Chapter IX

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Hughes stated (1991:29) that information has always been essential to political, economic and social intercourse. In that context information plays a vital role in changing and developing socioeconomic condition of Bangladesh. The national and socio-economic development of our country can not be thought of without the effective use and support of information. Transfer of information technology (IT) made this work, to some extent, successful and simple. With the advent of information technology, it has become an indispensable infrastructure in the globe with more and more high speed information services year by year. Information technology today allows us to create, store, manipulate, retrieve and transmit information in such a way which we had never dreamt before. This technology has a great impact on rural, industrial, cultural and research development in the country. The IT has grown tremendously in recent years. The technology has been changing in such a manner that an unbelievable large amount of information is available on the Internet and people of all areas have access from anywhere in the world to that internet. It is virtually impossible to perform any activities without the help of information services (Sattar, 1997:338). This information services is provided by libraries.

Among all types of libraries in Bangladesh, top ranked private university libraries in higher education institutions are playing leading role in providing fastest and quickest services to the users’ community with a few exception. Limitless potential has been in information technology for its versatile and useful application in libraries. This has become a fundamental part of all library resources, operations and services. Use of IT, in libraries, is to increase the efficiency, productivity, and effectiveness of library services. The success of modern library management is dependent on the effective utilization of information technologies.

The current study has been conducted to introduce the present status of use of IT in some selected private university libraries of Bangladesh. A comparative study between leading public and private university libraries was also made in terms of use of IT in the respective libraries. This chapter provides a summary of problems, recommendations, conclusion and ends with limitation of the study, which will be applicable for private university libraries in Bangladesh.
**Problems**

Bangladesh is one of the developing countries of the world where information technologies started in 1964. Since then IT has, gradually, taken place in all sphere of our daily life. A number of problems have been observed during conduction of the study. The problems are given below.

*No long-term planning* – No desired target can be achieved without any planning. No university is yet being developed any long-term plan for the development of university libraries.

*Administrative hurdles* - This problem is much more delicate in public university libraries than private university libraries. Administrators, policy makers, and government executives are not fully aware of the importance of information technology. Moreover, library administrators of public university libraries failed to make its importance clear.

*Lack of knowledge on IT* - Lack of knowledge of technological developments has created a critical obstacle to the installation or development of information technology facilities in libraries.

*Lack of respect of librarians* – As the librarians are not duly respected by its authority, obviously the librarians are not that much keen to take any initiatives for the development of IT facilities.

*Lack of competent and skilled staffs* – It is assumed that a small group of library professionals are experienced in using computers and other IT related facilities. This group of people, mostly, lives in Dhaka. In general, library professionals in Bangladesh do not have adequate knowledge on computer application and new technologies, except a few. Most public university libraries are run by minimum staff members who are trained and skilled in IT.

*Lack of funds* - Lack of funds has seriously obstructed the development of necessary IT infrastructures and effective information services.

*Resource constraints* – Every university is facing budget constraints as the authority of the respective university does not want to invest a good amount of money to library. It is very tough to manage budget for developing IT facilities in public universities. It is true, to manage public money for the development of public university libraries is a difficult job as the Government has its limited resources. In case of private universities, it is also very difficult to get budget approval from the authority for overall development of library. Most owners of private universities look for earnings and benefits. Inadequate fund has made the possibility of IT application in libraries more complex.
Short of infrastructural facilities – It has been observed that physical facilities of public university libraries are better compared to private university libraries. Size, shape and facilities of private university libraries are not adequate to serve students properly. Infrastructures of private universities are not good, though a small number of universities have already taken initiatives to make permanent campus, i.e. NSU and IUB at Bashundhara and EWU at Rampura. Inadequate physical facilities hinder the growth of information technology. Telecommunications network and an uninterrupted power supply are vital for Bangladesh.

Status of Information, Communication, and Technology (ICT) resources – ICT does not mean only use of computers. ICT means more than that. Attention has not been paid duly to communication and other related technologies. Some university libraries have Internet connection but speed is not up to the marks. Most libraries are using microcomputers containing low configuration which, in some cases, may not support advanced IT system.

Software problems – Software is one of the vital tools for library automation. All university libraries surveyed use indigenous library software except DU. DU Library is using GLAS software but due to administrative and technical problems that software could not be updated. AUST Library does not have any library software.

Standardization problems – All university libraries surveyed do not follow any standard for computerization and automation purpose. Every library carries out their work in its own way.

Non-availability of latest product of information technology – Sometimes some product of information technology has not been released timely in developing countries. Developing countries like Bangladesh has not been able to take instant benefit of development of information technology.

Psychological problem - The unwillingness of library professional to accept new information technologies obstructs the development of IT-based libraries.

Lack of training programs in information technology – There is a scarcity of training programmes in information technology in Bangladesh, particularly, in the field of library and information science. It has been observed that some libraries are run with good IT facilities, those are run by the help of IT expert of the respective universities. At the same time it is also true that there are some library professionals in Bangladesh, who are good in IT and some of them have IT background.
**Implementation of IT** – No library can provide modern library services without implementation of recommended IT facilities;

**No networks** – At present, there is no network among the university libraries of Bangladesh.

**Absence of e-resources selection policy** – Collection of e-resources in surveyed libraries is not significant. In fact, no collection development policy for e-resources is yet being made.

**Lack of online purchase of reading materials** - Librarians of private universities are facing great challenges in purchasing books due to tender system. If the system continues, it will be very difficult to provide timely services by the librarian of respective university. Concerned authorities and administrators of private universities must think about the cancellation of tender system in order to acquire books timely. There is no policy of online purchasing.

**Users’ attitude towards use of IT in libraries** – Users’ attitude is not good towards usage of information technology in libraries. Most undergraduate students of universities are not that much aware about the systems and services of libraries in Bangladesh. Maximum undergrad students borrow text books from the library for meeting the requirements of class room studies. Users of universities cannot work as a pressure group for use of information technology in university libraries in Bangladesh.

**BIPC Consortium** – There is only one consortium in Bangladesh named Bangladesh INASP-PERI Consortium (BIPC), which is coordinated by Bangladesh Academy of Sciences (BAS). All members of the consortium finance regularly in sustaining the network. It has started functioning in 2007 and till now (January 2009) it is working but struggling to manage fund. No government patronage is available for maintaining the consortium.

**Non-professional staffs** – An attitude has been found with the authority of private and public universities both in appointing non-professional staff members in libraries, who do not have any professional qualifications, experiences, ideas, and knowledge on IT. They do not have sufficient knowledge for potential use of information technology in libraries. Non-professional staff are not willing to take any challenges for the development of libraries. Non-professional staff are also isolated from the mainstream of library professionals in Bangladesh, which hampers the overall development of libraries.

**Lack of initiatives of the University Grants Commission of Bangladesh** - Lack of initiatives of the University Grants Commission of Bangladesh is one of the primary issues by which application and
use of information technologies in university libraries can be influenced. No policy has yet been taken by the University Grants Commission of Bangladesh for use of IT in university libraries of Bangladesh.

**Lack of understanding of private university authorities** – Lack of understanding of governing bodies of private universities regarding the growth and development of libraries. It has been observed that the concerned authority of most universities does not want to invest on information technology and overall development of library.

**Lack of initiatives of professional bodies** – Lack of initiatives of professional bodies is one of the important key issues by which application of information technologies in university libraries can be strengthened.

**Absence of leadership** – In absence of creative and dynamic leader in the field of library profession, use of IT in libraries is less.

**Recommendations**

According to problems mentioned and discussed earlier, the researcher has made an effort to recommend some plans to overcome the hurdles hampered in developing private university libraries of Bangladesh. These efforts involved; in terms of time, equipment, money and expertise; in developing the application and use of Information Technology (IT) in private university libraries of the country. Hope that the recommendations will help the private university administration and concerned authorities to formulate and implement plans and policies regarding introducing and using IT in private university libraries. These recommendations may be considered for the better environment of the use of IT in private university libraries of Bangladesh.

- Proposed model plan mentioned in this study should be followed to establish any private university library in Bangladesh;
- The library building should be well-planned and well-structured. At least 20% seating arrangement, of total students’ enrollment of the respective university, should be kept in the library;
- The building should be air-conditioned. There should be sufficient light in the stack, circulation, and reading area;
- Comfortable furniture is very much needed for studying a longer period of time in the library;
- The university libraries should take long range planning for developing a modern, automated, and IT based library. Library and technological experts in the profession may play an important role for that purpose;
- Appropriate IT-based infrastructural facilities should be developed immediately in all libraries for taking advantages of global online facilities and providing services to users effectively;
- Planning for library automation is done mostly by top level library professionals. The library professionals at all levels need to be involved to improve their self-confidence and motivation for successful implementation of IT;
- A detailed system analysis should be undertaken before implementation of library automation programme and IT based information services;
- Considering the developments in the field of information and communication technology and its role in information system development, as well as to cope with and suit to the need of the time and to make it suitable in line with the demands of beneficiaries, university library should be developed as an efficient and effective information centre for the benefits of the learning community;
- The concerned authority should consider IT to realize the improper physical facilities of the library. The authorities should provide libraries in suitable locations and with sufficient space to accommodate best possible seating arrangement, collections, services and to carry out functions properly; and develop libraries’ collections (qualitative as well as quantitative) to justify the use of information technologies;
- Most personnel of university libraries have the lack of skill in managing IT. They do not have the knowledge how to use IT devices effectively. They should acquire IT management skill for increasing service productivity of the library. Besides, attitudinal barriers among librarians regarded as a major obstruction to realize the potential of information technologies;
- Development of technical human resources of the library and information centres is being felt urgently. The activities have been greatly suffering due to the shortage of skilled and trained professionals. Training for library and information personnel in the application and use of computers in university libraries need to be provided. Professionally skilled human resources are very much required for any scheme like the use of information technology and automation in university libraries. The emerging technology will eventually have an impact on every part of library and for that libraries should create appropriate environment and prepare staff for this change. University libraries need to have a long term planning and well defined strategy for IT
implementation in order to obtain maximum benefits and to minimize the problems of using IT. Programme should be undertaken to train university library personnel in handling and exploiting information technologies. Necessary steps also should be taken to develop properly trained and competent professional human resources for initiating and maintaining information technology based libraries in the universities of Bangladesh;

- The training should cover data entry, search information from library database, information retrieval, in-house IT operation, office maintenance, e-mail, e-governance, Internet surfing, and institutional repository;

- Professional library associations in Bangladesh should organize short term training programme for library professionals in the field of application and use of IT in library and information services;

- An IT application requires heavy investment for computerization of library at the initial stage. So, sufficient funds in the form of special grants should be made available for modernizing university libraries and their operations and services. All university libraries need to restructure their budget policies for organizing IT-based libraries;

- Online purchase of books and e-books should be encouraged for ensuring quickest and smooth library services for its users. At the same time, tender system for purchase of books should be dropped from all universities as this is very time consuming and hindering library services.

- For purchase of foreign reading materials, prior permission from the Bangladesh Bank should be taken for using foreign currency. Bangladesh Bank should also be very broad-minded in giving permission for using foreign currency to purchase reading materials for the respective university. Permission should be given to each university at least for an amount of one hundred thousand US dollar per year.

- International credit card should be introduced immediately at all universities for smooth purchase of online reading materials in order to make sure timely services.

- A cooperative effort need to be developed where all university library professional could work in one platform for developing standard library software exclusively for library automation in university libraries of Bangladesh, IT implementation, and information retrieval. Libraries with the help of software development firms should develop standard library software packages for the use of computer and information technologies in the university libraries of Bangladesh. University libraries should run with standard library software in order to keep pace with global library and information systems. They should also develop a standardized thesaurus in Bengali language for the use of computer system employed in the university libraries of Bangladesh;
Since a large number of information resources are now available in electronic form. University Libraries need to adopt a hybrid collection development policy in order to assemble resources with appropriate combination of both print and electronic media in a most cost effective manner;

All major international databases in online and offline (CD-ROMs) should be made available in university libraries in Bangladesh to know the availability of information and literature required by faculty members, students, fellows, researchers and staff members;

Sufficient budget provision should be made for purchase of furniture and equipment according to need. At least 5-15% of the total budget of the university should be allocated to the university library. A minimum of 55% percent of the total budget of the university library should be spent on the purchase and maintenance of equipment and library materials. The remaining 45% percent should be spent on staff salaries and allowances;

Concerned authority should provide separate budget for acquiring or subscribing electronic resources, particularly, for journals in electronic form;

Budget provision should be made available for adopting the change of technology, i.e. software, hardware, and telecommunication facilities;

To draw the best attention of brilliant scholar to the library profession, attractive pay scales and higher official status with future prospects should be offered in university libraries, particularly in private universities. Salaries and status of library professionals should be comparable with those of other professional services and fields;

Professional associations [Library Association of Bangladesh (LAB) and Bangladesh Association of Librarians, Information Scientists and Documentalists (BALID)] of Bangladesh are basically needed to come forward to make awareness among the librarians about the potential advantages of the use of information technologies and to encourage the librarians to go ahead for automation;

The associations should carry out the challenge of raising the status of libraries and information service personnel in Bangladesh;

Professional bodies should draw the attention of the state authorities to convince and make them understand the importance of application and use of information technologies;

Pioneer library professionals; who have knowledge on Library Science, Information Technology, English Language, and finally, international exposure on related field should come forward to make the university authority understand about the benefits and impact of IT use in libraries;
The ministry of Education, Science and Technology, and UGC, should come forward to help universities for using information technologies in respective libraries;

The Government of Bangladesh should make sure duty free access of IT equipment for all educational institutions in Bangladesh. The Government should also ensure purchasing and maintenance of computers and other related technologies;

Librarians should convince administrators at the higher level to make them understand the importance of the use of computers and information technology in libraries, which they need for decision making. There is a felt need to revitalize the negative interest of the authorities in all respect of the application and use of information technology;

A National Technical Committee with the representatives from public and private university library professionals, and professors having IT knowledge of public and private universities, should be constituted set appropriate standards relating to technical aspects of the use of information technologies, resources sharing and networking systems. Since the country does not have any library standards which are essential for information services. Standards are required to be made to evaluate the performance of the libraries and library professionals;

Opportunities should be made for library personnel to attend conferences, seminars, and workshops, as well as formal courses outside the country, which will keep professionals up-to-date with the latest developments;

MARC 21 format should be followed for cataloguing purpose. MARC 21 is not a new format. The original American version of MARC became known as USMARC in the 1980s; there was also a separate Canadian version with minor differences called CAN/MARC. After making minor changes to both formats, the USMARC and CAN/MARC specifications were merged in 1997 to create MARC 21, the name intended to reflect the 21st century.

An American standard communication protocol Z39.50 should be made available in all university libraries for the purpose of information retrieval. Z39.50 makes it possible for a user in one information system to search and retrieve information from other information systems. It will provide interoperability between different web based information systems;

Networking is one of the effective means of serving the users’ needs comprehensively. The data communications support the establishment of networks at local, regional, national and international levels. Online access to different databases through networking system, e.g. LAN, WAN is essential for making world’s most recent published information available to meet the needs of library users;
• Computerized union catalogue of reading materials should be compiled and made accessible to that by all;

• Libraries should pursue established standards for compatibility, exchange and sharing of resources considering costs and efforts;

• Every university should have its e-resources selection policy by which duplication of e-resources can be avoided;

• Need-based value added user services using IT facilities should be enhanced;

• All the libraries should have adequate number of computers for providing services and the concerned authority should provide more computers to university libraries for having access to OPAC, CD-ROM databases and Internet facilities by users;

• Users’ attitude should be changed towards the use of information technology in libraries. Undergraduate students of universities should be oriented with the systems and services of libraries in Bangladesh;

• Consortium network in Bangladesh should be enhanced for sharing resources with minimum cost. At least three to four consortium networks should exist in the country for the benefit of all libraries considering the main aims and objectives of the same;

• Inter-library loan requests should be sent over e-mail. Documents should be made available in electronic media and should be sent, if required, to requester immediately as an email attachment. Documents containing a few pages should be scanned and send over e-mail on request to other libraries;

• High quality scanners, servers, and hardwares for IT facilities should be made available for providing quality and quickest library services;

• Information and resources should be shared on network through institutional repository of the respective university;

• Skilled human resources recommended in the model plan of this study should be appointed to run the library;

• One IT professional should be appointed, if the number of computers in the library is more than 50. IT personnel should be increased as per ratio of computers in the library;

• A broad band communication channel, if possible, through optical fibre should be developed for transmission of bulk data;
Digital library environment should be created for the greater benefits of users, particularly, those who are doing research in higher education institutes. The researchers desperately need latest research information within a shortest possible time. Considering this, area-wise digital library environment should be considered for Bangladesh;

The printed materials of the respective university should be gradually digitized to make these available through the World Wide Web system;

The University Grants Commission of Bangladesh should encourage private university authorities and make some rules to convince them for using information technology in university libraries.

The private university authorities should be very sympathetic and kind to invest for the use of information technology in university libraries of Bangladesh.

Adequate steps should be taken by the respective university and the Government to implement the above-mentioned recommendations.

**Conclusion**

The problem of enormous growth of literature has gradually been resolved with the help of information technologies. Information technology is changing the work of libraries and information centers. Particularly, the private university libraries of Bangladesh need technology based library services in order to provide the same quickly. Information technology refers to the facilities of storage, retrieval, dissemination and transmission of data, information, and documents in electronic formats, such as computers, microelectronics, video-disc systems, optical storage systems, hypertext and hyper media technology, E-mail, and internet, and other type of telecommunication links. The most important development in the information storage technology is the computer and CD-ROM systems. Information technology today permits us to create, store, manipulate, retrieve, disseminate, and transmit information that one never dreamt before.

Information technology has made an easy and faster access to the world of information and literature. Users can now easily search for information and make literature searches, use online networking system. In spite of the severe economic constraints, electronic storage systems and telecommunications networks have been becoming increasingly popular even in the least developed countries. Bangladesh has been gradually adopting various types of information technologies to provide improved services.

During last one decade, a grand success has been achieved in the advent of information storage and transmission technologies.
Information technology should be regarded as capital goods. It means information has become an economic commodity which should have its place in economic theory. Information is now collected, stored, maintained, applied, bought, and sold at a price. It has come as a factor in production, equal of land, capital, and labour. Information technology has converted information into goods. All university libraries of Bangladesh should cautiously make a note of all these points. They should make plans and programmes considering information as a power in order to improve the socio-economic-political and educational scene of Bangladesh.

One of the important responsibilities of the Government is to organize itself internally to take full advantage of information technologies. The Head of the present Government has made a commitment to public to digitize Bangladesh. It is really very nice to hear from the Head of the Government that they are very much keen to develop IT facilities in Bangladesh. The Government has given serious thought on various uses of information technologies for the betterment of the nation.

The use of information technologies in Bangladesh has also been extremely affecting the information use patterns and behaviors, dramatically changing the mode of library operations and services, and making major impacts in audio-visual markets, education and training field, research, literature publishing, and etc.

Information technologies have important implications for rural, industrial, educational, research and development (R&D), socio-economic and cultural development of Bangladesh. Sound and realistic policies relating to the use of information technologies in libraries and information services are all lacking at present. This is not to say that the policies should try to control the flow of information technologies. Feature of information technology is like water. Its flow and impact cannot be stopped. It softly surrounds an individual, an institution, or even a government. What Government ministers, advisors, and leaders, can do is to understand this process and optimize it for the benefits of the nation as well as the people of Bangladesh.

At present, different types of publications-journals, books, dictionaries, encyclopedias are now available in electronic formats, such as CD-ROMs, and they are now easy to use and handle and retrieve. Online access to foreign databases and access to online electronic journals are also available for consultation. Huge databases are also available with citations abstracts and in some cases, with text files in CD-ROMs, thereby facilitating easy access to universe of knowledge.

In automation and reorganization of services we should emphasis the need for more information with respect to how change comes about, who is involved in decision making, how better use can be made of present staff and their skills, and what measures can be used to determine the success of reorganization. Answering these types of questions will enable the librarians to creatively and
actively participate in shaping the future of libraries. Technological change is unavoidable, the future of libraries is open-ended.

We know that knowledge is power, and thus information is knowledge, which in turn, creates power. The power is governing the today’s world. Simultaneously this power is transmitted with the means of information technologies. Finally, it is very much required to state that information and communication technology has been tremendously influencing all spheres of our life in Bangladesh. It is very important to understand the implications of the information technology and its users’ roles and responsibilities, which concern us most.

But it is matter of regret that technological limitations still exist in the private university libraries in Bangladesh. Moreover, the process of the expansion of technology is very slow in the private university libraries. It is observed that though the number of the students in private universities is increasing every year the infrastructural and technological facilities are not increasing considerably. So, the libraries are failing to play the expected role in achieving their respective targets.

The technological development of the university libraries will be stimulated if the government and private university administration come forward to help libraries for adopting information technologies.

At the end it should be stated that enough attempts have been made to collect information concerning information technologies used in Bangladesh. Materials so collected have been well organized, properly analyzed and fully digested. As such it is found that the importance of information technologies has been understood not doubt by many librarians, researchers, educationists and intellectuals in the country. Many libraries have already started to use information technologies in their libraries as shown in the relevant chapters. The problems in the use of information technologies have been thoroughly discussed in the relevant chapter. Whenever there are problems there must be solutions, applicable to Bangladesh. As such this researcher suggested the most important solutions. If these solutions are adopted and logically materialized it can be hoped that library and information services of private universities of Bangladesh like other university libraries of developed and developing countries will be computerized, automated, and connected with global information network. The researcher is very much optimistic and confident about the implementation of the above-mentioned guidelines.

**Limitations of the study**

The study experienced the following problems:

i) The study was confined within selected public and private university libraries in Bangladesh. Wider use of university libraries might be provided for more useful information.
ii) Only four public universities and six private universities were selected for this study, although the country had 78 public and private universities.

iii) Budget of private university libraries surveyed was better compared to public universities surveyed in terms of organizing modern IT-based library. A good budget of public university libraries might have brought good result for modernizing the same libraries.

iv) The size of the sample both of users and libraries might have limited the scope of the study. A larger sample size would definitely provide more specific information for IT-based library systems and services of universities.

v) A purposeful selection of university libraries might have raised the question of bias. However, before making the selection, a technical approach was taken up to minimize the bias in selecting university libraries.

vi) The cost benefit analysis was not done during development of the proposed model. More studies on users and university libraries would have exposed a better picture.

vii) The universities located in Dhaka and Mymensingh were covered as sample while other universities located in other places of the country had not been accommodated in the study.

viii) The researcher had faced a number of problems during the conduction of proposed 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 had 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 sort of things had hampered the research to some extent.
References


