
PROBLEMS AND PROSPECTS OF DIGITAL LIBRARY AND LIBRARY DIGITIZATION IN BANGLADESHI INSTITUTES OF HIGHER EDUCATION

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Abstract

This paper reveals the status of higher academic libraries of Bangladesh. The issues related to digital Libraries are also highlighted. Library digitization in Bangladesh are in initiation phase and facing various impediments, paper is giving some suggestions to deal with them.

Keywords : Digital Libraries; Higher Educaiton Bangladesh

1. Introduction

The most important contribution of web technology in the library and information service sector has been the creation of digital library that allows users to access digital information resources from virtually anywhere in the world. In a developing country like Bangladesh, it will be difficult to convert the traditional library system to a digital format. But the enhanced demands from the research sector in the higher educational institutions, some of the libraries started to convert their manual setup to an automated one and it seems to be a noticeable attempt of the digital library era.

2. Digital library Concept

In this 21st century the word library does not give us a view of a storehouse of books, journals and other forms of library materials. With the emergence of Internet facility, the library comes to the user instead of inviting the user to come to its doorway. Basically, digital library is not the World Wide Web or online databases and other sought of online search services, but a full-fledged library with all the traditional and non-traditional library facility. The only difference between a traditional library and digital library is that it provides library materials in a digital format as well as paper-based format. The digital library service has not replaced libraries of printed materials, but has enhanced information access and use by exploiting information and communication technologies. (Chowdhury and Chowdhury, 2004). Where as the digital format of the library materials can be used and searched digitally with the help of Internet from a PC from anytime and anywhere.

"Digital libraries are a set of electronic resources and associated technical capabilities for creating, searching and using information. In this sense, they are an extension and enhancement of information storage and retrieval systems that manipulate digital data in any medium (text, images, sounds, static or dynamic images) and exist in distributed networks. The content of digital libraries includes data, metadata that describe various aspects of the data (e.g., representation, creator, owner,

reproduction rights) and metadata that consists of links or relationships to other data or metadata, whether internal or external to the digital library.”(Borgman, 1999).

2.1 Why digitization ?

The two most obvious benefits of digitization are improved access and preservation of documents. It can be used by many users from different places simultaneously at any point of time and because of that the library does not have to purchase several copies of the same material, which saves money. Unlike printed and analogue library collections like papers, photographs, paintings, audio-visual materials, digitized collections are not damaged by extensive and frequent usage and it helps to prevent the document generation after generation. It is a great help for distant learners and those who do have opportunity to come to the library physically and use the resources. According to (Chowdhury and Chowdhury, 2004), the digitization of library materials provides us the following other benefits too.

- A digital library brings information to the user
- Improved searching and manipulation of information
- Improved facilities for information sharing
- Timely access to information
- Improved use of information
- Improved collaboration
- Reduction of the digital divide.

A large proportion of a digital library’s collection comprises materials that are born digital, such as e-journals, e-books, internet resources, databases, and so on. In Bangladeshi aspect, library resources are in a printed format and needs to be digitized to include in the library collection for electronic use.

2.2 Digitization of library materials

Digitization is the process by which analogue content is converted into a sequence of 1s and 0s and put into a binary code to be readable by a computer. Digital information also has common characteristics and qualities regardless of whether the content is stored on DVD, CD-ROM or other digital storage media: it can be linked to other materials to create multimedia; it is not dependent upon spatial or temporal barriers, or hierarchies; it can be stored and delivered in a variety of ways; and can be copied limitless times without degradation of the original. Digital data can be compressed for storage; meaning that enormous amounts of analogue content can be stored in a computer drive, or on CD-Rom. Digital content can be browsed easily, and can be searched, indexed or collated instantly. Most importantly, it can be linked to a whole web of other content, either locally or globally via the Internet (Hughes, 2004). The process of digitization involves two major sets of activities: (1) the process of digital conversion where by the source materials are converted into digital form, and (2) the processing of digitized information, which involves several activities related to the storage, organization, processing and retrieval of digitized information (Chowdhury and Chowdhury, 2004).

3. Bangladeshi institutes of higher education and their libraries: present status

3.1 Dhaka University Library: There are twenty-one public and fifty-three private universities in Bangladesh. Among them Dhaka university is the oldest which was established in 1921. It has nine institutes, nine faculties and forty-nine departments. All the institutes and departments have its own institutional and seminar libraries where there is a huge central library and a science library for the help of academic users. In January 1998 with the fund of United Nations Development Programme (UNDP), the central and science library has started the library automation project. But after more than five years the authority has launched the program without completing the project. To date, barcode levels have been transplanted to only 1,05,700 books out of total 6,00,000 books at two libraries. The project needs 31,400 digitized borrower's cards, but the authorities could provide only 700 such cards (Hasan, 2006). The other libraries of this organization are running in a manual format.

The scenario is almost same in the other public and private university libraries. Only a very few leading private universities such as East West University, North South University, BRAC University, Independent University, Bangladesh have automated system.

3.2 East West University library

The East West University library is completely automated by the Software Development Centre (SDC) of the institution. It provides the service of online catalogue search and it is open to all. The library subscribes the JSTOR online journals, business collections and language and literature collections. It also subscribes the ACM (Association of Computing Machinery) Portal Digital Library and the library provides access to more than 150 online journals of Oxford University Press (OUP) to its users. The library authority has not started to digitize its paper-based and audio-visual library resources (East West University website).

3.3 Ayesha Abed Library, BRAC University

It is a fully automated library, which provides an OPAC and few other digital library facilities like subscription of internationally published e-journals such as HINARI, AGORA, JSTOR, DOAJ, PUBMED; in-house publications such as CSE, RED, BU-IED, BRAC, SPH. Library website also provides links to several online national daily newspapers. They also have not started to digitize their existing library resources.

3.4 Library, Independent University

Bangladesh: The library provides OPAC service for books and journal articles from Dhaka campus and as well as Chittagong campus. They subscribes to following host of e-journals; AOM, ACM, ACS, CUP, E-journals.org, IEEE, JSTOR, OUP, Project MUSE, ScienceDirect, etc. (Independent University website).

These are examples of some leading public and private university libraries in Bangladesh. In most of the cases the library is on the way to be a digital library, but not yet a full fledged one. Those have

taken initiative to go for digital collection, only has gone up to some connections and links with e-journals, Internet resources and databases. No library has taken initiative to convert their existing paper-based and audio-visual library resources into a digital format.

4. Problems of digitization

There are mainly two problems involved in digitization project for Bangladeshi context:

- Lack of technical knowledge and support.
- Lack of sufficient funding.

4.1 Lack of technical knowledge and support:

The technology required to provide digital library services continues to change rapidly as researchers and commercial vendors expand the kinds of content and access services that might be included. As the technology changes and improves, an institution's vision and requirements for a digital library evolve accordingly. The software to support these services is complex and dynamic. It is difficult for an average academic library, with limited technical resource to manage the development and growth of a practical, real-world, production digital library that meets its unique requirements.

4.2 Lack of sufficient funding

Building and managing digital libraries involves huge financial resources. The budget allocation of most of the university libraries is not sufficient for the digital library research and development. Hundreds of millions of dollars have already been spent on digital library research and development activities throughout the world. Digitizing the existing library materials also involves a huge expenditure.

Some other problems of library digitization are:

4.3 Software Development

Large academic libraries may be able to develop their own software, perhaps in collaboration with university researchers and IT departments. But many libraries do not have the resources to build a complete solution, and a comprehensive commercial solution is often too expensive. Moreover, due to the various and expanding content and services, no single product can meet all the requirements of even a basic function of a digital library (Lund, 2001)

4.4 Copyright Issue

Access to the information in digital libraries is generally less controlled than it is in physical collections (Witten and Bainbridge, 2003). Though copyright is a major issue for printed resources in Bangladesh as well.

4.5 Organization of collection

Digital libraries are organized collections of information. Downloading information from the web and organizing them into focused collections and making the material more useful to others is a prime application area for digital libraries.

4.6 Illegal and harmful materials

Web information is a big portion of any digital library and some material in the web is illegal and harmful and clearly inappropriate for public presentation. Violence and pornography are two major issues in this aspect. It is difficult for our academic libraries to prevent the usages of those materials.

4.7 Cultural sensitivity

Most digital information are produced by people from European and North American backgrounds, yet the majority of people in the world live in countries that have a different culture than them (Witten and Bainbridge, 2003).

5. Prospects of library digitization

The main concept of university library digitization is to provide resources and services beyond the library's physical boundaries and ensuring that off campus users can readily take advantage of the library services.

5.1 Distance learners program

Some of the university provides the distance learning opportunity to their students. The students who study or conduct research away from the physical campus can use the library facility and resources as required. The following services can be offered through digital library (Brophy et al., 2002).

- Electronic document delivery of scanned items from print collections.
- Electronic document delivery of articles requested through inter-library loan.
- Electronic book reservation services.
- Digital reference service such as, "ask the librarian". With the help of this service, a user can ask a question (through net) to the librarian during office hours and can get answer.

5.2 Improved searching for the user

Digital library facilitate improved access to information by providing various sophisticated search and retrieval facility (Chowdhury and Chowdhury, 2004). There have been significant improvements in the end user search facilities provided by electronic database search services and web search engines (Arms, 2000). Research is vital part to serve any academic library and the current problems in Bangladesh. Most of the university libraries does not provide much search facility for the researchers and the traditional search techniques are time consuming. So, if the university library can provide quicker and improved search options to the users, the research work will be accelerated.

5.3 Library cooperation

Digital library facility provides improved facility for information sharing among different libraries in any network. A group of university libraries can come under an agreement and permit access to their subscribed e-books or e-journals to the other members of the group. In this way, they can save a lot of money and get benefit of the library cooperation.

5.4 Improved preservation facility for rare and fragile archival materials:

Developing a digital surrogate of a rare or original object can provide access to users while preventing the original from damage by handling or display (Hughes, 2004). Dhaka University and other old academic libraries have some archival material that are very fragile, such as old and original manuscripts written on leaf and on fabric. Such of valuable documents can be photographed and converted into digital format and saved for digital use. Through this process the researcher can use the digital copies while protecting the original.

5.5 Multiple users at a time without purchasing multiple copies

The digital collections through a digital library can be used by many users at the same time without purchasing their multiple copies. This is a great advantage for any library users because traditional library resources cannot be used in this way.

6. Conclusion

The major problem of library digitization in Bangladeshi university libraries has been the lack financial support from the parent organizations. The university authority is not much aware about the library and its role in an academic environment. Most of the university libraries do not have minimum facilities for the teachers and general students. In this situation, it will take some time to shift into a digital mode. Some leading university libraries already have started digitization projects but the benefits of full-fledged digital libraries in an academic environment have not yet been realized.

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