INFORMATION TECHNOLOGY AND E-LIBRARY AS TOOLS IN THE PROMOTION OF KNOWLEDGE SOCIETY IN NIGERIA

Abstract

The paradigm shift in knowledge society is highly due to the emergency of information technology cum electronic library (e-library). E-Learning in education is the wholesome of model integration of modern telecommunications equipment, and ICT resources, particularly the internet, into the education system. In a distance education system, teachers and learners are physically separate and the instructional materials are delivered via, telecommunication systems. This study thus explore the impacts and benefits of information technology and E-Library towards the promotion of knowledge society in Nigeria via questionnaires, to obtain data, and frequencies and percentage distributions were the analytical techniques adopted. The results revealed the easy exchange of information between library and her users, increased efficiency were the major impacts of ICT usage on librarians' activities. The information accessed through ICTs includes education, health, and research, among others. Findings equally revealed that the major challenges, in ICT use were erratic power supply and inadequate access to ICT facilities. Solutions such as: government intervention, external means of income generation, and campaign for ICT installation in virtually all libraries, among others were proffered.

Keywords: Knowledge, Education, Telecommunication, Health, information and Communication Technology, Electronic Library, Libraries, Librarians, Nigeria.

Introduction

Adoption of E-library and ICT is on the high side in Nigeria libraries, as the influence of information communication technology on E-learning and thus the promotion of knowledge society via smooth sailing deliveries of information to the general public is becoming more and more obvious and evident. It is no longer news that the world has moved from the industrial age into information age. Man's quest for knowledge has led to the creation and accumulation of tremendous amount of information. The world today boast of a knowledge based society. This quest for knowledge knows no bounds and limits and is never satisfied (Abdulsalami et al., 2013). According to Issa (2003), there has come to be in today's world, a full realization of the fact that information remains the prime commodity of present age. It has continued since the dawn of civilization to the modern age. Indeed, the availability and free flow of information bring about knowledge which has great potentials to provide impetus for the social, cultural, spiritual, political, economic, scientific and technological advancement of a nation. This hard-earned knowledge and information is valuable for the entire mankind and therefore liable to be preserved. With the invention of paper man has been able to convey this knowledge to others by writing books.

The need for the preservation of knowledge and dissemination of information led to the establishment of libraries, which begat E-library and thus ICT. Ikoku (1971), described library as the foyer of living ideas – ideas that permeate and animate all aspect of national life, a place where the dead are alive, where the ideas, knowledge and experience of great men though dead continue to live. Thus libraries acquired a great importance in the knowledge society. Libraries which have been variously referred to as the purveyor of information, the custodian of knowledge, and the house of learning plays a vital role in the development of any society by catering for the information needs of thousands of peoples within a particular community. Affirming to this, Reding (2005), noted that libraries play a fundamental role in our society. They are the collectors and stewards of our heritage; they are organizers of the knowledge in the books they collect – adding value by cataloguing, classifying and describing them; and, as public institutions, they assure equality of access for all citizens. They take the knowledge of the past and present, and lay it down for the future. Speedy dissemination of information, sharing of knowledge and ideas is aided with the invention and application of E-library and ICT.

The primary purpose of implementation is to achieve objectives of instruction, and achieve retention and transfer of knowledge. E-learning is an instructional medium that permits alternative, approaches to curriculum implementation in an ICT age (Yakubu, 2017). Richmond (1997) observed that there is a great link between the curriculum and ICT and that there are three major areas that technology can influence learning, including:

- ✓ Presentation, demonstration and the implementation of data using productivity tools.
- ✓ Use of information and resources on CD-Rom, online encyclopedic, interactive maps and atlases, electronic journals and other reference.
- ✓ Similarly, the role of ICT in curriculum implementation is recognized by the Nigeria National Policy on Education (FRN, 2004, P, 53) where it stated that, "the government shall provide facilities and necessary infrastructures, for the promotion of ICT and E-learning "It is against this background that the research intends to find out the extent of availability and the use of e-learning materials by teachers in secondary schools.

✓ Definition of E-learning refers to the use of ICTs to enhance and support teaching and learning processes-learning ranges from the way students use e-mail and accessing course work online while following a course on campus to programs offered entirely online. Again e-learning allows efficient transfer of knowledge anywhere and anytime, regardless of subject matter. It opens up a world of learning unavailable, in most corners of the world, while at the same time empowering learners with the information technology awareness and skills crucial to succeed in today global knowledge economics.

In this present era, knowledge society has become a key resource and a concept of importance in the library. Faced with increasingly dynamic environment and changes, libraries are beginning to realize that there is a vast largely untapped assets diffused in the organization – knowledge. However, the environment in which the library operates today and their role is drastically changing. The traditional image of the library as a quiet place of study, housing mostly print collections, is changing. In order to meet the growing needs of users the library system has been greatly improved and upgraded to meet the new challenges. The services offered by libraries have also undergone a great change with the advent of new technologies in the field of computers, telecommunications and Internet facilities thereby making libraries leaders in knowledge management.

The paradigm shift from obscure ways of service deliveries to fast and easy to access information via E-library and ICT has given vast significance to libraries and librarians. This paper thus explore the significance, importance, and impacts of E-Library and ICT towards the promotion of knowledge society in Nigeria.

Statement of the Problem

Considering the enormous benefits that are experienced from the impacts of E-library cum ICT in the Nigeria societies, libraries still experience some obstacles or hindrances in the effective and efficient use of the ICT resources in the library as several librarians are yet to embrace the paradigm shift from obscure means of data and information processing to that of E-library and information communication technology approach. Today, ICT acquisition and implementation, is facing a lot of problems. This research work is being conducted to expose some of the inhibiting factors that are hindering the impact of E-library cum ICT towards smooth dissemination of "information" and thus the dispensation of "knowledge" to the Nigeria society. Life changing/impacting "information" is a rare commodity and it is only those kind of information that can bring about sound "knowledge".

Objectives of the Study

1. To ascertain the impacts of E-library and ICT in the promotion of a knowledge society in Nigeria.

2. To determine the challenges associated with E-library and ICT in the promotion of a knowledge society in Nigeria.

Significance of the Study

The study will established existing gaps in the adoption of E-library and information and communication technology in the operation of libraries in achieving a knowledgeable society in Nigeria. The output of this study will serve as a blueprint for libraries information

managers/information scientists, researchers, lecturers students, and teacher to chart the right course of action for the use of information and communication technology in furthering a knowledge society in Nigeria

Scope of the Study

The scope of this study shall be limited to Federal Polytechnic, Ilaro, Ogun State and the study shall entail the information gathered from the selected institution.

Research Questions

This study will provide solution to the following questions.

1. What are the impacts of E-library and ICT in the promotion of a knowledge society in Nigeria?

2. What are the challenges associated with E-library and ICT in the promotion of a knowledge society in Nigeria?

Literature Review

The Information Society and Knowledge Society

The term "Information society" (or "information age") has come to epitomize the changes brought about by technological advance and globalization towards the end of the 20th century. The concept of the information society sums up the new world order, where the position of nations, their power, wealth and influence, increasingly depends on their access to and ability to use information. The development of E-library and Information and Communication Technologies (ICTs) has vastly increased the amount of information available and the speed and the ease with which it can be disseminated. Omekwu (2005) noted that the increasing prime of place giving to information through technological development and deployment evolves into an Information Society. Information is increasingly seen as a commodity that can be acquired, possessed, bought and sold. Issa (2003) pointed this out when he defined an information society as one whereby information is seen as a tradable commodity. A commodity that can be bought and sold in the information market place for a given price. A commodity that is indispensable for national development. As a result, all people do not enjoy equal access to information. Rather, globalization has bought a deepening divide between the information 'haves and have not's. A divide between privileged and unprivileged, rich and poor, North and South. Information can be viewed as a thing, and therefore can be a commodity, the predominant understanding and the one connoted by the terms information society/age. But it can be viewed in terms of effects, that is, information developing in interaction with the people seeking it. This perspective brings information closer to the concepts of knowledge and learning.

Development of the information society has established some necessary conditions for the development of knowledge societies. However, there are essential differences: knowledge societies are more empowering and all-embracing than the information society. They are also pluralistic - we talk of the information society, but knowledge societies. While the information society focuses on networks and connectivity through the technological advances of ICTs, knowledge societies use these to open access to all, to increase utilization of knowledge in all its forms for human development. It is not merely having ICTs, an

abundance of information, global access and networking, but using these to construct a desirable society for all, that is, to construct knowledge societies.

The term "knowledge society" ("*sociedad del conocimiento*") as an alternative by some in academic circles to the "information society" first used by Peter Drucker in 1969, builds on the concept of the information society. Knowledge society which involves all members of a community in knowledge creation and utilization is a fuller and richer concept where the emphasis is on content – the creation, distribution and use of information and knowledge in society. It is not merely the result of collection, processing and distribution. Knowledge society requires application, experience and the exercise of judgment (Abdulsalami et al., 2013).

The idea emerged at about the same time as the closely related concept of learning society and lifelong education. While it can be argued that all societies are in some sense knowledge societies, the UNESCO report of 2005 argues that in the past control of knowledge was part of a system supporting inequality, exclusion and social conflict. The Age of Enlightenment in Europe spread demands for democracy, openness, equality and freedom, with regard to knowledge and education as well as other areas of life. This came along with the greater diffusion of knowledge through books and printing and extension of education to more citizens through development of schools and universities. With recent technological developments, humanity has learned how to mass-produce knowledge, but how will this knowledge be used? The use of ICTs offers us new opportunities to achieve equal and universal access to knowledge and genuine changing in a public knowledge forum, thereby, realizing the idea of democracy and freedom of expression. According to the UNESCO report (2005), these new developments "should be the cornerstone of true knowledge societies, which are a source of human and sustainable development". Societies that set up institutions and organizations enabling people and information to develop without limits and open opportunities for all kinds of knowledge to be mass-produced and mass-utilized are knowledge societies. Lor and Britz (2006) defined knowledge society as a society that operates within the paradigm of the economics of information. It values human capital as the prime input to production and innovation.

Dike (2007) enumerated five features of knowledge societies as thus:

- Knowledge societies are pluralistic and culturally diverse.
- Knowledge societies are democratic societies for all and by all.
- Knowledge societies are learning societies.
- Knowledge societies foster full human development.
- Knowledge societies build better future.

Approaches to Knowledge Revolution

What is knowledge? Knowledge as defined by Harbert and Payton (1995) is an acquaintance with or understanding of facts, actions, etc or as that which is known. However, knowledge in the fast changing world needs to be put in its dynamic functional and humanistic dimension to be appreciated. Information becomes knowledge when it is decoded, interpreted and given a context by the individual and embodied in his/her beliefs, values and commitments. Knowledge may be classified into subject's knowledge, general knowledge and professional knowledge. Since knowledge is becoming the most important factor in economic and social development, managers of institutions in Nigeria should accordingly shift emphasis to

functional knowledge creation, delivery, dissemination and application (knowledge processes): skill training and technology acquisition and innovation.

Institutions here include universities, polytechnics, monotechnics, and colleges of education, research institutes and other post-secondary school-level institutions. Tertiary institutions are yet to make the desired impact on knowledge revolution, apparently because the country has not effectively integrated into the global knowledge economy.

Abdulsalami et al. (2013) stated that, managers of institutions in Nigeria, should see the global knowledge revolution as a critical challenge and play a leading role (as in other countries) in the production of intellectual and social capital necessary for the construction of modern knowledge societies for sustainable development and poverty reduction. Unfortunately, this is not yet happening in Nigeria though some institutions have introduced e-teaching and e-learning. Effective knowledge creation delivery and application in Tertiary Education Institution (TEI) require proper management strategies. Alabi (2001) opines that effective management strategies constitute a necessity for the success of any educational policy or programme. Management is the process of planning, organizing, directing/leading, staffing, coordinating, and evaluating the human and material resources designed to accomplish the pre-determined goals and objectives of an organization. The managers of TEI need to understand the dynamic processes of knowing knowledge creation, sharing, transformation and application as well as the role played by communication in knowledge construction and delivery.

Dike (2007) posed several questions thus: what will library be like in the future? Some questioned whether libraries will disappear, to be replaced by other forms? Or will they radically change character, focus, opinion, directions to be scarcely recognizable? Or will library services become totally virtual? Selling commodities and services to clientele? Or will libraries incorporate new ideas, new media and technologies, new services to meet new needs, circumstances and challenges of today and tomorrow?

Based on the aforementioned there can be no knowledge revolution if there is no library or if library have no future, knowledge revolution cannot occur if we are standing still while the world is changing, we assure you that the world cannot change without the library, every revolution in knowledge is attached to the library while library is knowledge. Libraries and librarians must put extract effort so that self-made libraries (researchers) will not overtake our role. Libraries must move forward, make progress and develop in response to the opportunities and challenges of an ever-changing world, to make the role of the library and librarians prominent (Abdulsalami et al., 2013).

Knowledge revolution is the aim of nations around the world. According to Dike (2007), every country seeks to develop their agriculture and industrial base and to increase their wealth and prosper. The level of development was formerly measured by a country's Gross National Product (GNP) or Gross Domestic Product (GDP), this model was found wanting. Based on this, issues on human development were added to the development of model knowledge which began as an issues of equity, gender, equality, literacy, health, education for all human rights and participation in society. This precipitated the movement from an "industry-based" to an "Information-based" society which lent more emphasis to human resources development, as human beings with the requisite education and skills leaving the library as centre of development.

Dike (2007) expresses that the concept of sustainable development grew out of concerns that the planet could not continue to support certain patterns of human and economic development indefinites to development. It was feared that degradation, over population, pollution, global warming, etc would lead to declining standards of living and increasing conflicts over dwindling resources. It could even lead to the extinction of humanity in the long run. Balancing the fulfillment of human needs with the protections of the national environment so that these needs can be met not only in the present, but in the indefinite future. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The library forms part of this development. Knowledge revolution is forward looking, requiring planning, foresight, concern for others and self-control. It is also multi-dimensional, encompassing economic and human development as well as protection of the environment.

The Roles of E-Library and ICT in the Promotion of Knowledge Societies in Nigeria.

Information and Communication Technology (ICT) has transformed library services globally. Most current information are recorded in electronic format, ICT has also contributed immensely to the performance of librarians in the discharge of their duties such as in cataloguing, reference services, circulation management, serials control etc. ICT has made access to the library very convenient and easy. With the invention of e-libraries, access to the library has been brought even to the most remote areas and has brought learning to the feet of everybody. I believe ICT in the library has brought more advantages than challenges to library services

Digital library brings library from the past to the present and information technology takes it from the present to the future. E-library significance cannot be fully implemented nor the impact duly felt without the immense presence and full functionality of ICT. ICT stands as the middleman between the library and the final user of the information it holds in store. Abdulsalami et al. (2013) stated that libraries are centers of information, primarily established to generate knowledge, equip people with knowledge to serve the society and advance the well-being of mankind. Thus, library is like a storehouse of knowledge, a whole world encompassed in one room. In this digital age, libraries face challenges from both within (institutions) and within (the business sectors) for instance, academic departments, faculty members and even students may buy or build their own portals to meet their academic and research needs. Is it possible then that services offered by libraries may be marginalized?

A pivotal role played by libraries is one of the factors which helps in the development of a society or even a civilization. It caters to the knowledge thirsty minds of thousands of people. With the onset and advancement of technologies, virtual libraries are created. These types of libraries are present in many colleges. Libraries are an integral part of the education system and development and one is incomplete without the other (Abdulsalami et al., 2013).

In order to continue to remain relevant and valuable, libraries must strive to provide the right amount of information to the right clientele at the right time with a right expense of financial and human resources. With the ever dwindling library budget, libraries have to increase their operational efficiency in order to meet this challenge. One management tool that can help in this regard is Knowledge Management (KM). Lee (2006) expressed that it was the business world that first recognized the importance of knowledge in the "global economy" of the "knowledge age" in the new knowledge economy, the possession of relevant and strategic knowledge and its increasing renewal enables business to gain competitive advantage. The

palliatives of knowledge management have now spread to other sectors including government agencies, research and developments, departments, universities and others.

The basic aim of establishing e-libraries and information technology in modern societies is to be able to respond to the information needs of communities. Abdulsalami et al. (2013), argued that for information organizations to function well there is the need to train the professionals who will be able to provide the needed resources and services to meet the development needs of individuals/governments. It is only through this process that Nigeria society can guarantee library and information services to all Nigerians irrespective of locations, age, religion, political and ethic affiliations.

Other roles of libraries include:

- To provide comprehensive and balanced information resources relevant to the activities of its parent organization;
- To provide required information quickly and precisely;
- To conduct retrospective literature search for as appropriate;
- To acquire, organize, maintain and disseminate information materials relevant to the organization activities.

Libraries provides the below services: Current Awareness Services (CAS), Selective Dissemination of Information (SDI), Document Delivery Service (DDS), CD-ROM Service, Access to Internet and E-mail, Discussion Group/Bulletin Board Services, etc.

Advantages of Using ICT in the library

- Speedy dissemination of information within the library and the outer world
- ICT makes library work easier, faster, cheaper and more effective
- Helps to manage information overload as information retrieval is made easier in computerized systems
- Remote access is enabled through networked systems

Challenges of using ICT in libraries

- Poor funding of ICT infrastructures
- Constant change of software and hardware
- Erratic power supply
- Insufficient bandwidth
- Lack of technical IT knowledge by library staff

Methodology

The research design adopted for this study was a descriptive survey design. 300 well-structured questionnaire entitled Information Technology and E-Library as Tools in the Promotion of Knowledge Society in Nigeria was used to gather information from randomly selected staff and students of the Federal Polytechnic Ilaro. A total number of 280 (93.3%) respondents responded to the questionnaire items. The questionnaires were administered and collected using research assistants. Results of findings were analyzed using frequency table and percentages. The questionnaire was based on three factors, "Agree, Disagree, Undecided" – ADU. The result analysis is done based on the output of those aforementioned parameters.

Table 1: Frequency rate of impacts of E-library and ICT in the promotion of a knowledge society in Nigeria.

S/N	Options	U		D		A	
1	Quick dissemination of library information to end-users	38	13.6%	30	10.7%	212	75.7%
2	Able to respond to the information needs of communities	40	14.3%	24	8.6%	216	77.1%
3	It helps in the development of a society or even civilization	9	3.2%	5	1.8%	266	95%
4	The information accessed through e-library/ICTs includes education, health, and research	5	1.8%	3	1.1%	272	97.1%
5	It helps to manage information overload as information retrieval is made easier in computerized systems	5	1.8%	3	1.1%	272	97.1%

Table 1 above shows the frequency rate of impacts of e-library and ICT in the promotion of a knowledge society in Nigeria. The data reveals that 75.7% of the respondents agreed that e-library and ICT helps with quick dissemination of library information to end-users. A significant 77.1% of the respondents also opined that e-library and ICT are able to respond to the information needs of communities and 95% of the respondents also believed that the information helps in the development of a society or even civilization. 97.1% of the respondents opined that the information accessed through e-library/ICTs includes education, health, and research, and also helps to manage information overload as information retrieval is made easier in computerized systems. The advantages, impacts, improvement, and facelift brought to the library by ICT cannot be completely unraveled. It can be simply stated that e-library cum IT is the future of knowledge acquisition.

Table 2: Frequency rate of the challenges associated with E-library and ICT in the promotion of a knowledge society in Nigeria.

S/N	Options	U		D		A	
1	Poor funding of ICT infrastructures	6	2.1%	24	8.6%	250	89.3%
2	Constant change of software and hardware	7	2.5%	8	2.9%	265	94.6%
3	Erratic power supply	5	1.8%	3	1.1%	272	97.1%
4	Insufficient bandwidth	5	1.8%	5	1.8%	270	96.4%
5	Lack of technical IT knowledge by library staff	7	2.5%	3	1.1%	270	96.4%

The data from Table 2 above shows that 89.3% of the respondents believes that poor funding of ICT infrastructures is one of the major challenges faced by e-library and ICT in Nigeria. Constant change of software and hardware is an issue that is yet to be addressed as 94.6% of the respondents believed that the software packages were not up-to-date. 97.1% of the respondents opined that erratic power supply is still a major difficulty towards smooth operation of e-library and ICT. Insufficient bandwidth and lack of technical IT knowledge by library staff remain unresolved and needs proper consideration as 96.4% of the respondents stated that both challenges should be addressed. However, this study proffered solutions to the challenges stated above.

Conclusion

Do we live in an era of change or in a changing era? How can one characterize the deep transformations that come with the accelerated insertion of artificial intelligence and new Information and Communication Technologies (ICTs) in our present society? Is it a question of a new stage in the industrial society or are we entering into a new era? "Global village", "technotronic era", "post-industrial society", "information society" or "information age", and "knowledge society" are just a few of the terms that have been coined in an attempt to identify and understand the extent of these changes.

Library and librarian has recognized the expanding nature of the challenges that is before them and the range of competencies required of them. The challenges represented by these competencies must be seized and acted upon today so as to ensure that professionals in the libraries are viable.

The level of development which was formerly measured by a country's Gross National Product (GNP) or Gross Domestic Product (GDP) i.e. the level of economic development, was found faulty due to its irregularities nature i.e. between the rich and the poor moving its industrial based to an information based society which lent more emphasis to human resources development as human beings with the requisite education and skills were seen as key societal resources.

Based on the above statement, library which is both knowledge society and information society is the key to achieving sustainable development which is said to meet the needs of the present without comprising the ability of future generations to meet their own needs.

To this effect, the roles of the e-library and ICT are ever growing because an attempt to educate a man invariably is an effort towards educating the society. Based on this argument put forward the library is the store house of these knowledge/development. It therefore behooves on the library professionals to possess the requisites competencies to be able to collect, process, store and disseminate information effectively so that knowledge and information management will not only affect communities but the society at large.

Recommendations

The followings are recommended:

i. Library should be made to acquire and store modern information technological resources while the librarian should master the art and science of the profession in their work environment.

ii. The libraries should grow alongside information technology which has restructured the role of the library to creating access to information and knowledge irrespective of its location in the world through virtual nature of technology.

iii. As our counterpart in Europe, America etc prove the relevance of the role of the library; we must not out of laxity make ourselves irrelevant in our provision of information to the communities we serve.

iv. Library should provide comprehensive and balanced information resources relevant to the activities of its parent organization.

v. Recognizing the increasing rate and nature of information, libraries should be adequately funded to enable them provide necessary infrastructure for knowledge acquisition and provision of services.

vi. Public enlightenment programme, lectures, symposia, conferences should be organize in a non-formal scheme through the rural communities of the state through Federal Ministries of Education.

vii. A reliable source of power supply should be afforded to libraries. Alternative power generation such as; solar power system, gas powered generators, among others, should be considered.

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