currently available for a cost less than the annual cost of one clerical worker (Shell and Damachi, 1984).

The launching of the submarine cable to digitally connect Bangladesh to the information superhighway and make internet connectivity cheaper is very important. Bangladesh Telegraph and Telephone Board (BTTB) demanded the high-tech SEA-ME-WE4 (South East Asia-Middle East-West Europe 4) submarine cable, now connected to the newly built optical fiber line between Cox's Bazar and Chittagong, is currently undergoing tests. Bangladesh Submarine Cable Company (BSCCL) is a Telecommunications infrastructure service provider primarily through the international Submarine Cable and domestic high capacity optical fiber network. Thus, the service provided by BSCCL represents the gateway communication between Bangladesh and the rest of the world. Emerging in July 2008 from BTTB (Bangladesh Telegraph & Telephone Board)'s submarine cable project, BSCCL presently handles Bangladesh's lone submarine cable called the SEA-ME-WE-4 submarine cable and represents our country in the SMW-4 international cable consortium. By providing submarine cable Bandwidth through the SEA-ME-WE-4

cable system BSCCL is contributing to the revenue earning of the Government of Bangladesh. BSCCL is one of the growing companies in the Telecom sector in the country. It is a leading company in implementing National ILDTS & ICT policy to develop modern tele-network in Bangladesh. The submarine cable network is expected to be the main telecommunications infrastructure for "Digital Bangladesh" by the year 2021 and BSCCL is going to play a major role in this regard (bsccl website: 2010).

(f) Insufficient Reading Materials and Ineffective Services

Most of the complaints received from the users are about the limited or restricted access to information. The problem of providing required reading materials as sources of information to the readers, with limited financial resources of libraries, is now almost universal.

(g). It is observed that some of the Divisional public libraries in Bangladesh have started using new technologies since 2000 without creating the essential infrastructure. They did not consider the economic, political and social implications of the use computer technologies. It is found that in some libraries computers are not being used in any important work. It is being used merely as an alternative to typewriter.

(h). Many libraries purchased computers for the use of the readers but they have never devoted their attention whether the readers are getting any opportunity of using the computers for their research or study. In many cases it was found that the readers are not allowed to use or handle the computers for their benefits.

(i). The availability of specific software and related hardware is another problem. There have been instances when sufficient funds were not available to purchase suitable software to implement public library automation.

(j). One of the burning problems of public library automation in Bangladesh is the lack of national coordination and effort of a professional association regarding the implementation of new technologies in the public libraries. Most of the respondents urged that if the nation's policy makers and planners were more enthusiastic about the importance of library and information services in the development of the nation, the

situation would certainly have been different. The situation is exacerbated by the lack of adequate local IT specialists. Spare parts and after sales service (maximum a year free service), particularly of equipment imported from abroad are therefore, either not available or are only available at an exorbitant price with a particular agent or dealer, who runs monopoly business.

(k). Furthermore, there is a lack of background and appropriate technological knowledge on the part of users. Their low level of awareness makes them unable to use even the simplest new technologies on their own. Some respondents indicated that users are unable to carry out even minor operations, like operating computers, browse internet or use even the simplest information retrieval systems. Apathy on the part of users towards certain types of technologies inevitably results in low demands for these.

Synthesizing the above discussions, the following critical problems could be identified which are responsible for creating obstacles on the way to gradual development of automation in the government public libraries of Bangladesh:

- Lack of trained library personnel and training facilities;
- Lack of recognition of the necessity of libraries and library services in a social setting.
- Poor status of librarians;
- Technological backwardness;
- Unskilled and shy librarian;
- Lack of funds;
- Lack of proper planning;
- Shortage of space and equipment;
- Lack of cooperation among the libraries and lack of cooperative spirit among the librarians;
- Lack of standards for public libraries;
- Lack of uniformity in pay scales, poor gradation and irrational structure;
- Lack of international cooperation;
- Administrative problems;

- Course curricula for library automation followed in the Information Science and Library Management Department in the universities do not fully reflect the requirement as only two universities in Bangladesh offer LIS degrees;
- The number of graduates in library and information science produced by only the two universities each year is nowhere near the actual requirement. Substantial numbers of such graduates leave the country for overseas employment. Some of the private institution approved by the National University of Bangladesh Like ILIS, ILIM, etc. are short of quality trainers and do not follow any standard course curricula on computerized library systems;
- Lack of overall planned scheme to increase computer literacy;
- Resource materials on Information Technology, such as books, magazines, software etc. are scanty and scattered;
- Whatever hardware, software and communication resources are available, cannot be found under 'one roof';
- Power supply is unreliable and inconsistent;
- Access to essential information is limited by restrictive policies for public procurement and information sharing, an outdated legal framework which is unsuitable for IT application and does not protect intellectual property rights. Rigid organizational mind set and constraints to sharing of knowledge, Managerial mind-sets which are not well matched to effective information management;
- Inadequate interaction between public libraries and academic and special libraries which resist change.

Suggestions for Improvement

Some problems are sure to crop-up during the course of automation of public library. A problem of one library may not be a problem for another. Thus they are varies and many. The present study offers some suggestions to resolve these problems:

- There should be exclusive budgetary provision for automation and for training of library professionals. The budget should be allotted initially for 5 years.
- A judicious action plan for automation of public libraries should be chalked out after forming a committee of library experts, computer specialists and academicians.
- An integrated network of public libraries of Bangladesh as suggested should be formed forthwith. This will ultimately help to mitigate the problems related to budgetary limitations, collection development and access to e-resources.
- There should be ample provision for extensive hands-on computer training for the staffs of public libraries. It should include training on basic hardware and software applications so that most of the routine technical problems could be solved at the initial stage.
- Special provision for acquisition of non-book materials, such as microfilms, CDs, DVDs, etc. should be made along with usual budget heads like general books, book bank, subscription of current journals and e-journals.
- Computer network and IT infrastructure facilities should be increased as to facilitate the effective use of different e-resources by the users.
- Orientation of new users should be a regular exercise so that the new users get acquainted with the use of different e-resources within local and other networks.
- Automation of all the public library activities and services should be completed at the earliest by appointing computer trained staff with proper subject background for a short period or by giving contract to national agencies or professional bodies as a short term project so as to tackle the backlog.
- BSKNPL, Dhaka should create its website with an access option to all the district public libraries and arrange for its regular updating so that it can reach a larger and wider audience globally.

- The present scenario of public libraries of Bangladesh is not encouraging. The weaknesses inherent to the current system should be identified and prompt action must be taken to solve the problems.
- Automation programme must be started with a mission and vision. A target should be fixed up to automate specified areas/activities within a stipulated time frame so as to achieve its goal.

General Recommendations

The Government should allocate sufficient funds to support the purchasing and maintenance of automation technologies for public libraries. Tax and VAT on automated equipment should be withdrawn initially for 5 years if the country wants to encourage automation process.

Any automation project of the special and academic libraries in Bangladesh should be a joint venture with public libraries. This is necessary owing to the cost involved and the readily available expertise at the centers.

Library education syllabus in different public universities should be developed in such a way that the new generation of library professionals can face the challenges of the 21st century.

Librarians should convince administrators at the higher level, of the importance of the use of computers and the leverage that computer in particular and automation in general could give. This includes awareness raising, education and motivation. However, if the library professionals themselves are not fully proficient in the new techniques and technologies, they will never be able to convince the policy makers. Therefore, their own level of skill and education should be continuously upgraded to keep pace with the latest developments in library and information science as well as in information and communications technologies.

Automated systems are dynamic rather than static. So it is important in planning for automation, that hardware and software be selected, which is sufficiently flexible to meet both the present and future needs. The hardware chosen must have the capacity

to handle growth of the system for at least three to five years. The software chosen must also be flexible enough to accommodate additions and/or changes to the system as need arises (Johnson, 1989).

A local team can build Library Automation System (LAS) software and the web-based DL (Digital Library) access system. There are several free open source DL software developed by UNESCO and other organizations. However, associated standards for federated access management, ontology, multi-lingual document management, digital object exchange, e-commerce, etc., are still actively evolving. Bangladesh can gain strategic advantage by grooming local developer teams.

Libraries should join hands with local software developers to build automation system capable of meeting all the diverse needs of today's library and information centers. Attempts should also be made to develop local contents as well as standardized thesaurus in Bengali language for the use of computer systems employed in Bangladeshi libraries.

Libraries should also develop centralized databases to include all documents and sources of information available in the country in order to support research and studies, and to provide decision-makers easy access to needed information. Such databases are needed to be linked with other international networks.

The Library Associations of Bangladesh should organize seminars and workshops to create awareness among librarians about the potential advantage of automation and thus encourage more libraries to automate their processes.

The Government of Bangladesh should allocate sufficient funds to support the Government public libraries as well as non-government public libraries. It may be noted that in the year 2009-2010 only 0.12% was allocated for government and non-government public libraries from the total budget of education. But the allocation in this sector must be at least 5% of the total budget for education.

Information Science and Library Management Teaching and Training Institutions should introduce different types of training programmes for the library professionals.

The training programs should include fundamental courses such as cataloging (both manual and electronic), classification, bibliography, indexing and abstracting, electronic information delivery, public relation, e-mail, Internet, software management, integrated library automation, etc. so the unskilled library professional could manage information systems and centers effectively and efficiently.

The government can open Information Science and Library Management Department in different government and private colleges and universities to train and educate more efficient library professionals. It may be noted that only two public universities are now offering library and information science course (both Honors and Master degree).

For smooth management of libraries proper rules and regulations should be formulated as soon as possible and standards should be maintained.

International Cooperation is a must for the unhindered development of the library field. The government and the library authority should contact various international bodies for the development of the libraries.

The rank and status of librarians and information professionals should be elevated and for this purpose government should take proper initiatives as soon as possible.

Government should establish public libraries as much as possible and should assist private initiatives in establishing public libraries.

Government and concerned authority should co-operate each other for the development of library sector.

Besides these, a number of recommendations are proposed by the respondents during the survey to improve and promote the existing services. The most important ones include:

- (i) Organizational restructuring of the public library system
- (ii) Institutional cooperation;
- (iii) Community empowerment.

(i). Organizational restructuring of the public library system: Organizational restructuring will enable the public library system to operate independently with its own administrative structures, budgets, and staff in order to provide better services. However, even if the system remains the same as now, it is necessary to have more integration of goals and roles of education and public library services to provide services that contribute to educational development, such as literacy programs and information programs for functional and recreational purposes. More appropriate books and materials should be provided for learning centers and village reading centers.

(ii). Institutional cooperation: In a resource-constrained situation, institutional cooperation seems to be an effective strategy that helps the public libraries expand and improve their services in a cost-effective way. For example, the bookmobile project has cooperated with foreign agencies, and this has enabled the project to receive substantial funding to carry on the project for over 15 years. The project also cooperates with the formal education system to provide their services to rural students and teachers or even to extend services to remote areas.

(iii). Community empowerment: One question raised by this study is how to maintain community enthusiasm, interest, and involvement in the library automation projects. Community empowerment is therefore recommended. This strategy includes: leadership training on topics such as participatory planning and decision making as well as collective actions; active mobilization of community participation in library activities; and creating a support system for local initiatives and actions.

Many respondents have ~~also suggested valuable~~ ~~also suggested valuable~~ recommendations which include: reformulation of the national information policies that focus more on social needs, organizational capacity building through education and training, provision of appropriate information, application of appropriate information technology, designing innovative approaches in public library automation service delivery, raising awareness of the important role of public library and information services in the process of national development, and systematic evaluation of public libraries in Bangladesh.

Conclusion

The government plays an important role in the development of libraries in Bangladesh. Over the years, many public libraries have been established throughout the country. School library is one sector which needs more attention. National library, academic libraries and special libraries have experienced considerable advancement; the trend of public library development in latter group goes toward automation which is in the state of development. The future trend of library development in Bangladesh will undoubtedly focus on the use of new technologies. The application of integrated library software packages made within or outside the country will increase substantially. More cooperation among libraries in the country will occur to share their resources. The planning of the automated library integration programme of Bangladesh to create public library automation network in the country is a likely outcome of the ongoing concerted efforts of the library authorities. An ideal online bibliographic network like Australian Bibliographic Network (ABN) or Singapore Library Automation Service (SILAS) looks not so unlikely when government public libraries of Bangladesh will start their online library automation systems using Horizon automated library system software package. The new system can handle Bangladeshi resources effectively. But public libraries in Bangladesh still need substantial capacity development to support the country's information system. It is evident that cooperation among libraries in the country and full support of the government are the keys to the building of an effective library network. Establishment of public library automation system in the country will surely usher in a new era of cooperation and development among the regional and international information systems.

Limitations of the study

The study experienced the following problems:

1. The study is confined within selected government public libraries in Bangladesh. Admittedly, a wider coverage of public libraries would have provided more useful information.
2. Although the country has 68 government public libraries, only 20 government public libraries were selected for the study,
3. The size of the sample of both librarians and users might have limited the scope of the study. A large sample size would definitely have provided more specific information for IT-based library systems and services of the government public libraries in Bangladesh.
4. A purposive selection of government public libraries may raise the question of bias. However, before making the selection, a technical approach was adopted to minimize the bias in selecting government public libraries.
5. The cost benefit analysis has not been taken into consideration during the development of the proposed model plan. Furthermore, the technological aspects for implementation of the model plan have also not been taken into account due to resource constraint. More studies on users of the government public libraries would have exposed a better picture.
6. The researcher has faced a number of problems during the conducting of the research. The sources of information needed for the study, in some particular cases, were also not duly available as the subject matter of the study was vast. The researcher has to face some bitter experience in collecting information. In some cases, information was manipulated by some responsive librarians, which was later corrected by further communication. These sorts of things have hampered the research to some extent.

Areas of Further Research

No study could be termed as ultimate. This applies to the present study as well. The study may be replicated with larger samples and even more variables so that it could focus on more areas and especially to areas which have remained unexplored.

The study is primarily restricted only to twenty public libraries of Bangladesh, hence, it can be used as a model for further research taking into consideration the public libraries of other districts, so that it would give a clearer picture of public library development.

Owing to paucity of time and available resources, all the public libraries and the whole spectrum of library operations in Bangladesh could not be included in the survey. Hence, future researchers may consider including all the public libraries of Bangladesh and the entire spectrum of library services that a modern public library is expected to provide and the overall phenomenon of public library automation, so as to discover:

- (a). Whether the state of automation in public libraries of Bangladesh is identical with the public libraries of the neighboring/other districts or regions of the country;
- (b). Whether the public library authorities have a positive attitude towards automation; and
- (c). The extent and areas to which the users of these public libraries are interested in automated library services.

Library profession is a noble profession. It is not just a desk job. Today's librarians play a dynamic role in the evolving knowledge based society. If the librarians can shoulder the responsibility of extending effective, need-based services with the help of information and communications technologies, they would be able to prove their worth to the society. This study would therefore act as a signpost for new vistas of research.

APPENDICES

APPENDIX	I	:	Bibliography
APPENDIX	II-(A)	:	Questionnaire for Librarians
	II-(B)	:	Questionnaire for Users

Appendix-I-A

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Appendix-II

Questionnaire-A & B

On

Automation in the Public Libraries of Bangladesh: A Plan for Development

For

Partial Fulfillment of Ph. D. Programme

By

Md. Nasiruddin

Supervisor

Dr. S.M. Mannan

Professor

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

Md. Nasiruddin

Assistant Professor

Department of Information Science and Library Management
Rajshahi University, Rajshahi-6205
Bangladesh

Survey questionnaire

Questionnaire-II (A)

Questionnaire for Librarians

A. Background Information:

1. Name of the Library : -----
2. Address Location : -----

3. Year of Establishment : -----
4. Librarian's Name : -----
Phone # -----
5. Type of Library Building : a. Housed separately
b. Own Building
c. Building on Rent
6. Library members/users : a. staffs-----
b. students-----
c. teachers-----
d. general users-----
7. Library Hours : Week days-----to -----
Holidays-----to-----
8. Library Budget : Year(s) -----
2003-2004-----
2004-2005-----
2005-2006-----
2006-2007-----
2007-2008-----
2008-2009-----
9. Library Collections (MBs) : a. Text & Reference Books -----
b. Reference Tools -----
c. Dissertations/thesis -----
d. Reports -----
e. Book Bank -----
f. Bound journals -----
g. Standards/Patents -----
h. Gifts/dominations -----
i. Misc. -----
10. Collection of NBMs : a. e-books -----
b. cd-rom -----
c. video cassettes -----
d. Slides -----
e. Microfilm -----
f. Others, -----
11. Subscription of current journal : Total Titles Total Cost

12. Staff Strength
- a. Bangladeshi :
 - b. Foreign :
 - c. Gift :
 - d. e-Journals :
 - : a. Professionals :
 - b. Semi-Professional :
 - c. Administrative :
 - d. Computer Personnel :
 - e. Others :

B. Information related to automation of Library

1. Status of Library Automation : (a). whether automation has started –Yes/No.
 (b). If “Yes”, the Year of Starting-----
 (c). State of Library House keeping operations
 (Please use √) i). fully manual
 ii). partially automated
 iii). Fully automated
 iv). partially automated

2. Areas of Library Operations where automation is used. (Please use √)
- | | | | |
|-----------------------|--------------------------|------------------------|--------------------------|
| a). acquisition | <input type="checkbox"/> | b). cataloguing | <input type="checkbox"/> |
| c). circulation | <input type="checkbox"/> | d). serials control | <input type="checkbox"/> |
| e). OPAC | <input type="checkbox"/> | f). reports generation | <input type="checkbox"/> |
| g). reference support | <input type="checkbox"/> | h). any others | <input type="checkbox"/> |

3. Types of software(s) used
- i). Operating systems- versions
 - a. DOS-----
 - b. UNIX----
 - c. DS-2-----
 - d. Linux-----
 - e. Windows NT
 - ii). Application software
 - a. WS-----
 - b. MS-Office----
 - c. MS-Word-----
 - d. Page Maker---
 - e. Fox base-----
 - f. Oracle-----
 - iii). Library Software used
 - a. CDS/ISIS-----
 - b. LIBSYS-----
 - c. Others-----

4. What type of catalogue do you generate with the help of computer?
 a. Book form Printed/hard copy----- b). Printed card form-----
 c. COM----- d). OPAC-----
 e. Web-pack-----

5. Method of data entry activities
 a. On contract basis b. through part time data entry operator
 c. by existing library staff d. by any other means(please specify)

6. No. of database recorded created:
 a. Books b. Bound vols.
 c. thesis d. any other----

7. Automated library services if provide by your library:
- | | | | |
|-----------------------------|--------------------------|---------------------------|--------------------------|
| a. circulation services | <input type="checkbox"/> | b. reference service | <input type="checkbox"/> |
| c. OPAC | <input type="checkbox"/> | d. multimedia-CD-ROM | <input type="checkbox"/> |
| e. Inter library loan | <input type="checkbox"/> | f. bibliographic services | <input type="checkbox"/> |
| g. E-mail/Internet services | <input type="checkbox"/> | h. Web Pack | <input type="checkbox"/> |
| i. any other areas | <input type="checkbox"/> | | |

8. Details of persons engaged in library automation :

Category	No. of persons engaged	qualifications--scale of pay
a. system analyst/engineer	:	
b. information scientist	:	
c. programmer	:	
d. scientific officer	:	
e. documentation officer	:	
f. tech. Assist/library assist	:	
g. data entry operator	:	

9. No.of library professionals having training on computer application in library:

10. i). Computer Systems configuration:

Sl. No.	Type of computer	No. of Units	RAM Capacity	HDD	Trade name	
1.	Pentium-I					
2.	Pentium-II					
3.	Pentium-III					
4.	Pentium-IV					
5.	Any others					

ii).:

Computer related equipments	Trade name	capacity	indented application	costs
-microfilm				
-microfilm printer				
-micro-fiche reader				
-slide				
-CD Server				
-DVD player				
-modems				
printer				
floppy disk				

11. Library Automation Budget:

Purpose & Head

Amount Allotted

- a. hardware
- b. software
- c. maintenance
- d. computer personnel
- e. computer stationary
- f. subscription
- g. telephone cost.
- i. any other

Total TK.

12. What does the term Internet describes for the library?

- a. catching up service to library
- b. image building for library
- c. wealth or huge current information
- d. great reference value
- e. huge information bur difficult to obtain
- f. communication tool
- g. substitute to library
- h. supplement to library
- i. makes library cost effective

13. How frequently do you provide the following internet services?

(Please circle) Never Rarely Occasionally Frequently Everyday

- a. WWW
- b. E-mail
- c. New groups
- d. Discussion forums
- e. FTP
- f. Chatting
- g. Any other

14. Which of following do you consider as the major problem that prevents automation in your library? (Please check)

- a. Paucity of fund
- b. Lack of computer trained manpower
- c. Lake of attitude of Public library authority
- d. Lack of work culture/responsiveness
- e. Lack of space
- f. any other reason

15. Comments or Suggestions: -----

Signature of the Librarian
Date

Questionnaire-II (B)

Questionnaire for the users of the Public Library

01. How frequently you visit the Library?

- a. Daily b. One in a week c. Twice in week d. Once in 15 days
e. Occasionally

02. How much time you spend on each visit?

- a. Below ½ hour b. ½ an hour-01 hour c. 1 hour -2 hour d. 2 hours -4 hours
e. 4 hours -6 hours

03. What resources you prefer most during the library visit?

- a. Periodicals b. Books c. Abstracts/Indexes d. Reference Books e. Theses
f. Reports g. Newspapers

04. Do you feel the following resources are adequate in the library?

- a. Books Yes No
b. Periodicals Yes No
c. Research Reports Yes No
d. Conference Proceedings/Monographs Yes No
e. Reference Documents Yes No
f. Newspapers, Magazines, Maps and Atlases Yes No

05. What do you do to meet your required information?

- a. By self purchase
b. By visiting the Library
c. By corresponding with others
d. By corresponding with authors
e. By corresponding with professional associations

06. Which one you prefer most for the acquisition of the library collection?

- a. By consulting publisher's catalogue
- b. By consulting journals
- c. By consulting book shops
- d. By consulting other libraries

07. Do you satisfied with the following services of the library?

- a. Reference service
- b. Circulation service
- c. Reader's guidance/assistance
- d. Current Awareness Services/ Inter Library Loan
- e. On-Line information services

08. Do you satisfied with the existing arrangement of reading materials in the library?

- a. Text Book
- b. Reference Materials
- c. Periodicals/Journals
- d. Reports
- e. Theses/Dissertation

09. Do you satisfied with other infrastructure facilities of the library? Such as,

- a. Cleanliness
- b. Ventilation
- c. Space for reading
- d. Drinking water
- e. Toilet Facilities

10. Do you receive any technology based services?

- a. Computer Systems
- b. Email & Internet facilities
- c. Microfilm
- d. Micro fiche
- e. Audio Visual aids

11. Do you get any on demand information services from the library?

12. Do you satisfied with the existing manpower?

13. Do you find any software in the library to provide services?

14. Do you think the existing budget is adequate for overall maintaining the library?

15. Are there any trained technical hands in the library?

16. Do you enjoying internet facilities to share resources with other national and international organizations?

17. Please write your suggestion for improvement of the public library services

Name:

Date: