THE IMPORTANCE OF DIGITAL LIBRARIES FOR DISSEMINATING KNOWLEDGE IN THE ARABIC SPEAKING WORLD

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ABSTRACT: - *Digital libraries play a vital role in delivering the information required by end users in academic, public, special and almost all sort of libraries by publishing and giving access to available materials to their students, scientists, research workers or employees. Statistical data can be provided through the local digital library. Books and E-journals might be provided through the digital library as well as reports and technical reports which can also be provided through the digital library. In fact, a considerable variety of information resources of user interest could always be easily provided through the digital library. The objectives of this paper is to explore the importance of digital libraries for sustainable developments in today's World. It aims also to shed light on the services that can be provided through digital libraries which can help in disseminating information to target users. Therefore, a shift to an electronic environment is a necessity if libraries in the Arabic speaking World want to survive in the 21st century in which a new generation regarded as digital natives have grown up.*

KEY WORDS – *Digital libraries, Electronic library services, Open source software. Greenstone digital library software, Content management systems.*

1. Introduction

There are many different views in the literature as to the actual nature of digital libraries. This paper does not intend to provide a comprehensive collection of definitions of the digital library, but rather a number of representative definitions. A variety of terms are still used interchangeably such as electronic library, hybrid library, library without walls, cyber library, virtual library etc. Arms (2000) views a digital library as "managed collection of information with associated services, where the information is stored in digital formats and accessible over a network". Witten and Bainbridge (2003) define the digital library as "a focused

collection of digital objects, including text, video, and audio along with methods for access and retrieval, and for selection, organisation and maintenance of the collection". The digital library federation (DLF) defines digital libraries as "organizations that provide the resources, including the specialised 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." A digital library has the following characteristics (Jeng, 2006):

- It is an organized and managed collection of digital objects
- It is accessible over internet or server
- It is a global information infrastructure
- Should over service

The last point indicates that there is a difference between a digital collection and a digital library in that a digital library should offer service to end users. Therefore, a digital library is considered a collection of information objects and a collection of services that should be provided by the digital library. "The definition of a digital library that came up in the March 1994 Digital Library Workshop emphasized that a full service digital library must accomplish all the essential services of traditional libraries and also exploit the known – well advantages of digital searching, storage, and communication (Chowdhury, 2002). Leiner (2009) reports "There are a large and varied set of services, including services to support management of collections, services to provide replicated and reliable storage, services to aid in query formulation and execution, services to assist in name resolution and location, etc."

The World summit of information society in Geneva 2003 and Tunis commitment 2005 declare the desire to build a people-centered and development-oriented information society, where everyone can create, access, utilize, and share information and knowledge (World summit on the information society, 2005). An information society is defined as "a type of society in which information and information access plays a central role, economically, socially and individually. (Mobileman Glossary,2005). The information society can be measured by exploring citizens access to and use of the internet, e-government, e-learning, e-health, buying and selling on-line and e-business readiness. It may be concluded from the former definitions that everyone in an information society participates in the process of handling of information as a producer or as a consumer and access to information is also available to everyone. Digital libraries can assist in narrowing the digital divide which is still

widening between developed countries and the third World countries. The term digital divide was coined in the 1990s to describe the growing gap between those who have access to, and the skills to use, ICT and those who have limited or no access. In other words, it is the gap between the haves and have nots, or the information rich and the information poor.

Digital libraries can assist in the transition process to an information society in many ways. Establishment of digital content and long-term preservation strategies of the information created, purchased, and harvested in a digital form along with an ICT policy framework, to highlight the priorities of providing information for health and education as well as for remote specialists and researchers, is considered a major step for the advancement of developing countries. Meyyappan (2000) reports that "reviews of digital libraries show the diversified collection of information resources available to users ranging from full-texts of journal and conference papers to CD-ROM databases, theses and dissertations, e-journals, e- books, examination papers, images and photographs, maps, audio, video and multimedia resources, manuscripts and so on". This means that the World is witnessing a considerable transformation from print based-formats to electronic-based formats and almost all known formats can be stored and retrieved from

digital libraries which can be accessed in a variety of ways, for example through:

• Institution's library WebPages
• WebPages of specific digital libraries such as NDLTD, , NZDL, ACM digital library, Pub Med
• Subject Gateways, such as SOSIG, Biz/ed, OMNI
• Search service providers such as Dialog, Ovid online, Proquest
• Web search tools: search engines including meta search engines and specialty search engines like Google, AskJeeves, Kartoo, Vivisimo, etc., and directories like Yahoo (Chowdhury,2000).

Digital libraries improve the spread and access to information in many ways. Pandian (2001) points to the following advantages:

• Digital libraries bring the library to the user

  ➢ Searching and browsing
  ➢ Support full text searching
  ➢ Information can be shared more easily
  ➢ Current Information can be updated easily
  ➢ Information is always available (not limited to space and time)
  ➢ New forms of information become possible (digital representation of objects)

- ➢ Allows networking and exchange of ideas
- ➢ Preservation and archiving
- ➢ Faster scholarly communication and research
- ➢ Multilingual capability
- Other advantages of digital libraries as mentioned by Haddouti (2007) are:
  - ➢ Users can access the information everywhere
  - ➢ Reduction of bureaucracy by access to the information
  - ➢ The information is not necessarily located in same place
  - ➢ Understanding the catalogue structure is not necessary
  - ➢ Cross references to other documents speed up the work of users
  - ➢ Full text search

Digital libraries can provide cost effective information retrieval system, provide library materials to the largest possible audience, and can simplify the process of library search, material lookup, and typical library functions (Malkawi, 2007). In the last four years, the digital library paradigm received considerable interest from scientists from various areas (universities, arts, libraries, industries, etc.). The emerging term Digital Library is the result of information proliferation and technological advances. Witten (2006) states that "digital

libraries can assist human development by providing a mechanism for distributing information on priorities and materials that addresses specific community problem besides benefit from methods of information distribution".

Digital libraries are spreading over the world. All types of libraries, e.g. academic, national, public and special libraries, have started building digital libraries. The number of digital libraries on the internet is increasing dramatically. Managers of special libraries and information centres across the world have realized the importance of digital libraries and their potential contribution to the advancement of the services provided to end users and their positive effect on the performance of the parent body. A considerable number of special libraries in institutions, organizations, enterprises, and industries have built their digital collections and have started the provision of digital library services using various software. Building a low cost digital library is becoming less complicated thanks to the availability of free software required for building low cost digital library. A significant quantity of the software required for building digital libraries is freely available and can be modified and redistributed. This type of software is generally called open source software. Source Forge is a very famous site for

downloading a variety of software required for building digital libraries. The following are some of the well- known software in this domain according to the Registry of open access repositories (ROAR)

- Greenstone
- Dspace
- Bepress
- Keystone
- Eprints
- Fedora
- DigiTool, etc.

A number of special libraries and information centres have built their digital collections to improve the services presented to end users and to start providing electronic services. The availability of free information resources on the Internet has encouraged many library professionals involved in building electronic collections to exploit such resources for building their digital libraries. These resources are free to use by anyone anywhere in the world. Librarians and information professionals can add what they think might be useful for their users to their local digital library. In addition, there are also government publications that could also be disseminated through the digital library. Some freely accessible resources on the net are mentioned below. Special library users can

benefit from the vast amount of information through the local digital library if these resources are added to the digital library.

It is worth mentioning in this context that there are also several information resources available on the web through Subject Gateways and Virtual Libraries. Chowdhury (2004) has pointed to several subject gateways that are very useful if information professionals involved in building the local digital library choose the appropriate one and make it accessible to their users by pointing to the website from their own page.

Examples of subject gateways:

- ➢ BUBL: This subject gateway provides an organized structure of web resources using DDC.
- ➢ Business and economics.
- ➢ Social science: SOSIG.

The following screenshots show some digital libraries that were built using open source software. All of these digital libraries were built by digital library developers using Greenstone digital library software
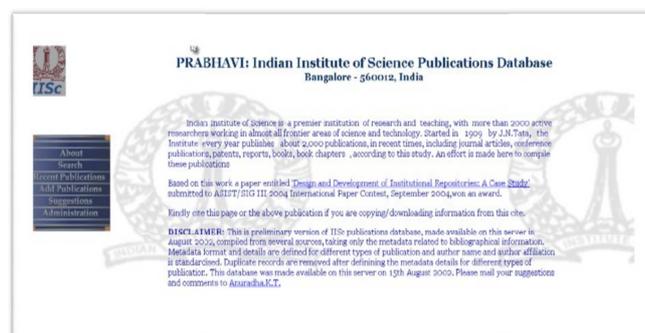
Figure 1.   Indian institute of science publications database
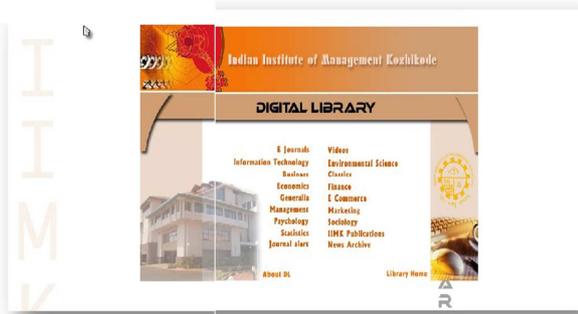

Figure 2. Indian institute of management

The Indian Institute of Management Kozhikode is a premier management school set up by the Government of India during 1996. The Centre for Development of Digital Libraries of IIMK uses GSDL software for its DL collection development. The DL at IIMK is truly a multi-media, multi- publication type and multi-format library with books, monographs, reports, journals, cases and educational videos forming part of its growing collection.

Very few libraries in the Arab world have exploited open source software to build digital collections and to start providing electronic library services. A handful of organizations and institutions have built digital libraries and made them accessible on the internet, e.g. Sudan open archive and the Sudanese Association of libraries and information. Both digital libraries were built by Greenstone software.

Figure 3. Sudanese association of libraries and information

Figure 4. Sudan open archive

Digital libraries can assist in developing the services provided by the special library in many ways. For example, some special libraries keep a user's profile and each user should update his or her profile, which is normally stored by the librarian and covers most of his or her informational needs. The user of the special library can be notified by email or other means of communications when materials of his or her interests are delivered to the library. It is a sort of current awareness service. The digital library can provide this sort of service electronically,
which is faster than any other means of communications. The digital library also plays an important role in delivering the information required by special library users in the organization by publishing the organization's

publications and giving access to such materials to their scientists, research workers or employees. Statistical data can also be provided through the local digital library. Reports and technical reports can also be provided through the digital library. In fact, a considerable variety of information resources of user interest could be easily provided through the library. The following are a number of information materials that can be provided through the digital library:

- e- books
- e- journals
- Statistical data
- Annual reports
- Technical reports
- Standards
- Theses
- Audio, video, and multimedia

The special library is considered an information centre for the organization it serves and has a significant role to play for the advantage of the parent body. Therefore, a shift to an electronic environment is a necessity if the special, public, and academic library wants to survive in the 21st century in which a new generation regarded as digital natives have grown up. Prensky has developed this new concept to describe individuals who have grown up in an entirely internet world (Law, 2007).

References

- Arms, W., 2000. *Digital libraries*. Cambridge: MIT Press.
- Chowdhury, G., 2000. Access to Information in digital libraries: users and digital divide. *Journal of Information Science*, 5(26), pp. 124-130.
- Chowdhury, G., 2002. Digital libraries and reference services: present and future. *Journal of Documentation*, 3(58), pp. 33-39.
- Chowdhury, G., 2004. Digital divide: how can digital libraries bridge the gap. *Journal of Information Science,* 4(12), pp. 56-63.
- Jeng, H., 2006. *Usability of the digital library: an evaluation module*. Ph.D. New Jersey: State University of New Jersey.
- Law, D., 2007. *Beyond the hybrid library: libraries in a web 2.0 world*. London: Springer.
- Leiner, M. and Richard, S., 2009. *A working definition of digital library.* [online] Avaialble at: <http://www.diglib.org/about/dldefinition.htm> [Accessed 16 January 2009].
- Malkawi, M., 2007. *Digital library* services in special libraries. [online] Available at:
- <http://www.unesco.org/webworld/public_domain/> [Accessed 18 January 2009]
- Meyyappan, N. and Chowdhury, G., 2000. A review of twenty digital libraries. *Journal of Information Science,* 5(26), pp. 24-35.
- Pandian, Q., 2001. *Qualitative research and evaluation methods.* Newburg Park: Sage.
- UNESCO. *World Summit on the Information Society* (WSIS). [online] Available at: <http://www.itu.int/wsis/index.html.> [Accessed: 21 January 2008]
- Witten, I., 2006. Digital libraries for the developing world. *Interactions*, 2(4), pp. 47-49.
- Witten, I. and Bainbridge, D., 2003. *How to build a digital library*. San Francisco: Morgan Kaufmann.