

# Building digital libraries in Bangladesh: A developing country perspective

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#### **KEYWORDS**

Digital libraries; Digitization; Bangladesh; Digital library development; Access to Information (A2I); Bangladesh government **Abstract** This paper describes the ways used to build digital libraries in Bangladesh as well as the problems that might be encountered during digital library system development. It shows the existing status of digital library development, particularly the status of digitization in Bangladesh as well as government initiatives to build digital library system. Finally, several steps are proposed by the author for one possible approach to build an effective digital library system.

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#### Introduction

The term digital library has become one of the most frequently used terms in the library and information science arena. Digital libraries are complex with diverse aspects and cannot be captured by a simple definition. The term digital library is currently used to refer to systems that are very heterogeneous in scope and provide different functions. These systems range from digital objects and metadata repositories, reference-linking systems, archives, and content administration systems to complex systems that integrate advanced digital library services (DELOS, 2006).

Borgman (2000), one of the most influential researchers on the subject, defined digital libraries as "a set of

\* Tel.: +880 1710953233; fax: +880 2 8615583. *E-mail address*: nafiz\_z@hotmail.com. electronic resources and associated technical capabilities for creating, searching, and using information" (p. 42). In this regard, 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 metadata that describe various aspects of the data (e.g. representation, creator, owner, reproduction rights, etc.) and consist of links or relationships to other data or metadata, internal or external to the digital library (p. 42).

Comparatively, the Digital Library Federation (1998) defines a digital library as an organization that "provides the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities."

1057-2317/\$ - see front matter © 2012 Elsevier Ltd. All rights reserved. http://dx.doi.org/10.1016/j.iilr.2012.07.002 Meanwhile, the Association of Research Libraries (ARL) (1995) identifies five elements common to all definitions of the digital library:

- (1) The digital library is not a single entity;
- (2) The digital library requires technology to link the resources;
- (3) Linkages between digital libraries and information services are transparent to users;
- (4) Universal access to digital libraries must be a goal; and
- (5) Digital library collections are not restricted to document surrogates but include digital artifacts that have no printed equivalent.

#### Benefits of the digital library

Numerous benefits are associated with digital libraries, including:

- Library access from anywhere: Digital libraries are accessible anywhere. Individuals with a computer with an Internet connection can use the library from wherever. There's no need to visit the library in order to read a favorite book or collect required information. Patrons can search the library and collect desired information from their desktop, home, or office.
- Access 24/7: A digital library has no time and space boundaries. Patrons can access the library at anytime. For instance, it is possible for Norwegians to search a digital library of Bangladesh at 9 p.m. in Norway when it is late night in Bangladesh. Traditional libraries are only open for certain time periods and require patrons to be physically present to access materials.
- Broader access: The digital library system brings greater access to users. It is possible for a diverse range of patrons to access more information and often simultaneously. For example, in a traditional library there could be one or two copies of a book restricting only two users to use the book. But, in the case of the digital library, more users than the number of copies can access the same item.
- Information sharing: Through the digital library, it has become easier to share information with other organizations/library and information centers. Now, any library or information center can seek information from another library or information center without physically visiting the entity.
- More current information: In a digital library system, it is easy to update information without spending much time and labor. For example, it is difficult to update the information contained within traditional printed catalogue cards over the catalogue information on digital format.
- Less time and labor: The digital library system decreases the amount of time spent searching and retrieving information. Users can search and locate desired information in a shorter time frame and with less effort than through the traditional library system.
- New forms of access: A digital library can meet simultaneous access requests for the same electronic

document by easily creating multiple copies of the requested document. A digital library can serve a much larger population of users. A digital library can provide access to content in different and more current forms including animation, graphical, audio and video formats; support post-processing of information (e.g., conversion of a spreadsheet to a graphical form); and adapt to the special needs of physically disadvantaged users.

Improved preservation: Through metadata and information exchange protocols, digital libraries can easily share information with other digital libraries and provide enhanced access to users. Since electronic documents are not prone to the same wear and tear as its physical counterparts, digital libraries facilitate preservation of special and rare documents and artifacts by providing access to digital versions of these entities (FAO & UNESCO, 2005).

## Current state of digital library development in Bangladesh

In Bangladesh, the computer was first introduced in 1964, with the installation of an IBM 1620 computer at the Atomic Energy Commission (BASIS, 2005). Subsequently, the use of the computer was established at the Institute of Statistical Research and Training (ISRT) in 1964 followed by the Bangladesh University of Engineering and Technology (BUET) in 1968, Janata Bank in 1969, Adamjee Jute Mills Ltd. in 1970, and the Bureau of Statistics in 1973.

The 1980s are considered the beginning of the automation era for libraries and information centers in Bangladesh. The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) Library and Agricultural Information Centre (AIC) were pioneers in creating bibliographic databases on specialized fields using microcomputers (Khan, 1989). Recently, in light of the changing attitudes of information users in getting specific information, a number of libraries and information centers in the country have taken the initiative to establish an appropriate system for providing desired information to users through automation facilities.

The Internet arrived in Bangladesh with UUCP e-mail in 1993 and IP connectivity in 1996. In mid-June 1996, the Very Small Aperture Terminal (VSAT) base data circuit was commissioned for the first time in the country. Thereafter, Internet connectivity was established and made available to the public.

Nowadays, use of computers and Internet has dramatically increased in Bangladesh though a significant digital divide exists throughout the country. Fig. 1 shows the access to ICT in Bangladesh.

As the Fig. 1 shows, over 98 percent of the population in Bangladesh has no e-mail access and about 97 percent has no computer access. The same scenario exists in the country's libraries as most of the libraries especially school, college and public libraries in Bangladesh are still unable to offer ICT-based services for its users.

As a result, full-fledged digital library systems have not yet been developed in Bangladesh. However, some public and private university libraries have recently realized the Download English Version:

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