

THE POTENTIALS OF ELECTRONIC LIBRARIES (E-LIBRARIES) IN KNOWLEDGE MANAGEMENT IN CONTEMPORARY LIBRARIES IN NIGERIA

Isaac Abu Umaru¹, Philip Chike Aghadiuno^{2*} and Isaac Umaru Mamo³

¹The Polytechnic Library, Nasarawa State Polytechnic Lafia, Nasarawa State

²Department of Library and Information Science, Nasarawa State Polytechnic Lafia,
Nasarawa State

³The College Library, College of Agriculture Lafia, Nasarawa State

ABSTRACT: *This essay discusses e-library services and knowledge management and its application in the contemporary library. It is further broken down into the definitions and concepts of e-library and knowledge management, their respective roles in the libraries, role of the librarian, the inherent problems and challenges faced in using the e-library and some strategies and recommendations in which the problems can be tackled. Traditionally, libraries used to process, store, preserve and disseminate information and information sources through the traditional form of library use, but the application of computers and knowledge management has brought a change to the way librarians and the library operations are been carried out. Introduction of e-services and knowledge management in the library has made it very easy for the end user to access information, and also for the librarian to be able to source information to his users. With e-services in the library, one can easily have access to library resources without visiting the library.*

KEYWORDS: Electronic Library, Contemporary Library, Knowledge Management, Nigeria

INTRODUCTION

The library to some people is a building where a collection of books and other information resources are been kept for reading, studying and research purposes. Libraries are aimed at providing information to its users, so it is the job of the library to be able to make those materials available and accessible to its intended users or clients.

The coming of e-libraries has played significant and important roles in the modern library services delivery. From acquisition, processing, storage to the dissemination of information and information resources, e-libraries make it possible for libraries to deliver services to their users round the clock. E-library services has also made it possible for academic libraries to digitize their resources like theses and dissertations which are the intellectual properties of their mother institutions and make them available to users anytime, from any place.

There has been a shift from the concept of libraries as repositories or storehouses for information materials to the concept of libraries as gateways to offer information resources located in any part of the world, gone are those days when libraries/librarians talked and boasted about the size of their collections, the emphasis today is not the size, but the ability of the library to connect and read through the internet facilities with the use of electronic data bases anywhere in the world.

Definition of the Concepts E-Library and Knowledge

Management

E-Library

There are many definitions of the term electronic library; e-library refers to the process of translating a piece of information such as a book, sound recording, picture or video into bits. Bits are the fundamental units of information in a computer system. Turning information into these binary digits is called digitalization.

An e-library is therefore an assemblage of digital computing, storage and communications machinery together with the by content and software needed to reproduce, emulate and extend the services provided by conventional libraries based on paper and other material means of collecting, cataloguing, finding and disseminating information (Gladney et al 1994). RMG Consultants (2002) define electronic library as one in which a number of different information resources can be brought to an end user or clientele, rather than delivering the end user to a physical set of resources. Pacific (1977) defines it as a system which user's access information that resides solely in electronic format on computer networks without respect to physical location of the information. Association of Research libraries (1995) identified some elements as common to these definitions. These are:-

1. The electronic library is not a single entity.
2. The electronic library requires technology to link the resources of many.
3. The linkages between the many electronic libraries and information services are transparent to the end users.
4. Universal access to electronic libraries and information services is a goal.
5. Electronic library collections are not limited to document surrogates: they extend to digital artefacts that cannot be represented in printed formats.

It must be emphasized that the electronic library does not replace the traditional library services. Rather it is another means of providing them. Electronic libraries are about new ways of dealing with knowledge: collecting, organizing, preserving, propagating and accessing it.

Electronic libraries are libraries without walls, but they do need boundaries. The very notion of a collection implies a boundary: the fact that some things are in the collection means that others must be outside it. Collection, besides, need a kind of presence, a conceptual integrity that gives them cohesion and identity. Every collection should, in fact, have a well articulated purpose which states the objectives it intends to achieve and a set of selection principles which will guide the decision on what should be included and more importantly should be excluded.

The concepts and technologies associated with digitalization or electrification of library materials begin with planning, selection, production, storage and retrieval.

Knowledge Management

It is important to note that data, information and knowledge go hand in hand. Data refers to the content or facts that we wish to process, while information refers to the data communicated or

received. Knowledge goes beyond mere information, in that information has now been interpreted and processed according to a point of view, preparing the receiver for appropriate actions (Aguolu and Aguolu, 2002). We can determine the extent of one's knowledge from one's ability to answer questions. When information is combined with context and experience, that is the introduction of human factor, it becomes knowledge. (Ellen, 2009).

Knowledge is a very important resource in any institution or organisation whether it is academic, research, business or industrial organisation. If we are to manage knowledge; we must first understand what it is, its nature and structure in an organisation and what makes organisational knowledge distinct from other forms of knowledge. According to Nonaka and Takeuchi (1995) organisational knowledge is categorised into 'tacit' and 'explicit' knowledge. Tacit knowledge is a type of knowledge that people believe can only exist in the human minds. It is often a personal knowledge rooted in individual experiences, including intangible factors such as personal belief, perspective and value system. Choo (2002) saw tacit knowledge as the personal knowledge used by members in organisations to perform their work and interact with their environment. Explicit knowledge on the other hand is the knowledge expressed formally using a system of symbols, and can be easily communicated or diffused. Knowledge by its nature depends on other knowledge to build on. As noted by Duffy (1999) and Narayanan (2001) knowledge is created by a process of value addition to previous knowledge.

Knowledge management as noted by Girgis (2004) is a methodology for information capturing, optimising, delivering and maintaining information that are of value to the organisation. Davenport and Prusak (1998) defined knowledge management as the discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing all of an organisation's information assets. These include databases, documents, policies, procedures, expertise and experiences in individual worker or individual information assets. Knowledge management is also described as an organised and planned approach to gathering, storing and distributing knowledge. Traditionally, information professionals are concerned with managing tacit knowledge which may be in form of skills and competencies or explicit knowledge; that is recorded information (codified knowledge) in publications, documents, technical reports, audio-visual materials, theses and dissertations and so on.

Information professionals possess tacit knowledge that is critical in the performance of their duties. They are skilled at selecting and searching information sources, evaluating the quality of information, summarising important information and having the know-how to analyse information needs and relating and packaging the information found for a specific project or problem, Choo, (2002). As further stated by Choo, in managing explicit information knowledge, information professionals are often involved in many stages of knowledge processing cycle such as:

- Acquiring or extracting knowledge from documents with the help of experts.
- Writing up and editing raw knowledge such as presentations and turning it into processed knowledge (best practices, lessons learnt).
- Organising the processed knowledge and adding index terms, subject headings and cross reference links; and
- Disseminating knowledge through a variety of knowledge assets in libraries and information centres.

The Role of E-Library and Knowledge Management in the Modern Society

The importance of an electronic library in this modern era also known as the information age cannot be over emphasised. The digital library is understood to have the information stored predominantly in an electronic or digital medium for easy access and retrieval of information to the library patrons or users. Some of these roles are:

- It helps libraries preserve rare and fragile objects without denying access to those who wish to study them. Some materials that cannot be gotten physically can be bought online and be saved in the library so that patrons can have access to it.
- Reduces labour (no shelving) and saves the time of both the staff and the user, library materials stored in the system is easily gotten on the computer than done manually in shelves.
- It is convenient, once books are converted to digital form, patrons can retrieve them in seconds rather than in minutes, materials online are easily gotten than those in print form been shelved in the library.
- They occupy millimetres of space on a magnetic disk rather than meters on shelf. The magnetic disc can save large materials and it will reduce space on the shelf.
- Enhances immediate receipt of issues and eliminates the problem of missing issues, files stored in a computer can easily be retrieved when missing, but when the materials are in book form, they can easily be missing and no available copies which makes the library loses its value.
- In cataloguing and classification some schedules are online and cataloguing information and holdings of other libraries can now be searched from remote locations. Libraries that operate in a centralized or cooperative system of cataloguing can enjoy the e-libraries, as it allow them to have access to what they other libraries.
- Acquisitions and collection development have been made easier by the availability of online selection databases, which provide bibliography information, pricing abstract and reviews, through the internet, libraries can buy books online, negotiate prices without having to meet the authors or book vendors.
- Virtual reference queries have been developed such that librarians can now answer reference queries and guide users through online services such as online chats, email.

It must be emphasized that the electronic library does not replace the traditional library services; rather it is another means of providing easy access to information that are not easily available. Electronic libraries are about new ways of dealing with knowledge: collecting, organizing, preserving, propagating and accessing it.

Knowledge in libraries are sources and resources which include books, journals, monographs, newsletters, indexes and abstract, newspapers, magazines, bulletins, annual reports, patents, conference reports etc. All of these mentioned have knowledge contents which impacts their users and certify their needs and aspirations. The management of these knowledge assets in the library translates to their processing by classification/cataloguing and indexing in order to

assemble and accumulate them in pigeon holes for easy sharing and retrieval by knowledge workers and seekers. The role of knowledge management in education and nation building are:

- Knowledge management leads to the production of efficient manpower for nation building.
- Knowledge management leads to training of a skilful work force in all sectors of economy.
- Production of knowledgeable graduates can supply the needed hands in active governance and leadership.
- Knowledge management improves the performance of the work force employed at the federal, state and local governments.
- Sharing science and technological data improves the performance of graduates for high level of manpower production.
- Uniting intellectuals through ICT resources breeds cross fertilization of ideas for improved performance.
- Knowledge management leads to the cultivation of channels of effective knowledge flow.
- Providing limitless access to information resources equip scholars and workers to perform maximally.

As we can see, the role that knowledge management plays cannot be underestimated in terms of learning and nation building at large.

The Role of the Librarian in The Electronic Library

If one may ask: who is an electronic librarian? Gibbons (2004) reason that since the range of digital content can be vast, which includes text, audio, video, images, learning objects and datasets, born of digital or of a physical medium that has been digitized, such as scanned images, digital librarians could be defined as bridges between digital resources and users. This implies that he or she must be skilled in the use of information communication technology (ICT).

The increased amount of information and technological advances has changed the nature of the libraries profession, the role of the library has broadened beyond the traditional library model with its emphasis on physical resources. The concept of the library in physical structure is rapidly changing to that of an electronic or digital environment. Going into library no longer requires physical visit but virtual. Library resources are increasingly being expanded to include electronic formats to support user expectations.

Other notable changes on the library scene are that librarians are becoming information and knowledge professional. Librarians before the information age/era measured the effectiveness of their collection in terms of volumes of books and journal titles. This emphasis has shifted to easy accessibility of collections and data bases in some distant locations. It is no longer ownership but easy accessibility to desired information that counts.

The explosive information revolution has placed information at people's finger tips. A click at a button on a computer can bring forth a great amount of information. In such a situation, the tendency is to rely on self rather than the librarian in the search for information. If information can be obtained so effortlessly, why should users go to the library instead of getting it at home or in the office? The intermediary role of the librarian between information and the user is under threat. In view of this development, librarians Khoo (2005) observe that librarians now go the extra mile to provide 'value added' services including research skills and skills are synthesing and packaging information to support readers work and decision making. They also develop online digitalised collections of core materials, developing online gateways, re-packing information for users in the form of summaries, literature reviews. Not only has the librarians role changed from 'keeper of books' to information manager, the traditional librarian is able to move out of the library setting to the information environment environment where he can perform a variety of roles as 'information brother', 'website developer', 'information specialist', 'knowledge manager', 'software librarian' and 'information analyst (Reagan, 2005). Igun (2010) cited Zhou (2005) declared that the ICT/digital librarian must be able to:

- Select, acquire, preserve, organize and manage ICT/digital collection;
- Design the technical architecture of ICT/digital library;
- Plan, implement, and support ICT/digital services such as information navigation, consultation and transmit services;
- Establish friendly user interface over network;
- Set up relative standards and policies for the ICT/digital library;
- Design, maintain and transmit added-value information products;
- Protect digital intellectual property in network environment; and
- Ensure information security.

The change have brought into focus, the issue of competencies for librarians. The paradigm shift has brought about major challenges for library and information professionals who now require a variety of competencies to enable them perform in the new system of libraries (e-libraries).

Inherent Problems in Electronic Libraries

In running an electronic library, there are challenges that both the librarian and the patrons face in having ease to making good use of the library, bellow are some of the problems that is faced in running an electronic library;

- 1) Funding is a major factor in setting up an electronic library because it needs money to be able to set up a modern day library. Computers and networking are very expensive to handle, buying books online or making information available to the end user is not as easy as it sounds, money is heavily involved and that is a major hindrance in setting up an electronic library.
- 2) Inadequate professional staffs: in setting up an e-library, the librarian and the other library workers most at least have an idea about ICT's and how to go about it. If the

library does not have such qualified staffs then it becomes a problem because the library needs someone to put the users or clientele through when information is needed online.

- 3) Use of some of the online materials is limited by copyright laws and licensing agreements.
- 4) With the coming of the e-library, more dependence on technology and less use of the human brain.
- 5) Poor power supply and internet services: in running an e-library, power failure is a major problem because the computers cannot be used without light. Most times libraries face the problem of slow internet services or breakdown of servers which affects the e-libraries.
- 6) Users' inability to be able to use the computer: some users are computer illiterates, so they find it difficult to use e-library and therefore render the library somehow useless.

strategies to Enhancing These Problems

E-libraries has a very vital role to play in library and information services, most libraries and librarians should try and set up an e-library for effective use of information resources available worldwide. From the studies carried out, the following strategies can be used to enhance these problems:

- In setting up an electronic library, whether it is owned by government, institutions or private individuals, funds should always be made available to ease the problems of buying online materials and also in running the day to day activities of the library. Library administrators should collaborate with their parent institutions or establishing authorities to gain some sort of financial assistance and any other form of assistance to help them in running the e-library.
- Librarians working in an electronic library must be computer literates themselves, and must also employ well learned and trained individuals that are grounded in ICT application, to ensure easy running of the library.
- In running an electronic library, buying online materials are very important, so the library must be able to agree to terms and conditions of the copyrights laws and licensing agreement in order to have full access to online materials, even if it means registering with such an organisation.
- The coming of e-library should make libraries and librarians encourage patrons to be technologically advanced and at the same time be good users of the library manually, that will be an advantage to both the librarian and the patron.
- Electronic libraries demands the use of steady power of supply, so constant power supply should be made available. The library should have a standby generator in the case where PHCN fails, and also the use of (uninterrupted power supply) UPS, to maintain power in case of power outage.
- In setting an e-library, the librarian should know the type of patrons he has in mind, those that will be able to access the computer and make good use of it.

RECOMMENDATIONS

E-library has become very useful in making information and information resources accessible and available to end-users in the library and the world at large. It is recommended, with the coming of e-libraries, library operations and services should shift from the traditional in-house services to a digitalized library and information service. The emergence of e-library, library services have been made more sophisticated and interesting due to its user-friendly nature. Handling and availability of information resources has been made easier and quicker due to the growth and development in information and communication technology. It is advisable that e-libraries should be established in every facet of the country and the nation at large as its importance cannot be over emphasized.

CONCLUSION

E-libraries have become more responsive in making library users more literate in terms of using technology due to the continuous emergence of advancement in technology. These technology have not only affected the formats and sources of information, but also how and where to provide library services.

In conclusion, e-libraries have offered libraries new ways and dimensions of efficiently acquiring, organizing, storing and disseminating of information and information resources.

REFERENCES

- Reagon, R. A (2005) competencies required by south African entry-level library and information science graduates. Retrieved from etd. www.ac.29.usfills.modues/etal-init2674-1175584949.pdf (July, 2014).
- Khoo, C.S. (2005). Competencies for new era librarians and information professionals Available at <http://www//ico%20papers202%20Christopher%20khoo.pdf> Accessed on 2 nd. (July, 2014). [http://www.lib.usm.ny/.../icolretrieved\(march20,2012\)](http://www.lib.usm.ny/.../icolretrieved(march20,2012)).
- Groff and Jones (2003). Introduction to Knowledge Management: KM is Business. Amsterdam: Butterworth – Heinemann.
- Mohammed, Zakari (2003) Knowledge Management Framework and Strategies for National Development. A Paper Presented at 41st Annual National Conference and AGM of NLA held at Makurdi, Benue State, 7th – 12th September, pp 33-41.
- Webster, F. (2003) information society. Encyclopedia of library and information science, Volume 36. Alan Kent (Ed.). New York: Marcel Dekker, 1983.
- Ezra, S. G. (2007) Challenges of Implementing Virtual Library for Higher Institutions in Nigeria. A Paper Presented at 45th Annual National Conference and AGM of NLA held at Uyo 2007, 9th-14th September, pp 52-57.
- Edem, N. B. and Ani, O. (2010) Knowledge Management in Academic Libraries in Nigeria. A Paper Presented at 48th National Conference and Annual General Meeting of NLA held at Abuja 2010, 18th-24th July, pp 104-108.
- Okore, A. M. And Ekere, J. N. (2008) Information Professionals and Knowledge Management in Global Library and Information Services. A Paper Presented at 46th Annual National Conference and AGM of NLA held in Kaduna 2008, 1st-6th June, pp 53-60.