Situational Analysis of ICT Applications in Colleges of Education libraries in Nigeria: Issues and Challenges

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Abstract

This research work dealt on "Situational Analysis of ICT Applications in Colleges of Education libraries in Nigeria". The purpose of the study is to find out the challenges of applying ICT in library functions and to examine the benefits of applying ICT in library functions. A survey research design was used for this study. The researcher made use of purposive sampling technique to select fifty respondents from (300) three hundred library staff of colleges of education in south eastern Nigeria. Purposive sampling technique was adopted because the respondents are few and have the same features, for instance, the respondents work in college library. The instrument for data collection is the questionnaire which has thirty (30) items designed to obtain information on ICT application in colleges of education libraries. The mean statistics was used to analyze the data collected. The findings of the study showed that lack of ICT personnel, lack of standardization, lack of library software to mention but a few are some of the challenges of applying ICT in library functions. The paper also listed some of the benefits of applying ICT to library functions such as low cost of processing materials, speed and accuracy of information, better service at lower cost, influences accessibility of information acquisition of knowledge and skills etc. The paper concluded that Government should employ ICT personnel and experts in our libraries to handle the integration and at the same time provide in-service training and re-training for library staffs on a regular basis as measures to ICT application in Colleges of education libraries.

Keywords: *Information and communication Technology (ICT), Libraries, ICT based library services.*

Introduction

Libraries are indispensable structures in supplementing and enhancing our learning. The review of this literature seeks to respond to the benefits and challenges of applying ICT in library functions. After the enormous and continuing revolution in technology, access to information around the globe is becoming equally comfortable. In recent decades, librarians are adopting various technology designs to offer education services. Integration of ICT ensures an active role for librarians in their work (Vijayakumar & Vijayan, 2011; Akor, Joshua, &Idika-Mba, 2016). Also, ICT improves speed and accuracy in accessing, retrieving, storing, manipulating and disseminating data to users. In this line, computers and telecommunication technologies are the leading agents in changing the library operations.

With the dawn of technological advancement, library operations are becoming digital. An academic library brings together learning materials such as textbooks, audiovisuals to enhance the educational and institutional programmes. Besides, it has a collection of advanced books for learners, teachers and scholars who may wish to advance knowledge in a given discipline. A library must acquire reference books to help learners understand concepts on their own besides classroom teaching (Okon & Ogbodo, 2014). In a school set up, a library prepares learners to different professions and occupations by developing and widening their pool of knowledge and skills. Libraries should also provide materials such as newspapers and magazines to make users aware of the current events. Furthermore, libraries provide fiction materials, dictionaries and directories.

To meet the above functions, a library must have a catalogue to ease the process of retrieving the resource materials. In the traditional setting, to access materials from the library, users had to go to the library physically. However, technology has made the process easy. Integration of ICT in the library brings millions of useful resources across the world, helping users to acquire the most recent and relevant materials (Okon & Ogbodo, 2014). A huge number of libraries across the globe can take advantage of ICT.

In recent times, we require and can access information that is produced in all formats. Technology enhances means through which we can gain information in different e-book formats. Access of these resources ensures the sustenance of library and information practices (Okon & Ogbodo, 2014). The Declaration of Human Rights by the United Nations in article 19, states that all persons irrespective of geographical boundaries have freedom of opinion, expression and access to information (The United Nations Universal Declaration of Human Rights, 2014). It follows that the UN recognizes the importance of sharing information across boundaries. Accordingly, libraries can serve us with up to date information.

In most of the developing countries like Nigeria, the libraries face many problems in the implementation of ICT in libraries. According to Naqvi (1982), he observed the following obstacles as factors militating against integration of computers or ICT in library operations. The librarians have no practical experience in the use of computers, as this is still a new innovation. The various numbers of computer brands, windows and programming languages adds to the difficulties. Computer applications for libraries are still new and not taught at our various institutions of higher learning. Professional librarians rarely specialize in computers, just as computer personnel are not well suited to apply computers to library operations.

Observation has shown that most educationists, planners and librarians are scarcely interested in computers. Another problem vividly outstanding is the librarians' rigidity and conservatism, they prefer to do things the way they were taught which is outdated and no longer in vogue. However, the exorbitant costs of computer hardware and software are perhaps the most important factor. There are several other issues that are significant to the challenges of computer application to library operations such as unavailability of vendor support, lack of training facilities, computer illiteracy, lack of library software, lack of funds, retrospective conversion, improper planning, bureaucratic setup, lack of standardized and quality control.

It is without notice; technology is facilitating the flow of information to enhance communication. ICT enhances collection and provision of accurate data, the achievement of research objectives which may be challenging due to organizational structures (Akor, Joshua, & Idika-Mba, 2016). Most of the countries and institutions across the world are using ICT in the library. However, in Nigeria, traditional methods of accessing, processing, storing and delivering information are still in use (Okon & Ogbodo, 2014). It is a concern which makes us raise our eyebrows on reasons why libraries and librarians are taking long to integrate ICT in their operations. In this research, we call them to rise and match up to the occasion and embrace technological changes engulfing the world today.

In the classical libraries, information is carried in the form of graphical representation and in the traditional libraries, information is carried in form of hard copies and operations were manual. Traditional libraries had a list of problems which ranged from finance for acquisition of library materials to the organization of these materials. For instance, it is believed that conservatively there are in print every year, about 11 million books and 2.5 million periodical titles. On the average, a library can add to its collection only 15,000 volumes or 10,000 titles of books and 5000 periodical title per annum. The implication is that the traditional libraries cannot acquire majority of the publications.

Again, library budgets seem to be dwindling, where they exist. Sadly too, the parent bodies that release funds equally determine such volumes to be acquired. Other problems of traditional libraries are; access to rare books, manuscripts, ancient books and out of print titles. The ripple effect of these problems associated with traditional libraries is that users

are deprived of necessary information at the right time, thereby inhibiting academic progress.

The fast evolution of ICT in library operation has led to new ways of managing traditional libraries, especially through the use of computers to create, distribute and access information in digital formats. With e-libraries, the information media of storage systems, access and services have to change. ICT enables academic libraries to publish their categories on the web, online public access (OPAC). For example, the IITA library database has been uploaded on the internet using the web publishing hosted by CGNET. CGNET is the electronic mail network of consultants group. The particular advantage this has for universities and colleges is that resources of those libraries can be accessed on the internet and it promotes resource sharing among academic libraries.

Integration of ICT has numerous positive impacts on the libraries and the level at which information is readily available. Development of Online Public Access Catalogue (OPAC) which is a product of technological innovation which brings together billions of academic resources across the globe, helps in saving space and brings together hundreds of academic catalogues. Libraries and librarians can link to share information, resources and expertise. Networking through local and wide area networks helps in bringing together large databases together for access by users. Consequently, libraries can share resources. Eases the access of compilation of publications from scholars of a given institution such as theses, dissertations, conference papers, reports, papers from seminars and lectures for inaugurals which are great assets of an institution (Vijayakumar & Vijayan, 2011; Akor, Joshua, & Idika-Mba, 2016). Once universities link via the network, they can share the institutional repositories. ICT promotes the creation of a library beyond the space limit. Resources are accessible to all and space is enough for all. The benefits of ICT in library operations has also been identified by several other writers like Madu, (2004), Okore, (2005) and Nwachukwu (2005), to include low cost of processing materials, speed and accuracy of information, better service at lower cost, influences accessibility of information, growth in knowledge and skills, controls proliferation of information, conservation of time as well as boosting income generation.

Over and above the main benefits we recognize from integrating ICT in the library. It is important to note the overwhelming challenges impacting the process. Some of the challenges include inadequate funding from the government, which affects the level of ICT incorporation in Nigeria's learning institutions. ICT infrastructure for libraries requires hefty sums and comprises of network, software, computers, and subscription and purchase of academic material resources. Unfortunately, government allocation to the education sector is 6% of the overall budget (Ameh & Aluko, 2019; Oghenetega, Umeji, &Obue, 2014). The funding is too little to bring up new technological infrastructure. Researches on the impact of ICT in Nigerian libraries highlight funding as the contributing factor to integration (Okon & Ogbodo, 2014).

Power supply to most of the libraries in Nigeria is not consistent. ICT requires a constant supply of power to ensure resources are accessible. When the power goes off, network and computers shut down interfering with free flow of information. Majority of the librarians in Nigeria are not well versed with technological know-how; it is, therefore, a great challenge for them to train and adapt (Oghenetega, Umeji, &Obue, 2014). Nigeria Government restructures ICT policies to fit the interests of the individuals in power. Failure to maintain ICT infrastructure is another challenge facing the library in Nigeria (Okon & Ogbodo, 2014; Vijaya kumar & Vijayan, 2011). Maintenance requires constant and regular monitoring of the networks, resources and security features of the websites. Finally, the use of substandard equipment in the installation stage affects the overall success of the entire library systems (Oghenetega, Umeji, & Obue, 2014).

Factors affecting the adoption of ICT in Nigeria libraries include lack of necessary infrastructure, wrong perceptions of ICT, inadequate training to librarians to possess basic skills, unconducive working environments and inadequate ICT components in the school curriculum (Oghenetega, Umeji, & Obue, 2014). From the ongoing review of the literature, it is clear that ICT integration has numerous benefits despite the challenges. The researcher hopes that

the government will allocate more resources to ensure that learners of Nigeria can access material resources across the globe. Today the need for information is fundamental.

Research questions

1. What are the challenges of applying ICT in library functions?
2. What are the benefits of applying ICT in Library functions?

Methodology

A survey research design was adopted for the study. The population is made up of three hundred staff of colleges of education libraries in South-Eastern Nigeria. Fifty respondents were sampled for the study, using purposive sampling technique. Purposive sampling technique was adopted because the respondents are few and have the same features, for instance, the

respondents work in college library.

The instrument for data collection is the questionnaire which has thirty items designed to elicit information on ICT application in colleges of education libraries. The instrument was first validated by experts in library studies at federal college of education technical Umunze and an expert in measurement and evaluation at Nwafor Orizu college of education Nsugbe, Anambra state.

The reliability of the research instrument was determined through the measure of internal consistency of 0.80. This measure is high enough for the instrument to be considered reliable. For data analysis, the research questions were analyzed using mean statistics. Any mean of 2.5 and above is said to be high and effective and those below 2.5 are said to be low and ineffective.

Results

The following are the results of the data analysis:

Research question 1

1. What are the challenges of applying ICT in Library functions?

Table 1. Mean rating scores on the application of ICT in library functions

S/N	Item Description	X	Remarks
1.	Lack of support from the government	1.9	Rejected
2.	Lack of ICT personnel or expertise to handle the ICT integration	3.0	Accepted
3.	There is no in-service training for staff	2.8	Accepted
4.	Lack of concern on stakeholders	3.5	Accepted
5.	Lack of standardization and quality control	2.4	Rejected
6.	Librarians have little or no practical experience	3.6	Accepted
7.	The large number of computer brands and languages adds to difficulties.	2.2	Rejected
8.	Computer applications for libraries are not taught at University level.	3.5	Accepted
9.	Lack of interest in computers by librarians, educators and planners.	3.0	Accepted
10.	Rigidity and Conservatism on the part of librarians	3.4	Accepted
11.	Computer illiteracy.	3.5	Accepted
12.	Improper planning and lack of funds.	2.8	Accepted
13.	Lack of library software.	3.5	Accepted
14.	Lack of training facility and retrospective conversion.	3.0	Accepted
15.	Lack of bureaucratic setup and unavailability of vendor support.	3.5	Accepted

The result presented in table one showed that items 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14 and 15 were rated high by the respondents. This was clearly indicated from their respective mean

scores of 3.0, 2.8, 3.5, 3.6, 3.5, 3.0, 3.0, 3.4, 3.5, 3.8, 3.5, 3.0 and 3.5, which are above the criterion of acceptance fixed at 2.5 and above. This means that the librarians are in agreement that the items stated above are challenges militating against ICT applications in the library functions. Items 1, 5, and 7 were rated low by the respondents. This can be seen from their respective mean scores of 1.9, 2.4, and 2.2. It means that Librarians did not see these items as challenges to the application of ICT to library functions.

Research question 2

What are the benefits of applying ICT in Library functions?

Table 2. Mean rating scores on the benefits of applying ICT in Library functions

S/N	Item Description	X	Remarks
16.	Influences accessibility of information.	3.0	Accepted
17.	Influences growth and knowledge skills.	3.0	Accepted
18.	Low cost of processing materials	2.8	Accepted
19.	Computers are known for their speed and accuracy.	3.2	Accepted
20.	Controls proliferation of information.	2.5	Accepted
21.	There is better service at lower cost.	3.5	Accepted
22.	Computerization enables librarians to place their entire collection at the immediate disposal of the users.	3.5	Accepted
23.	Enhances resource sharing.	3.5	Accepted
24.	There is efficiency and accuracy.	2.8	Accepted
25.	There will be flood of information.	2.5	Accepted
26.	Solves the storage problem faced by libraries.	3.4	Accepted
27.	There is durability and security of data.	3.0	Accepted
28.	Centralization of services	3.2	Accepted
29.	Serves the information need to remote users	2.8	Accepted
30.	Simple and portable.	3.0	Accepted

The result presented in table 2 shows that items 16-30 were rated high by the librarians. This was clearly indicated from their respective mean scores of 3.0, 3.0, 2.8, 3.2, 2.5, 3.5, 3.5,3.5, 2.8, 2.5, 3.4, 3.0, 3.2, 2.8, and 3.0 respectively. These mean scores are above the criterion of acceptance fixed at 2.5 and above. This means that the items stated above are the benefits of applying ICT in Library functions.

Discussion of findings

The result of the analysis of research question one shows that challenges facing the application of ICT in library functions are: lack of expertise to handle the integration, lack of concern on stake holders, lack of library software among others. These findings are in line with Naqvis (1982) who identified the following obstacles as factors militating against integration of ICT in libraries: librarians have no practical experience in the use of computer brands, as it is still a new innovation, the various number of computer brands, windows and programming languages adds to the difficulties, computer applications for libraries are still new and not taught at our various institutions of higher learning among others.

Corroborating this assertion, Ameh & Aluko, (2019), Umeji & Obue, (2014), Okon & Ogbodo, (2014) identified poor funding as the contributing factor to integration of ICT in library functions. The result is also in conformity with that of Oghenetega, Umeji and Obue 2014 who identified factors affecting the adoption of ICT in Nigeria libraries as: lack of necessary infrastructure, wrong perception of ICT, inadequate training to librarians to possess basic skills, unconducive working environment and inadequate ICT components in the school curriculum.

The result of the analysis of research question two shows that the benefits of applying ICT in library functions are: low cost of processing materials, influences growth and knowledge skills, influences accessibility of information, controls proliferation of information etc.

These findings are in agreement with the works of Madu, (2004), Okore, (2005), and Nwachukwu, (2005), who observed the benefits of ICT in libraries to include: low cost of processing materials, speed and accuracy of information, better service at lower cost, influences accessibility of information, growth in knowledge and skills, controls proliferation of information, conservation of time as well as boosting income generation.

Conclusion

The adoption of ICT application in Library functions is a welcome development towards sustainable development of libraries in Nigeria. Therefore, Government should allocate more resources to ensure that learners in Nigeria can access material resources across the globe. The adoption if carried out diligently, will help to achieve the objectives of libraries and at the same time help Nigerians to enjoy the benefits like their counterparts in the developed world.

Recommendations

Based on the findings above, it is recommended that:

1. Government should employ ICT personnel and experts in our libraries to handle the integration.
2. Government should provide in-service training and re-training for library staff on a regular basis.
3. Government should make adequate provision for funding library projects on a regular basis.
4. Government should formulate policies that would encourage the application and adoption of ICT in all libraries across the country.
5. Government should ensure that libraries acquire the necessary ICT tools, software and gadget with the help of the Nigeria Library Association (NLA) and National Library of Nigeria (NLN).
6. Private companies, rich individuals can invest their resources in ICT especially at colleges of education libraries.

References

[1]. Akor, P. U., Joshua, O. A., & Idika-Mba, E. W. (2016). Imperatives of Modern Technology on Service Delivery in University Libraries in Nigeria. *International Conference on Information and Communication Technology and Its Applications (ICTA)* (pp. 168-172). Minna, Nigeria: Federal University of Technology.

[2]. Ameh, J., & Aluko, O. (2019). 2019 budget: Education gets N.620.5bn, against UNESCO's advice. Retrieved from PUNCH: punchng.com.

[3]. Madu, E.C. (2004). Automation and Service Provision in Libraries and Information center in developing countries, in Madu E.C (ed) technology for Information management and services. Ibadan: Eni coleman publication.

[4]. Nwachukwu, V.N. (2005). Information Technologies application to libraries in developing countries: The need for caution. A journal of Global review of Library and information Science. Vol 1(1) PP :94-100.

[5]. Naqvi, R H (1982) "Computer Based Reference services in Pakistan" Pakistan Library Bulletin. 13 (1). Pp. 17-22.

[6]. Oghenetega, L. U., Umeji, E. C., &Obue, C. N. (2014). Challenges Associated with the Use of ICT Facilites in Public Library of Nigeria. Developing Country Studies, vol 4 (22) 1-5.

[7]. Okon, M. E., & Ogbodo, C. I. (2014). Information and Communication Technology (ICT) AS A Necessity for Libraries and Librarians of Nigeria Universities in the 21st Century. Review of Information Engineering and Applications, 39-54.

[8]. Okore, M.I. (2005). The challenges of Information Communication Technologies for Nigrian Academic libraries. A journal of Global review of Library and information Science. 1(1)84-93.

[9]. The United Nations Universal Declaration of Human Rights. (2014). The united nations universal declaration of human rights (Article19). Retrieved from

http://www.UN.org/en/documents.udhr.

[10]. Vijayakumar, D. A., &Vijayan, S. S. (2011). Application of Information Technology in Libraries: An Overview. *International Journal of Digital Library Services*, 144-152.