

Full Length Research

Information and Communication Technology (ICT) Tools for Sustainable Development in Nigerian University Libraries

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Accepted 31 August 2021

This paper highlights the important role of Information and Communication Technologies (ICT) tools plays in University libraries. In particular, the paper has argued that ICT tools have impacted on University libraries practice in Nigeria to date in a numbers of ways but that the impact will grow considerably in years to come and that use of ICT tools will become a strong agent for change among many University libraries. It is evident from the study that use of ICT tools in University libraries is increasing very rapidly in various university libraries. In developing countries where University libraries is fraught with serious challenges at multiple levels, there is increasing pressure to ensure that technological possibilities are viewed in the context of library needs. The use of ICT tools in University libraries lends itself to more student-centered learning settings. But with the world moving rapidly into digital media and information, the use of ICT tools in University libraries is becoming more and more important and this importance will continue to grow and develop in the University libraries. In conclusion this paper gives an overview of current trends in university library through the use of ICT tools, advantage, disadvantages and importance. It suggested that there is an urgent need to adequately fund university libraries in Nigeria. Librarians have to advocate for adequate financial investment in the ICT-based libraries by the stakeholders and government. Adequate funding is vital for the sustainability of ICT-based library services. This paper also highlights on the Challenges and Way forward of using ICT tools on the University library.

Keywords: University Libraries, ICT, Application of ICTs in University Library, Importance of ICT, Challenges and Way forward

Cite This Article As: Sahabi, M.K., Unobe, E.S ((2021). Information and Communication Technology (ICT) Tools for Sustainable Development in Nigerian University Libraries. *Inter. J. Acad. Lib. Info. Sci.* 9(9): 432-438

INTRODUCTION

University library is a kind of academic library that serves the information needs of the university community through provision of information resources that supports learning, teaching and research. The university library is usually centrally located where students can access the library with ease. The primary aim of a university library is to promote and support the objectives of the university

which is based on learning, teaching, research and services. The library is highly regarded as the heart and brain box of the intellectual activities of the university. Aina (2004) asserts that the quality of a university is measured by the services provided by the library because of its unique position in the over-all university system.

The 21st century is regarded as an era of information revolution. Advances in information technology have led

to far-reaching developments in higher education sector; an example of which is the application of digital information in learning. Libraries and information centres in Nigeria are not only equipped with materials that are in physical format but also in electronic formats: they offer users a vast selection of information resources. Before the emergence of ICT, the functioning of libraries in Nigeria has been cumbersome, time-wasting, without giving any room for flexibility (Omagbemi, Akintola & Olayiwola, 2004). But with the introduction of ICT in Nigeria, particularly at the higher educational institutions there is simultaneous access for many users at the same time and it helps to close the global information gap and create brighter future for students (Harrison, 2000).

CONCEPT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Information and Communication Technology, usually abbreviated as (ICT) is often used as an extended synonym for information technology (IT). Bappah (2010) defined "ICT as a broad-based term that encompasses the gathering (acquisition) organization (packaging), storage and retrieval (dissemination) of information that can be in textual or numerical (books, documents), pictorial and vocal forms (audio-visual) or a combination of all the above (multi-media), using a combination of computers and telecommunications telephony distance learning". According to Harrison (2000), ICT is the use of scientific equipment and human resources to meet a human need or a human goal. Informations are used to communicate and understand. Communication (from Latin *commūnicāre*, meaning "to share") is the act of conveying meanings from one entity or group to another through the use of mutually understood signs, symbols, and semiotic rules (Harrison, 2000). Information and Communication Technology can be defined as the use of Information in order to meet human need or purpose with reference to the use of contemporary devices such as the internet and computer (Stosic & Stosic 2015). ICT is defined as a variety of tools and technological resources used to communicate, create, disseminate, store and manage information (Bolu, 2011). These technologies include computers, Internet, broadcasting (radio and television) and the telephone all are used for sharing of information.

Information and Communication Technologies (ICTs) are referred to as the varied collection of technological gear and resources which are made use of to communicate. They are also made use of to generate, distribute, collect and administer information. ICT is a force that has changed many aspects of the way we live. Information and Communication Technologies consist of the hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images), as

well as related services (Tofi 2019). ICTs can be divided into two components, Information and Communication Infrastructure (ICI) which refers to physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and the services that utilize those (Internet, voice, mail, radio, and television), and Information Technology (IT) that refers to the hardware and software of information collection, storage, processing, and presentation.

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) TOOLS

ICT tools in university library is beyond access to computer and Internet, or searching information on Google, Yahoo. Rather, it is access to e-books, e-journals (Databases), e-thesis and e-Dissertations, Magazines and Online Newspaper (Issa, John, & Ali 2013). They further said that the emergence of ICT tools has transformed library search in information searching, access, processing, evaluation, organization, storage and utilization by information users in educational environments across the globe. People, upon hearing or listening about ICT think and believe that it only concerns computers, but it is far from just the computer. ICT means Information Communication Technology, i.e. those channels, mediums, aids, through which or by which communication is made, and information circulated. Information communication technologies include, Computer, ROMS, television, telephones, GSM phones, projectors, Audiovisual, Video Tapes, Video Machines, Recorder (Tape & Video), Filmstrip, Cameras. Therefore, the application of these techniques in the University Library will reach the goal of discussing methods of application and use also (Issa, John, & Ali 2013).

Computers

Computer is a master in the world of ICT. Indeed, all ICTs deal with computers. Most, if not all, ICTs go through the computer. The students and lecturers in the University Library use computers to solve assignments and crack strong questions. Computers can be used to keep facts or store facts and records in University Library (Alade, 2006).

Mobile phones

The Mobile phone is a 21st century scientific product that facilitates communication, sending and receiving message. Through the Mobile phones, librarian can help lecturers to provide notes to the class members and send it to WhatsApp platform for discussion. With a GSM phones, the lecturers can also arrange appointments with

students by sending e-notes, eBooks and e-journals. The Mobile phones allows direct communication between librarians and users so that users fly with the wings of knowledge and amiable character. Mobile phone is simply use for an online platform for interaction purposes to create, share, and exchange ideas among librarians in Nigeria to meet the information needs of the users include the following.

- **Blogs:** librarians can periodically create messages on a particular subject; share it and allow users to contribute accordingly.
- **Facebook:** This is a library-friendly app because it allows for the interaction with users to know the information they need. Libraries try to link some of these specialized library applications to Facebook.
- **Flickr:** this is an image distribution tool that can be utilized by Librarians in Nigeria. Important pages of new arrivals of both library materials such as books, journals, periodicals can be shared to users through this platform.
- **Library Thing:** A tool that enriches the library OPAC. Once an account is created, a list of books with ISBNs is sent to Library Thing which sends back a piece of code which is pasted into the footer of the Library OPAC. Librarians can utilize this to send a list of current publications to users.
- **LinkedIn:** this platform can be utilized by Librarians to connect with professionals across all discipline. Librarians can use this platform to have a one-one relationship with specialist who can keep them informed about latest development in their world.
- **MySpace:** In academic institutions where the students are; libraries have taken advantage of this site to post, calendar, custom catalog search tools, and blog features to improve their presence.
- **Ning:** this is used to connect with users, library associations, and more. The Nigerian Library Association (NLA) utilizes this platform to discuss topical issues among the members.
- **Twitter:** This app can be used to update library users on new developments in the library. In fact, new collections of materials, current content services of library, important information regarding library services can be shared promptly on the platform. Users can also react to the post made by the institution on the app.
- **Wikis:** This is a free online encyclopaedia that shows a brief knowledge about a given phenomenon shared by users. Users are permitted to contribute to the content shared after accessing it which makes it a collaborative platform.

In another view, Ezeani & Igwesi (2012) described mobile phones as a tool for accessing knowledge openly because the resources are available with no need for payment or authentication before viewing it. In an open access platform, users are not charged for accessing resources of any kind i.e. they can read it for free,

download it, share it and even print it especially when it doesn't violate copyright rules

Projectors

Projectors are, as their name indicates, electronic devices that display photos, movies, or other intellectual information on the screen. This is used to cover a wide range of viewpoints as we see them in cinemas, schools, University Library and others. Librarian can assist lecturers in teaching the students and it also helps to influence knowledge or information in a wider area. It does what black and white boards can do and more (Alade, 2006).

Videos

According to Demson (2007), "ICT tools can be used to provide tutoring in distance learning". They can be used to administer test to the learner, and also disseminate information to students. Example: **YouTube:** this is a platform where audio-visual contents are uploaded to enable wider reach of the message shared during seminars, conferences and workshops. Librarians can utilize this platform for their respective institutions in Nigeria.

THE NEED FOR ICT Tools for Sustainable Development in Nigerian University Libraries

ICT, without being told, is of paramount importance in the daily activities of man. There is one general aphorism which says that "if one is not informed, the person will be deformed". This is true because man cannot (necessarily) do without information which is got through communication and enhanced with the scientific technologies available.

The importance of ICT tools in university Library is basically to collect, manage, preserve and make information resources accessible. The following are some of the importance of ICT tools in University Library are:

- User-friendly interface.
- To benefit network facilities.
- To support library functions.
- To enhance advanced search, access and retrieval of information.
- To improve the library operations.
- To enable one to perform searches that is not practical manually.
- To improve information sharing.
- To preserve unique collection through digitization.
- Access to large amounts of information to users

- wherever they are and whenever they need it.
- Integration with other university libraries.

The significance of any work done is its contending results. The use of ICT in the University Libraries should also bring praise and devastating results. This means that the application of ICT in the University Libraries has advantages, on the one hand, and disadvantages.

Advantages: The use of ICT University Libraries offers students, teachers and the entire world the following benefits:

- Nobody is shielded from information, which is empowerment.
- There is a mental development.
- The world is becoming a global village with use of ICTs.
- Users' information and data are not in the danger of being lost easily.
- Many people can be educated at the same time, if a meaningful result is obtained.
- This increases our knowledge of these ICT applications.
- It stimulates development - social development, intellectual development, cultural development, human development, economic development, and information communication technological development.
- It helps to simplify imitators and agents of irregularities in the examination room.
 - Information is not limited by time or space
 - Multimedia information
 - Resource-sharing and partnership with other libraries or educational institutions
 - 24-hour service
 - Easier to keep information current
 - Concurrent access to information resources
 - Collaboration and exchange of ideas- e-mail and teleconferencing
 - Economy-DLs may save money on building, staff, collection maintenance storage equipment and space.
 - Enhances preservation- especially of fragile original materials, rare publications and artifacts.

Disadvantages: ICT applications have also contained very irregular situations consistent with their use in the University Libraries. These anomalies may or may not want.

- Appropriate use of ICT can lead to fraud - unwanted phishing.
- Students crack their brains in order to manipulate the computer and execute their hidden agenda,

which could not be taken into account if the ICT application were not used in University Libraries and general education.

- Some teachers give their students significant and illegal access to these ICT applications.
- ICT application make some people lazy and students stop reading the values in books.

However, the advantages and disadvantages are in polarity, which may indicate whether the use of ICT in University Libraries should continue. Certainly, every human activity has a polar notion, but what we should consider as rational beings is a being that discourages others (that is, the advantages and disadvantages). To a large extent, given the productivity of ICT in University Libraries, the advantage superseded the disadvantages. We can always combat the inconvenience of using computer tools, but we cannot avoid or prevent future benefits. They always talk about themselves and around the world, so we should never think about using ICTs in the University Libraries, because nothing can really prevent good results.

Challenges of Using ICT tools for Sustainable Development in Nigerian University Libraries

Despite the enormous importance of using ICT in enhancing library services, this still poses a number of challenges which include but not limited to:

Demands for new skills: According to Anyakola (2005), the new information environment makes it very necessary that librarians themselves have to acquire skills and expertise, especially in the application of modern information and communication technologies, electronic publishing, digital information management and knowledge management. It is obvious that the trainings are given to libraries in the library schools with respect to Nigerian library schools can no longer keep them safe in the digital environment. In other words, for librarians to remain relevant in the university libraries there is need for them to acquire ICT-based skills

Cost / Funding: Due to regular budget cuts of university libraries, considering high cost of books and journals subscriptions, libraries are faced with no options but to reduce expenditures on books and journal subscriptions. The introduction and use of ICTs in libraries has not made the situation any better because capital intensive. Fund is required to maintain and upgrade the equipment and software, pay software license fees, pay for access to electronic journals and online databases, pay for internet connections and training of man power is not available through the cost of maintaining e-library in the university is high, it is even more risky maintaining the status quo. Librarians cannot afford to remain where they are, it is either they adapt to new trends or perish. As

buttressed by Adigun (2015), the greatest challenge facing libraries in Nigeria is that of funding. The provision of improved, effective, efficient and sustainable information services, as well as access to a wide array of knowledge and information sources in the face of dwindling funding is not feasible. Funds are needed to cater for a whole range of services in the library of the 21st century yet government subventions in the education sector are not adequate (Emezie & Nwaohiri, 2013). This no doubt validates the fact that fund is a prerequisite for effective management of university libraries in the digital age.

Copyright management: Digitization and provision of access to digital collections accessed via electronic networks, especially the internet, is presenting bigger challenges to librarians. Unlike print-based documents, digital-based information resources can be accessed from anywhere via electronic networks, copied several times, manipulated (i.e. edited, modified, repackaged, etc.) or deleted. The ease at which digital information resources can be copied and manipulated may result in governments, under pressure from information producers, to put in place rigid copyright laws in which the rights of the right-holder had increased at the expense of users and this may affect the provision of access to digital information sources in libraries.

Managing of new generation of learners: There are alternatives to libraries and information centres especially, in contemporary digital environment, these alternatives that are available to library users to exploit poses challenges to library managers. A click of the button using any search engine would yield millions of information sources in a second, in view of this, librarians are faced with the herculean task of designing means of ensuring that students in the university are not fully drifted away from the library environment. The new generations of learners are partially if not fully ICT compliant. Hence, to effectively manage libraries to meet their needs requires libraries to reposition itself.

Lack of skilled manpower: There is dearth of skilled manpower to maintain the electronic resources in university libraries in the digital environment. The absence of properly trained staffs is also a great source of problem for the libraries as they are poorly trained on handling library materials and also oblivious of new trends and updates in the library and information sector. There is also a lack of sufficient professional librarians as the academic libraries have failed to effectively train students in library science, today the few graduates of library science rather hunt for jobs in other sectors due to the poor state of the academic libraries in Nigeria. Library staff that are not properly trained are not always able to handle user behaviour and expectations, therefore making interested library users discouraged.

Lack of confidence in the face of increasingly information technology: To effectively manage both human and infrastructural resources in university libraries requires confidence. Having a strong confidence to manage university libraries in digital environment requires the library manager being in touch with modern developments. Many librarians lack confidence in the face of increasingly information technology

Lack of maintenance culture: One of the major challenges of managing university libraries in the digital environment is lack of maintenance culture. This attribute is not just synonymous with libraries but Nigerian government and leaders. Without the spirit of maintenance culture, managing university libraries in the digital libraries becomes problematic.

Resistance to changes: According to Maa (2017), change is a phenomenon that is inevitable for progress. It is not easily accepted in any society because of fear of the unknown. Librarians are afraid of it. They are not sure of what change may bring to their profession. Resistance to changes in libraries will limit the extent that university librarian can go in managing university libraries.

Information access: Whereas libraries generally contain and provide access to censored information resources, this is not the case with information accessed on the web. Distribution of pornographic materials and information produces for deliberate disinformation is very easy to do on the web and this presents problems to many librarians on how to exclude access to such types of information, especially on internet workstations located in university libraries.

Preservation of digital information resources: The print-based library and archives environment, as opposed to the digital

information environment, has evolved over centuries. Preservation methods and formats for print-based documents have also been developed and tested. There are print-based documents that have been preserved for over 2000 years in the world today and can still be read. The digital information era is in its infancy stage and already some of the information is stored in formats or media that cannot be accessed or read.

Legal deposit: In the print-based environment, producers of publications are required by law to deposit copies of their documents with the national library or national archives, or any agency designated to receive and preserve such publications. In the digital information environment, the situation in many countries (Nigeria) is still not clear as to who is responsible for the long-term preservation of digital information resources.

Lack of well-defined ICT Policy: University libraries in Nigeria are yet to come up with uninformed ICT-based

service policy. Such policy will articulate what is required for sustainable ICT-based library services in the digital environment, areas of digital library services to be given top priorities, ICT training need of library staff and strategic plan to ensure continuous maintenance of ICT facilities. Most university libraries in Nigeria do not have a well-defined ICT-policy to guide and regulate the application ICT to library services delivery. There is need to address pertinent issues relating to the expediency of ICT training needs of librarians, the nature of ICT-based library services, the ratio of library allocation that should go into ICT-based library services. Maa (2017), observed that there are no policies and capacity building for libraries and librarians to render e-library services.

Lack of ICT literacy: According to Ashikuzzaman (2018), some professional librarians lack the requisite technological literacy needed for a 21st century library service. To them, lack of basic skills in the use of information technology has become a clue to better library services.

CONCLUSION

ICT has changed the world and has become one important tool for retrieving information in 21st century. University Libraries are not only limited to printed documents but also electronic resources increase by their use. The most effective way to provide access to information in the university library is through online databases, which can be done through ICT for enhancing learning, teaching and research activities of the university. ICT tools are very important component of the university library recourse they support core functions of the university in terms of teaching, learning and research activities. The university library is very essential to the existence of all universities. Funding university libraries the 21st century is necessary particularly at a time when information is significantly stored in electronic format. This will only be possible when adequate budgetary allocation is provided by the government and proprietors in order to meet up their financial requirement of the libraries. However, the implication of relying on a single source of funding is that, the libraries may suffer in times of recession or change in priority of the parent institution.

Way forward

Library managers can use a diverse approach to create atmosphere that promote leadership development in their organization. The following strategies if adopted would help administrators of university libraries to effectively manage university libraries for national development. They are:

Adequate funding of university libraries: There is an urgent need to adequately fund university libraries in Nigeria. According to Ashikuzzaman (2018), librarians have to advocate for adequate financial investment in the ICT-based libraries by the stakeholders and government. Adequate funding is vital for the sustainability of ICT-based library services

Effective communication: Effective communication in an organization refers to all the elements that make up the human group (the customer/user, the employee/librarian, manager, cleaning personnel), cooperate with each other, provides an open and reliable environment that takes on an essential role to organizational success (Aina 2004). According to Ashikuzzaman (2018), effective communication and the free flow of information is the underlying current in the life of an organization

Adopting of good leadership style: Good leadership as well as appropriate leadership styles could facilitate job effectiveness and by extension organizational effectiveness (Makinde & Opeke, 2017). They noted further that organizations all over the world depend to a large extent on the quality of leadership style provided by its front-runners which is often propelled by the nature of the organizational environment.

Recruitment of adequately skilled staff: In other for library administrators to effectively manage university libraries in this digital age, it is imperative that adequately skilled staff should be recruited.

Training and retraining of library staff: as noted by Adigun (2015), the digital age has brought about many opportunities and challenges to the African university libraries and research institutions. For the African university libraries to make it in the digital age, they must make sure that staff is adequately trained to initiate and manage the digital resources. The success of ICT adoption in the library is hinged on training of both staff and users (Anunobi, Nwakwuo, Oga & Benard, 2011).

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