

*Full Length Research*

# **Availability of Information and Communication Technologies (ICT) in Academic Libraries in Nigeria: A review**

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**This paper reviewed the availability of information and communication technology in academic libraries in Nigeria as such, various literature were consulted and it showed that academic libraries in Nigeria are at various stages of making ICT available and applied in their libraries though not adequate. It was recommended in this paper that Academic libraries in Nigeria should try and bridge the gap in making ICT available and deploy same to library services and funding bodies, agencies and NGO should help and make funds available to academic library to acquire modern ICT facilitates for improved library services among other recommendations.**

**Keywords:** Information Technology, academic libraries, Availability of ICTs.

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## **INTRODUCTION**

As society becomes more complex and dependent on technology, the need for a proactive approach to an organization's communication and dissemination of information through the application of information and communication technologies (ICTs) is inevitable. Ali (2015); Akanni (2008) posits that the direct consequences of globalization and the Information Age which the global community finds itself calls for review and redirection of library services to meet client needs. In this regard, Nigerian libraries like their counterparts overseas are faced with the challenges of globalization posed by revolutionary changes brought about by information and communication technologies.

Librarianship under the influence of information and

communication technologies has witnessed transformation and improved professional practices; as library services now cut across geographical boundaries. Hence, Atkinson (1991), states that the emergence and development of the virtual library system in the 21st Century is redefining and extending the traditional definition of library; rendering those definitions with respect to a particular 'locality', or 'particular institution' or 'geographical region' outdated. Hence, Nigerian libraries must therefore, overcome the prevailing perspective of locality as libraries play key roles in providing the right information in the context of the global village (Ali 2015, Akanni 2008). However, library services could be hindered by lack of information and communication

technology (ICT) infrastructure thereby frustrating the effort of providing the right information to the right audience at the right time and with ease.

In that regard, there has been a growing interest and concern over the availability and application of information and communication technologies (ICT) to library operations and services in Nigeria since the 1970's (Bichi, 2008). Over the years, many academic libraries in Nigeria had made attempts to apply information and communication technology (ICT) to enable them manage their libraries and also to join the global information phenomena (Akinyotu, 1976; Agboola, 2000; Nok, 2006 and Bichi, 2008). Though individual efforts at making ICT available and applied, started in the mid 70s and 80s by the University of Lagos, University of Ibadan and Ahmadu Bello University, Zaria libraries, serious use of ICT to library processes started in Nigerian university libraries in the 1990s (Bichi, 2008).

In this view, Folorunsho and Saka (n.d) reported that many ICT facilities are available in the University of Ilorin Library. The University of Ilorin and the University of Lagos were at various stages of automating their services (Folorunsho & Saka, n.d). Folorunsho and Saka (n.d) reported further that the Federal Polytechnic, Offa has only telephone facility, Kwara State Polytechnic has direct telephone lines and a photocopier, the College of Education, Oro, has photocopier, computers and CD-ROM Drives. This shows the extent to which various academic libraries are making effort to apply ICT in library services.

Teaching and research in tertiary institutions now demand the use of high caliber ICT infrastructure and facilities to keep abreast with current and recent developments in all fields (Chimah & Nwokocha 2015, Troll 2001, Okiy 2010, ). The implication of this is that academic libraries cannot effectively prepare for the future or position themselves on campus until they understand their changing roles in the current learning and research environment, which is radically changing. Chimah and Nwokocha (2015), Okiy (2005) reiterated that the central place of academic libraries is called into play because it is the duty of these libraries to make necessary information available through the use of ICTS to the faculty and students to achieve their teaching, learning and research needs.

## **REVIEW OF LITERATURE ON ICT AVAILABILITY IN ACADEMIC LIBRARIES IN NIGERIA**

As the world is undergoing a transition from paper to a digital economy libraries are encouraged to take part in this changing scene. In this regard, Dhanavandan, Esmail and Mani, (2008) stated that developing countries are being encouraged to invest in their national information infrastructure so that they can participate in

knowledge based development. Development in Information and Communication Technologies (ICTs) has provided libraries with new opportunities to improve their resources and services and have brought many changes in libraries (Oriogu, C. D et al 2014. Dhanavandan, Esmail & Mani, 2008).

Writing on the current state of application of information and communication technologies in academic libraries, Ali, 2015, Womboh and Abba (2008) stated that academic libraries had made series of attempts to adopt information technologies for improved services. Despite these efforts, very little success has been recorded. A lot still needs to be done. Hence, Nigerian universities are at various stages of compliance with information and communication technology application. Womboh and Abba (2008) reported that the Federal University of Technology, Yola (FUTY) library ICT project, began with the establishment of the Local Area Network (LAN) and Internet connectivity, using a dial-up system in 2002. Each division of the library was connected to the Internet through the dial-up system. However, due to the high cost of telephone bills, a very small aperture terminal (V-SAT) was installed in the library in 2003, and a space provided to serve as the Internet café (Womboh & Abba, 2008). Womboh and Abba (2008) also stated that Internet access was slow until a new V-SAT with a dedicated bandwidth was installed in 2005. Connectivity from the library café has been extended to the administrative block to serve as the nucleus for the campus ICT network. The FUTY library has embraced ICT in its services. Catalogue cards were now produced by computer. FUTYLIS, locally developed software, is being used to prepare the library's OPAC (Womboh & Abba, 2008). They are in the process of replacing the existing software, with the more comprehensive Alice for Windows software in order to completely offer online services.

Ejimofo and Ohaji (2008) noted that University of Nigeria, Enugu Campus (UNEC) begun the development of ICT facilities with acquisition of computers in the late 1990's under the auspices of Education Tax Fund (ETF) project. Later in 2004 and 2006 the university management bought computers and networked the university through AfriHub to provide cyber cafes within and outside the library. These networks have enabled the university communities download journals and other e-resources online thereby increasing the efficiency of the libraries (Ejimofo & Ohaji, 2008). Study by Chimah and Nwokocha (2015) to know the availability and awareness of electronic information resources by postgraduate library users in South East Nigerian Federal Universities corroborate the revelation of Ejimofo and Ohaji, 2008

Krubu and Osawaru (2011) studied the impact of information and communication technology (ICT) in Nigerian university libraries; it showed that 100% of the respondents agree that ICT is available in the libraries

they studied. Emojorho and Nwalo (2009) surveyed the availability and use of ICTs in collection management in university and special libraries in the Niger-Delta Region of Nigeria and their findings revealed that only about one quarter of respondents from university libraries think ICT facilities are available. In the special libraries, less than one-fifth of the respondents stated ICTs are available. A 2007 study by Igben and Akobo found that the university libraries surveyed in Rivers State had an average of only 8 computers each. In relation, Udoh-Ilomechine (2009) investigated factors associated with computer procurement among librarians in selected university libraries in Edo and Delta State South-South, Nigeria where 5 academic libraries were selected. The study revealed that computers are available in the academic libraries. This implies that there is some level of availability of computer in the libraries studied.

Chiemeke, Umar, Shaib and Longe (2007) stated that academic libraries have taken on additional new roles because of changing demands and new technology. Chiemeke, Umar, Shaib and Longe (2007) observed that academic libraries are currently regarded as agents for educational, social, economic and political change; and their doors are open to all. Chiemeke, Umar, Shaib and Longe (2007) stated that the United Nations Educational Scientific and Cultural Organisation (UNESCO) view of the library is "an organised collection of published books and periodicals and of other reading and audio-visual materials and the services of staff able to provide and interpret such materials as are required to meet the information, research, educational or recreational needs of users." The UNESCO definition touches on every aspect of what a library in the information age stands for (Chiemeke et al, 2007:16).

In the view of Bandele (2006), information and communication technology is a revolution that involves the use of computers, Internet and other telecommunication technology in every aspect of human endeavour. Bandele (2006) posited that ICT is simply about sharing and having access to data with ease; including the Internet which is regarded as the information super highway through which information is transmitted and shared by people all over the world. Jimoh (2007) defined ICT as the handling and processing of information (texts, images, graphs, instruction, etc) for use, by means of electronic and communication devices such as computers, cameras, telephone. Nkamnebe et al (2015), Ofodu (2007) also referred to ICT as electronic or computerized devices, assisted by human and interactive materials that can be used for a wide range of research, teaching and learning as well as for personal use. This means that ICT tools and services is extremely of importance in this era.

According to Troll (2001), the era of microform equipment, photocopiers, and the card catalog has been replaced with a growing array of hardware, software, and

systems, which are available in libraries. Libraries need articulated replacement cycles for all of this equipment as technology continues to be developed in libraries. Daniel, Oketunji, Okojie, and Abdusalam (2003) stated that application of information technologies to libraries appears to be very slow. This kind of situation was what informed the Executive Committee of the Nigerian Library Association, when planning for the 40th Anniversary National Conference and Annual General Meeting, "Eko 2002," to commission a survey of ICTs in Nigerian libraries, where they found out that there is low level of ICT availability and use by majority of the libraries. Emojorho and Nwalo (2009) noted that the availability of ICT in many academic and special libraries in Nigeria is expected to translate into effective library services for users, that user services in university and special libraries in the Niger-Delta region are less than satisfactory and that users complain of inadequate information services.

Walmiki and Ramakrishnegowda (2009) in a survey of university libraries in Karnataka, India outlined the status of ICT infrastructure of selected six university libraries. The data collected include details of hardware infrastructure like availability of servers, PCs, Laptops, printers, scanners etc. Software facilities for automation of house-keeping operations, digital library activities are included in the survey. Availability of campus LAN and Internet facilities to provide access to information sources were detailed in the study. The survey revealed that most of the libraries lack sufficient hardware and software facilities, and Internet with required bandwidth. The implication for librarians is to plan, implement and develop ICT infrastructure to exploit the benefits of information and communication technology. In this regard, Ajayi and Ekundayo (2009) listed information technologies to include;

- i. Computers that are used to process, organize, store and access information in the library.
- ii. Radios (tape recorders) that are used for listening to recorded audio information?
- iii. Projectors that are used in teaching and learning during presentation to viewing audience.
- iv. Television sets and videos and disc players that are used in viewing audio visual contents
- v. slides and film trips that are used in viewing visual contents
- vi. Bulletin boards and electronic notice boards for announcement like new arrival and other information the library want the public to know.
- vii. Internet for accessing and retrieval of online information

Also, Olatokun (2007) found from a study that ICT facilities available in academic libraries include

- i. Computers which include personal computer

- (PC), laptops etc
- ii. Printers for printing document in the library,
- iii. Internet for uploading and downloading information,
- iv. Scanners for electronic conversion of document,
- v. Facsimile for sending and receiving document like book order and quotation,
- vi. Telephone for enquiry and reference services as well as mobile phone,
- vii. Photocopiers for reprographic services, as well as
- viii. Videoconferencing and teleconference technologies for online chatting and meetings.

In a study by Anunobi and Benard (2007), that was carried out to identifying the IT facilities available in Nigerian University libraries, revealed that (84.2%) of the Universities in Nigeria had personal computer, (72.7%) used CD-ROM, (57.9%) used Local Area Network (LAN), Internet and e-mail facilities. The population of university libraries using Wide Area Network (WAN), fax machine and online public access catalog (OPAC) is below (50%). Those ICT facilities are more prevalent in Universities in Northern part of the country than Universities in Southern part of the country. The implication for this is that communication technology has evolved in libraries which have led to the convergence of information and communication technologies to enhance effective library services. Fagbami and Ogunjobi (2009) studied and examined the availability of information and communication technologies (ICTs) in Agricultural Research Institute in Ibadan. The study is essentially a survey research with adoption of a purposive sampling technique which produced a total of 169 Research Scientist in all the research institutes surveyed. Findings showed that research scientist in the research institute have access to some ICT facilities like laptops and personal computers. Other ICT facilities were not available due to inadequate funding, poor infrastructure, lack of ICT trained personnel to manage ICT centres etc

Anunobi and Nwankuo (2008) surveyed eight university libraries in South Eastern Nigeria to determine the state of ICT application including the availability of the hardware, software, e-resources and their challenges. The authors found out that many of the libraries especially those funded by the state government have no Internet, or LAN workstation but have standalone computers. Though a few of the libraries subscribe to online electronic resources such as EBSCOhost, Access to Global Online Research in Agriculture (AGORA), Health Internetwork Access to Research Initiative (HINARI), Online Access to Research in the Environment (OARE) and The Essential Electronic Agricultural Library (TEEAL), most of their electronic resources are on CD-ROM.

## CONCLUSION

It is concluded in this paper that academic libraries in Nigeria are making serious effort to meet user's information need in this era by making ICTs available and applied to academic library's services. However, the review showed that ICT availability in academic libraries in Nigeria is still low.

## RECOMMENDATIONS

1. Academic libraries in Nigeria should try and bridge the gap in ICT availability and deploy same to library serves.
2. Making ICT available require funding as such funding bodies, agencies and NGO should help and make funds available to academic library to acquire modern ICT facilities for improved library services.
3. Librarians in Nigeria should now realize that ICT is now the tool needed to move academic library forward and also to meet client need, thereby making their library relevant, if not they face obsolescence
4. The following ICT facilities must be made available in academic libraries in Nigeria which are formed into a library network where possible, they include:
  - i. Computers with library management software (LMS) that are used to process, organize, store and access information in the library.
  - ii. Radios (tape recorders) that are used for listening to recorded audio information
  - iii. Projectors that are used in teaching and learning during presentation to viewing audience.
  - iv. Television sets and videos and disc players that are used in viewing audio visual contents
  - v. slides and film trips that are used in viewing visual contents
  - vi. Bulletin boards and electronic notice boards for announcement like new arrival and other information the library want the public to know.
  - vii. Internet for accessing and retrieval of online information
  - viii. Subscription to online Databases and purchase of E-Resources
  - ix. Printers for printing document in the library
  - x. Scanners for electronic conversion of document
  - xi. Telephone for enquiry and reference services as well as mobile phone
  - xii. Photocopiers for reprographic services, as well as
  - xiii. Videoconferencing and teleconference technologies for online chatting and meetings.
  - xiv. Barcode readers, Circuit cameras, Radio

Frequency Identifiers (RFID) for library security etc.

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