

Adult Education and Extension Services

Readings and Cases
in Memory of
PROFESSOR Y. Y. DIBAL

Editor
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CHAPTER 23

E-library in Education and Learning

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Introduction

Before the advent of electronic library (digital library), academic libraries were the sole custodians of information and knowledge which was in the form of prints (ink and paper). According to Wikipedia encyclopedia, *an academic library is a library that is attached to academic institutions above the secondary level, serving the teaching and research needs of students and staff*. These libraries serve two complementary purposes: to support the school's curriculum and to support the research of University faculties and staff. Its usually in print format (ink and paper) and it is bounded by walls. When expanded the academic library like any other traditional library, performs the functions of collection development and management; subject analysis; index creation; provision of access reference work; and, preservation (Cleveland, 1998).

However, the emergence and development of information and communication technologies (ICTs), especially computers, has transformed the manner the functions of traditional libraries are performed. This has also introduced innovations and challenges. Suffice it to say that the application of computers to

virtually all library services and functions beyond punch card applications in technical services operations and communication of library cataloging information through Machine Readable Cataloguing (MARC) format, envisions e-library (Brown, 2005). The emergence of the e-library or its metaphors has not in any way rendered traditional (academic) libraries irrelevant, redundant, or non-functional. Thus, this chapter will examine different definitions of e-library (digital library), its advantages and challenges and the role it plays in learning and education.

Definitions of e-library

An e-library assumes different appellations. Among others, it is referred to as digital library, virtual library, bionic library and "library without wall"; all meaning one and the same thing. That is, it is an electronic information access system that offers the user coherent views of an organized, selected and managed body of information as opposed to print, microform or other media and accessible by computers. The digital contents may be stored locally or accessed remotely via computer networks, which is a type of retrieval system (Adio & Olasina, 2011). However, the concept of digital library appears popular in literature and for that reason it is severally interchanged for e-library in this presentation. Hence, Arms (1995) considers digital library and by extension e-library as a managed collection of information with associated services, where the information is stored in digital formats accessible over a network. Also, according to Classical Digital Library Model (CDLM), a digital library is a collection of collections of

electronic knowledge resources developed and maintained in order to meet the totality of information need for a given user population. The Berkely Digital Library SunSITE identifies a distinguishing characteristic of an e-library and that is *information is organized on computers and available over a network, with procedure to select the material in the collections, to organize it, to make it available to users, and to archive it.*

From all these definitions, it can be inferred that e-library is a library with various types of collections such as images, sounds, videos and text in an electronic format that can be accessed and used by a vast amount of users for varying purposes, educational purposes inclusive, provided by a librarian via a connection of computer networks as intranet or internet with the aid of an effective operating software that enables effective retrieval of the organized and stored information.

Therefore, an e-library as highlighted by the Berkely Digital Library has the following common elements;

1. The e-library (digital library) is not a single entity: A digital library is not a single entity because in sourcing of resources, it has to be linked with other digital libraries for it to have the right and adequate amount of materials needed.
2. The e-library requires technology to link the resources of many. This is as a result of the internet and intranet connection via computers.
3. The linkages between the many digital libraries and information services are transparent to the end user.

4. Universal access to digital libraries and information services is a goal. This can be seen in the aspect of multiple usage of a single resource by lots of users.
5. E-library collection is not limited to documents surrogates. They extend to digital artifacts that cannot be represented or distributed in printed format.
6. Digital libraries are not restricted to walls unlike the physical library (academic library) that are enclosed by walls, digital libraries are not.

Advantages and disadvantages of e-Library

In a Wikipedia presentation the following are some advantages of e-library (digital library).

1. No physical boundary. People all over the world can have access to the same information through the availability of internet connection without them going to the physical library. This is not the same with academic library where students have to compete with space.
2. Multiple accesses. This is a major advantage of e-libraries, because a single information or resource can be accessed by institution and patrons simultaneously. Whereas users in academic libraries have to borrow and return before others can use or wait for a user to finish accessing a book before another can have access.
3. Information retrieval/harvesting. The user is able to search and use the entire collection and then download if he/she chooses. Unlike the academic library where a user

has to go through a list of catalogue cards before gaining access to the material sorted for.

4. Round the clock availability. People can gain access twenty-four hours daily (24/7) for information, unlike the academic library that is opened at a specific time and closed at a specific time.
5. Space. Because e-libraries are not restricted to space (building), they have potential to store much more information as a result of media storage technologies which are affordable (small buildings can house facilities that contains millions of information), unlike the academic library which is a gigantic building which houses people, facilities, books and shelves.
6. Preservation and conservation. Digitization is not a long term preservation solution for physical collection, but does succeed in providing access copies for materials that would otherwise fall in degradation from repeated use.
7. Certain characteristics of objects primarily the quality of images may be improved. It can enhance legibility and remove visible flaws such as stains and discoloration. It is also observed that despite the advantages of e-library, users have shown that there exist some disadvantages, which include;
 1. Copyright and licensing. This is one of the major challenges or disadvantage of an e-library/digital library. E-libraries are hampered by copyright law because unlike the traditional libraries, the digital libraries do not have access to

works from every period of time. The republication of materials by librarians on the web may require permission from right holders, and publishers. There is conflict between them and the publishers who may wish to create online version of their acquired content for commercial purposes. E-libraries are restricted to these guidelines;

i. Purpose of use; ii. Nature of the work; iii. Amount or substantiality used; iv. Market impact.

Copyright proposals have been put forward, suggesting that digital libraries be exempted from copyright laws. This will be beneficial to the public but non-beneficial economically to authors, which may lead to less or reduced dedication to create new works.

2. Digital preservation. This aims at making sure that digital media and information system can still be interpretable into the indefinite future. Each of these necessary components must be migrated and preserved. Only where the meaning and content of digital media and information system are not well understood is migrating possible as in the case of office document.

3. Metadata creation (cataloguing). As a result of the simplicity in creating metadata for printed works, the reverse is the case as to that of digital works; born digital works require substantially more effort in creating metadata (cataloguing) for these digitized works. This is because of the growing volumes of electronic publications. New tools and technologies have to be designed to allow for effective automated semantic classification and searching. There are many common catalogue

searches which cannot be performed using full text search e.g. finding text which are translation of other works, differentiating non-fiction from parody and linking text published under pseudonyms to the real authors.

The role of e-library in education and learning

Education is the result of a process by which an individual acquires knowledge, skills, attitude and insight. Education includes the development of cognitive (intellectual), affective (attitudes and values) and psychomotor (sensory-motor) skills and abilities. The aims of education are both individual and cultural. It is designed to affirmatively assist individuals to develop their potential skills and abilities so as to fulfill their potentials and to lead productive and satisfactory lives; (Encyclopedia Americana, 1829). Learning, on the other hand, is not just a cognitive mediation of knowledge acquisition but a process in which learners construct in their own ways and build unique representation of the content. It is also defined as a relatively permanent change in a behavioural potentiality that occurs as a result of reinforced practice (Encyclopedia Americana, 1829). Education or learning whether formal (taking place within the school wall), non-formal (out-of school education/learning) or informal (incidental learning) could be enhanced through the e-library.

On a general note e-library as a custodian of information technologies could facilitate learning, according to Thorpe (2005) in Ishag and Rami (2008) by:

- providing a sense of presence in online interaction;
- improving learner support;
- creating unlimited practice of difficult concept, skills, etc;
- providing unlimited access to resources via Internet;
- improving delivery of learner preferences;
- creating opportunities for global access to resources and teaching;
- providing opportunities to learn outside the classroom and anytime.

On a specific note, through the services offered in the e-library, the following educational benefits are implied:

1. Academic repositories. Many academic libraries are actively involved in building institutional repositories of institution books, papers, thesis and other works which can be digitized or born "digital". These repositories can be made available to the public with little restriction in accordance with the goal of "OPEN ACCESS" in contrast to the publication of research in commercial journals. Also digital library has helped universities to be rated worldwide because write-ups of university staff and students are posted online, as a result, the university gains popularity and is acclaimed "STANDARD".

2. E-library aids multiple accesses to electronic resources. An electronic resource can be used by multiple users round the world because of its "Open access" capability. Researchers can use the material without purchasing the

printed copy at a high cost or going to the physical library and be restricted by the accessibility of the material as a result of borrowing.

3. E-library is used by a lot of users to gain useful resources on particular titles or subject through the search engine. For instance, a student who does not know the author of a book but knows the title can type in the title and gain access to the book and even other authors of such related work, enhancing different views to such a title.
4. Also E-library in can be used in presenting a more precise view to a subject with the aid of clear pictures, audio visuals etc, thereby allowing the user understand all about the title or subject in question.
5. Computer Teleconferencing is allowable in the e-library where web cams on computers are connected to the Internet. By this, students and teachers could participate in live sessions of video and audio interactions or conferences taking place outside their immediate environment, even abroad.
6. Equality of educational or learning opportunities. The host e-library having subscribed to e-resources could make such resources available to many of its users without discrimination.

Challenges and Suggestions

In the use of e-library in education and learning, challenges are encountered. From the works of Cleveland (1998), Makinta

(2008) and Ishaq & Rami (2008) the following challenges could be isolated:

1. Copyright law and plagiarism
2. Internet inaccessibility
3. The low level of computer literacy of the e-library users
4. Metadata creation (Cataloguing)
5. Phobia for e-library usage
6. Lack of interest by users
7. Lack of funds
8. High cost of running the e-library; power supply, purchase and maintenance of equipment, etc.

Following the challenges highlighted, these suggestions are given:

Permission should be made accessible to digitized materials, that is, the copyright law should make it possible for people who want to use the resource to do so but with little restrictions or guides. This will guide against academic plagiarism. This is because every academic work is meant to develop people academically.

Also people should try and be computer literate for effective use of an e-library; the intended users must have a basic or in-depth knowledge of computer and its applications.

People should be properly trained on what an e-library is, its uses and how it can be effectively used for their academic growth.

The metadata creation (Cataloguing) should be done accurately and adequately by professional metadata creation staff that is familiar with the library schemes adopted.

The university should make provision that all academic work should be made or born digital to reduce the stress of digitizing works on-and-on. This makes users get a better understanding of the academic work they are researching on.

Also there should be adequate and effective internet accessibility by people, that is, the e-library server should have a good power source and a good backup for the library to function twenty-four hours daily (24/7).

A good budget should be made possible for the e-library - purchase of e-resource, staff maintenance, equipment maintenance and repairs.

Conclusion

This is a descriptive and a suggestive chapter on the place of e-library in education and learning. Thus, the meaning and features of e-library were described. Also, the chapter explained how an e-library could facilitate education and learning. In the course of discussion, challenges that might face patronage of the e-library, especially in developing countries, were highlighted and suggestions were given.

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