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**THE NEED FOR THE USE OF INFORMATION AND COMMUNICATION
TECHNOLOGY IN TWO UNIVERSITY LIBRARIES IN NIGERIA**

BY

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ABSTRACT

The study investigated the need for the use of Information and Communication Technology (ICT) in two university libraries in Nigeria. Population of the study is made up of 202 library staff of the two universities, 104 library staff from University of Agriculture, Makurdi and 98 library staff from Benue State University, Makurdi. Five research questions guided the study. The data was analyzed with the use of simple statistical tools like frequencies and percentages. Findings of the study revealed that There is internet access in the libraries. It also revealed that ICT facilities are mainly used for records keeping and playing of games in the library implying that acquisition, cataloguing and other clerical processes are done manually in the library. Inadequate Funding: this has resulted to issues like poor infrastructure and maintenance, lack of proper education and training of librarians and other library staff (lack of competent search skills). Epileptic Power Supply: which has become a great problem on an average Nigerian organization or establishment which also acts as a breakdown to computers. And network caused by poor electronic gadgets. Based on the findings of the study, it was recommended that since Information and Communication Technology has become the order of the day with its advancement, all library users (staff) should be trained to be computer literates so as to flow along with the reforms and trends and possess competent search skills.

INTRODUCTION

Information revolution started a number of years ago and the impact all over the world has been tremendous. Information revolution has brought about convergence of information and communication technologies (ICTs), which have remained at the nucleus of global social and economic transformation (Ajayi, 2016). The information revolution and extraordinary increase in the spread of knowledge has produced a new era-one of knowledge and information which affects directly economic, social, cultural and political activities of all regions of the world including Africa. Governments worldwide have recognized the role that information and communication technologies (ICTs) could play in socio-economic development (Ogunsola, 2015).

As information procurement and dissemination organizations libraries all over the world have found themselves right in the middle of the ICT driven Global village” and in order to play active roles in the village, public libraries have no other choice than to boost their effectiveness. Libraries are becoming more aware that in order to play cartelistic roles in fostering access to information as the basis for the socio-economic development of their countries, they need to exploit ICT to improve the range and quality of service to their clientele (Ajibola and Tihamiyu, 2012).

Oyedun, (2011) defines academic libraries as those libraries that are mainly found in tertiary institutions, they are established to support learning, teaching and research purposes. Over the past twenty-seven years, academic libraries have been affected by changes in information and communication technology. The rate of changes is still accelerating in this area. The introduction of various information and communication technology (ICT) trends has led to reorganization, change in work patterns, and demand for new skills, job retraining and reclassification positions.

Gilbert, (2010) defined information and communication technology as the acquisition, analysis manipulation, storage and distribution of information and the design and provision of equipment and software. Oketunji, (2014) stated that “Information and communication technology could be defined as an electronic means of capturing, processing, storing and communicating information”. He went on to say that ICT is defined as a convergence between computing and communication technologies. Furthermore, he said that one early example of ICT convergence is the crossing of the photocopy machine and telephone, leading to creation of fax machine. But the most spectacular achievement in this area is the convergence of computer and telephone that resulted to the upsurge of the internet.

Technological advancement of the past twenty-five years, such as the electronic database, online services, CD-ROMs and introduction of internet has radically transformed access to information. Rana, (2009) opines that ICT holds the key to the success of modernizing information services. Applications of ICT are numerous but mainly it is used in converting the existing paper-print records in the entire process of storage, retrieval and dissemination.

Ajibero, (2014) asserted that the role of ICT in the provision of references services to public library in Nigeria did not come over night. Libraries existed for many centuries without using ICT. But as technology emerged in the world at large, academic libraries

embraced these tools as a means to avoid some of the menial tasks inherent in managing large collections. Online catalogues provide additional searching possibilities. Such system helps in communicating with one another about which book are held in the libraries and use the computer to borrow various materials form any other library through various inter library loan systems. Academic libraries can be transformed into a new information services unit, providing electronic cataloging, electronic online public access catalogued, electronic acquisition and serials controls, and electronic circulation functions and reference services. But it must be realized that most academic libraries in Nigeria are yet to adopt modern ICT.

Information technology is at the core of competitive strategies of any successful organization such as libraries. It can be utilized to functional restructure the value chain of an organization by combining and rearranging certain activities and processes. Introducing information technologies into libraries system, the libraries in Nigeria with special reference to the two stated case studies noted that the acceptance of the users of this system is paramount and this is often related to such parameters as convenience, comprehension and cost thus at these libraries information technology as a new system is more convenient than the old system though it is capital intensive.

With the invention of Information and Communication Technology, libraries now use various types of technologies to aid the services they render. Everyday new technological advances affect the way information is handled in libraries. The impacts of new technologies are felt by libraries in every aspect. Computing technology, communication technology and mass storage technology are some of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to users. The academic library has been from its inception an integral part of institutions of higher learning.

The information technologies found in libraries today can be group into:

Computer media: The central processing unit (CPU) of the computer has definite amount of data capacity. Additional storage media such as magnetic disk, audiotapes etc. enhanced its performance.

Telecommunication: It facilitates the transfer or communication of data and information. However, only limited applications of these technologies appear to have taken are modified from the old ones. They include CD-ROM searching, networking and internets.

CD-ROM Search: The compact disk-read only memory is an information technology with great potential for academic libraries. It potential lies in storage capacity portability etc.

ICT and House Keeping Function in Library.

Library housekeeping function in academic libraries can be group into 4 sub-systems.

Acquisition: This section is concerned with the selection and acquisition of books etc. by purchase, gift, exchanges etc. most task of the unit is repetitive, and with the use of ICT such problems are eliminated.

Cataloguing: One of the most important library operations is cataloguing. It is traditionally most time consuming as a technical operation in the libraries. The use of ICT make task easy and fast.

Circulation: The use of ICT in the circulation section eliminate some of the repetitive nature of manual works such as charging and discharging, writing to over dues, recording of times etc.

Serial: This section handles publication issued in successive part as regular or irregular intervals. Maintaining this operation in a manual environment is cumbersome, but different in a fully automated system with ICT the following are enhanced subscription control, information storage and retrieval which entail selective dissemination of information.

However, because of the imperativeness of integrating ICTs in academic library functions, UAM and BSU libraries must seize this opportunity. Though, it seems impossible because of the problems and inadequate facilities plaguing the institutions and their libraries. This research work is therefore based on the need for the use of ICT in UAM and BSU libraries in Benue State.

Statement of the problem

The poor performance and lack of interest in the use of academic libraries by students/staff of tertiary institutions in the modern age of information and technology negates quick mastery of the use library for information searching and use as well as making users up as 21st century information literate because, an academic library is an indispensable tool in improving academic performance and research (Ebuka, 2010).

In the preliminary study of these academics, the use of ICT facilities in the libraries are still in epileptic stage, manual methods are still majorly used in all the clerical processes (acquisition, cataloguing, circulation and serial) in the libraries, though ICT are partially used in the libraries but not in expected standard. There are many problems faced with the use of manual in library operations. Manual work in the library operation especially the clerical aspect involves the use of hand, paper, biro and human brain in the performance of the library duties. These have been found inadequate and cumbersome. Manual system in most cases operates at a low level and decreasing efficiency in the face of ever increasing library work. This decreasing efficiency is a function of delays, backlogs, errors, staff dissatisfaction and perhaps a high rate of staff turnover.

This prompts this research to enlighten on the importance of full incorporation of ICT in the libraries under study. Other factors hindering the use of ICT in University of Agriculture Makurdi Library and Benue State University Library are lack of capital investment to buy hardware, software and standby generators for the libraries. Lack of search skills, automation at infancy level, epileptic power supply, and technical know-how are some of the problems encountered by these academic libraries.

Objectives of the study

The purpose of this study is to investigate the need for the use of ICT in the two university libraries in Benue State.

The objectives of the study is to:

1. Determine the degree of computerization/automation in the libraries;
2. Ascertain the efficiency and effectiveness of using ICT in the libraries;
3. Examine staff's attitude towards the use of ICT in the libraries;
4. Find out how satisfactory is ICT in the libraries to the users (staff);
5. Determine the problems faced by the libraries in utilizing ICT.

Research questions

The following research questions will guide the study:

1. To what extent has computerization/automation employed in the libraries?
2. How efficient and effective is the use of ICT in the libraries?
3. What is the attitude of staff towards the use of ICT?
4. How satisfactory is ICT in libraries to the library users?
5. What are the problems associated with the use of ICT in the libraries?

Significance of the study

The result obtained from this study will educate the general public on the benefits attached to the use of ICT in libraries in research and national development. This is because ICT use in libraries facilitate full and easy utilization of its resources and services. Enable the students/staff of UAM and BSU to appreciate the benefits of an ICT library in improving their academic performance and enhancing a more sophisticated research. If the academic library catalogue (OPAC) can be accessed via the internet or academic's intranet, information would be available at the point of need. The library will discover the need to provide a wide range of ICT information sources including CD-ROM, the internet and high quality licensed databases offering up-to-date information. Enlighten further researcher on the need of the use of ICT in academic libraries. Because ICT widens the range of materials available in the academic library and makes access to it much easier and less time consuming. The library will be able to offer access to ICT resources effectively and efficiency in order to enhance the reading, study and research purpose of the patrons.

LITERATURE REVIEW

The literature is reviewed under the following subheadings:

- The concept of academic libraries;
- Information and Communication Technology (ICT);
- ICT based products and services with benefits;
- The use/application of ICT in Nigerian academic libraries;
- Types of ICT facilities found in academic libraries;

- Factors affecting the use of ICT in academic libraries.

Concept of academic libraries

Basically one of the essential units of the university is the library which was established along with the university. As a service unit of the university it is out to provide information services to the mother institutions. Academic libraries are libraries attached to tertiary institutions such as universities, polytechnic institutions, colleges of education, colleges of agriculture, colleges of technology and also research institutes (Akorhonor, 2005). Singh and Kaur, (2009) stressed that preservation and access to knowledge and information is the main mandate of academic libraries alongside supporting the mission of their parent institutions which is teaching and research. An academic library plays a significant role in the context of this new learning paradigm. According to this new understanding of learning, a university library as a subsystem of university organization has not been a division only providing services for studies and research any longer. Instead it has become an important unit of university's information infrastructure and an active participant in the learning process of the particular study programme. Together with the university departments and teaching staff, the academic library strives to realize the study aims. The library becomes one of the potential learning environments that function at the university. It is characterized by the abundance of information sources.

Academic libraries are institutions that are established to take care of the information need of students, lecturers, researchers and other community of scholars. Their mission is providing quality information service and knowledge products (print and electronic) to resident community of scholars. In the words of Wolpert (1999), "academic libraries are cost effective information service and provider of knowledge products to a resident community of scholars". In order to function and provide timely information at a faster speed to lecturers, researchers and students, it would appear that administrators of academic libraries realized the important role information and communication technologies (ICTs) play in their job performance and so made information and communication technologies (ICTs) available to their workforce.

However, the richness of information does not ensure the development of learning environment. Within the library space an individual has to identify an environment that helps to achieve learning goals he/she has set. Striving to find rich and empowering learning environments in the library, the educational environment has to be created in the library. The latter should meet the need of academic study programmes, have the potential to be transformed into multifunctional learning environments as well as define the aims for developing participants' information and metal earning competence (Juceviciene *et al.* G. 2002). Thus, the aims and content of academic curriculum operate in the educational environment of academic library. It means that an academic library is influenced by the content of academic curriculum operate in the educational environment of academic library is characterized by the academic specificity (Juceviciene *et al.* G. (2002):

- It is an integral part of university's educational system;
- It has to interact with all the educational environments of academic study programmes;

- It's regular clients (students, teachers, researchers, administration staff) interact with each other;
- The selectivity of academic library learning environments depends on the type of clients and the educational environments of study programme. (It is important for students in particular).

The modern information and communication technologies (ICT) help the library to become not only the traditionally perceived learning environment as a physical space, but also the virtual learning environment. The possibilities of such a virtual learning environment expand the flexibility of learning environment, because it allows choosing where and when to study. The abundance of information sources and the provision with ICT are the conditions for creating the library's educational environment respectively and, its learning environments. The academic library learning environment is an individualized learning space and it is comprised of the library educational environment that is identified by an individual learner according to his/her experience, competence and personal learning goals. The physical and virtual library's learning environment contains the information related to learner's goal(s), the ways information is being received and perceived, the subjects (peers, librarians, etc.) and tools (Juceviciene *et al.* G. 2002). Therefore, every learner identifies a learning environment of the academic library in a different way. The transform environment of an academic library and its roles in organizing the study process has been analyzed by a number of researchers; some authors (bakewell, 1997) dedicated their efforts for analyzing changes in academic libraries and the quality of services they provide. Others investigate the development of student's information culture at universities and academic libraries, the problem of developing information competence (Candy, 2000). Despite the considerable attention to the education of information literacy in the institutions and at the workplace, the research works mentioned above indicate that students lack the competence of using the created educational environments in a modern library.

Kumar, (2009) notes that academic libraries are changing dramatically by adopting new means of technology in all activities of print to e-environment where a variety of manual method, are replaced by computerized system which provides opportunity for online accessibility. Okiy, (2005) denotes that libraries are now expected to provide to users a range of information and communication technologies necessary for retrieving information quickly from both immediate and remote databases as well as creating a need for library cooperation and consortium initiatives. The present-day academic library services in the 21st century is focusing more on the area of digital, virtual or libraries without borders all of which have transformed academic libraries and led to transition and transformation in the academic library environment. The transition and the transformation in the changing pattern in the information needs of users are growing rapidly. Singh and Kaur, (2009) observed that there is a paradigm shift from standalone libraries to library and information networks; from printed publications to digital documents; and from ownership to access. The transition according to them is as result of the impact of ICTs, the internet and the web which is affecting all types if libraries. The main concepts of academic library as a learning environment were identified by means of research literature analysis and according to the definition of academic library as a learning environment (Juceviciene *et al.* G. 2002). This definition served as a basis for extracting the main categories and sub-categories as well as for selecting the level of coding. While making a content of analysis, the existence or

missing of different concepts was chosen for identification. Before starting analyzing we decided to classify the concepts with the same meaning into one category or sub-category despite the different wording that was used to describe these concepts. The concept discerned were presented to the experts who supplemented them, corrected and submitted the explanations of their meanings. According to the meanings of the main concepts the identical and similar concepts were identified. The following concepts were discerned: users, information, place/space, equipment and technologies, activities (teaching, learning, communication, and collaboration).

Information and Communication Technology (ICT)

The term 'Information and Communication Technology' (ICT) first appeared in the mid-1980s and was defined as "All kinds of electronic systems used for broadcasting telecommunications and mediated communications", with examples including personal computers, video games, cell phones, internet and electronic payment systems and computer software. The ICT is made of computer and communication technology. The computer technology is the tool for storing and processing information in digital form while communication technology helps us to transfer and disseminate digital information. Additionally, ICT means a variety of technological applications in the process and communication of information. The word ICT is a combination of two words information, communication and technology. Information means knowledge and technology means use of computer and communication. The term ICT can be defined as "the integration of computing, networking and information processing technologies and their applications" (Riyasat & Fatima, 2008). Thus, ICT means a combination of computer applications' and communication technology for gathering, processing, storing and disseminating of Information. The exponential growth of these resources has caused socio-cultural, political, educational, and economic change in the world. The paradigm shift from traditional to multi-disciplinary librarianship has increased the quantity of information passing through the library and other field of human endeavor, notable example as cited by Okore and Ekere, (2009) is that it has led to the improvement in the services of industries, administration, management, education, and other services of human endeavor. Focusing on the indispensability of information and communication technology to the students of Niger Delta University Etebu, (2010) says that ICT is part and parcel of the entire system of the institutions, as a learning resource to the students and teaching aids to their lecturers. Comparing the use of ICT Resources between developed and the developing nations Komolafe-Opadeji (2009) observed that ICT resources offers opportunities for developing countries like Nigeria to narrow the development gap between her and developed nations. Looking into the future of computerizing of library services in Nigeria, Ani, (2007) reported that, "it is hopeful that majority of University libraries in Nigeria (Africa) would have effectively computerized their library services by 2020 for the provision of efficient library services". Today we are living in virtual realities as captured by Omekwu and Echezona, (2008) where library services are now in cyberspace and are not affected by time of opening and closing hours, which was corroborated by Ajigboye, (2010) who found that users have control of what they want to learn and from which location they want to learn and at any time of their choice.

Etim, (2004) observes that the rapid pace of development in the field of information technology and the advent of networked information services have prompted a comprehensive review of the library and information sciences (LIS) profession. The global trend is now characterized with a fundamental shift from traditional information environment to an e-environment where emphasis is placed more on the acquisition of e-resources such as e-books, e-journals as well as online databases. However, traditional library and information services and functions are still relevant. Today, the contemporary practice in academic library services in the 21st century is being propelled with an information explosion, and the inclusion of information and communication technology (ICTs) in all aspects of library services. Access to library services has moved beyond geographical location. Technology has helped solve the problems patrons face in accessing a few copies of textbooks that are available in the library. Oyegbami, (2009) observes that ICT is an instrument of social economic renaissance and if properly used it could excellently stem national and international calamity. If properly used it will assist growth and development of libraries in our higher institutions in Africa, it has conferred new role on the library by bringing about the revolutionary journey from traditional to the digital libraries with new technology it has been possible to access a variety of information and knowledge sources in a manner that would be simple, easy and independent of time, place and subject disciplines. Supporting the above assertion, Omekwu, (2003) as cited by Okore and Ekere, (2008) stated that ICT has led to the use of the Web to aid communication and dissemination of information suited for ever changing and complex society. Web resources according to Moses, (2004) are organized in such a way that users can easily move from one resource to another without much stress as witnessed with manual method of accessing information which seem to be a difficult task. However, with Internet access, students from Obafemi Awolowo University in Nigeria for example can easily find out any information in the Library of Congress (LC) in the US within a short time.

The evolution of ICT has also led to digital realities where information resources are now digitalized as manifested in e-book, e-journal, e-purchase, e-commerce, and newly face book that are now common in the western world. Other component of ICT that the student used for their academic work is digital libraries which Iwhiwhu & Eyekpegba, (2007) define as information sources that provides digitalize information resources where users through the means of intellectual access to digital works that are available for use by a defined community. Highlighting the benefits of digital library to users in higher institutions in Nigeria Irechukwu, (2007) noted that it has enhanced scholarship communication, rise in computational science, shared cataloguing and computer networking for collaborative relationship within the library community, on-line public access, abstracting and indexing schemes. Gone are the days when libraries were described as information centre where books are preserved for reading and reference purposes only however, the picture of today Libraries are laying more emphasis on information provision that is available on the World Wide Web (WWW). The use of ICTs in an academic library in Nigeria has added another role to the work of librarians, by providing access to a few copies of textbooks available in the library to its teeming users and complements this through ICTs more than enough resources for users to meet their information needs (Omagbemi, Akintola and Olayiwola, 2004). The role of ICT in university education is

widely discussed by experts in the field of education, they all agreed that when properly use, it will improve teaching and learning among students and workers in the Nigerian educational institutions, (Olulobe, 2007).

ICT based product and services

In the era of information explosion, the tremendous amount of information is being generated and transmitted from every corner of the world in the form of print materials, research articles, lectures, presentations video conferencing, technical reports, standards and patents etc. In the early stages of 20th century, libraries were facing the problems, of how to cater and fulfill the users' demand in minimum span of time. The solution was to adopt the ICT based products & services. To deal with new challenges and increasing demand of users, libraries are reconsolidating; reshaping, redesigning and repackaging their services and information products by incorporating ICT based products and services. Owing to ICT enabled products & services, libraries have changed the way, in terms of the provision of information services. These products and services are the integration of computer and communication technologies, which can be applied to store, process and disseminate information. They have changed the traditional practices of libraries in delivery of services (Ahmad & Fatima, 2009). In the present scenario, users can have access to a variety of information and digital archives of libraries from any corner, as well as can get update activities of libraries by the SMS on their mobile phones. It also helps users to access, manage, integrate, evaluate, create, and communicate with other users more easily than ever. The significant developments in ICT have forever changed the way of information gathering, processing and disseminating.

ICT products and services melt the physical walls of library; it has made library without walls or virtual library. These Products & services are responsible for the development in libraries Services. Libraries always play a vital role as social institution and served as a tangible structure where books, journals, magazines, and all kinds of information sources are available for end users. Both the librarian and users must be physically present in the library in order to exchange the information, available in any format. That is why the library was called the trinity of staff, user and document collections. Now present scenario has changed with the emergence of ICT based products and services in libraries. The physical walls of libraries are melting like ice melt in open environment. Development is a continuous process; every development brings new opportunities in the respective fields. The ICT based products & services have brought a great revolution in the field of education, and libraries are no exception in this context Kumbhar, (2009). Libraries are considered as heart of every educational & research institution. Owing to these new ICT products & services the library services has been got drastically changed. There are even changes in librarianship vocabulary: 'dissemination' is being replaced by 'communication', 'database' by 'repository', 'literature' by 'knowledge', 'search' by 'navigation', etc. Akintunde, (2004). The present boon of ICT based products & services have a great impact on libraries and the impact is quite perceptible right from the beginning as the libraries started adopting ICT in the form of automation, stage of digital archives, and now we are talking about library services on mobile phones.

Benefits of ICT based products & services:

The ICT products & services are beneficial for the libraries in the following ways:

1. It provides efficient and accurate services;
2. It saves the time, space, energy and resources;
3. It helps for controlling the tremendous escalation of information;
4. It assists to provide high quality of services and increases the range of services;
5. It has invented the ways of resource sharing by co-operation and co-ordination;
6. It helps for the betterment of library image by providing better services in modern ways.

Library automation

Library automation was first giant step towards the use of ICT based products & services in libraries. It brings great revolution and save tremendous time of users and library staff for collecting and disseminating information. The libraries started for automation in middle 1950's until 1980's. Library automation refers to use of computers, associated peripheral media such as software for automation, magnetic tapes, disks, optical media etc. Library automation makes the provision to provide the 'right information to right reader at the right time in a right form in a right personal way' it is the basic aim of libraries. Library automation fulfills the above demand of libraries by providing the library activities as: very efficiently, rapidly, effectively, adequately and economically. Thus, ICT made possible for automation in libraries Ahmad & Iqbal, (2009). Now libraries are using the RFID (Radio-frequency identification) to prevent the theft of library resources. The RFID is the use of an object (typically referred to as an RFID tag) applied to or incorporated into an information product for the purpose of identification and tracking using radio waves. For library automation, there are some open source software available: Evergreen, CDS Invenio, Koha, NewGenLib, PMB, PhpMyLibrary, OpenBiblio as well as many commercial software: SOUL, Alice for windows, Netlib, LibSys.

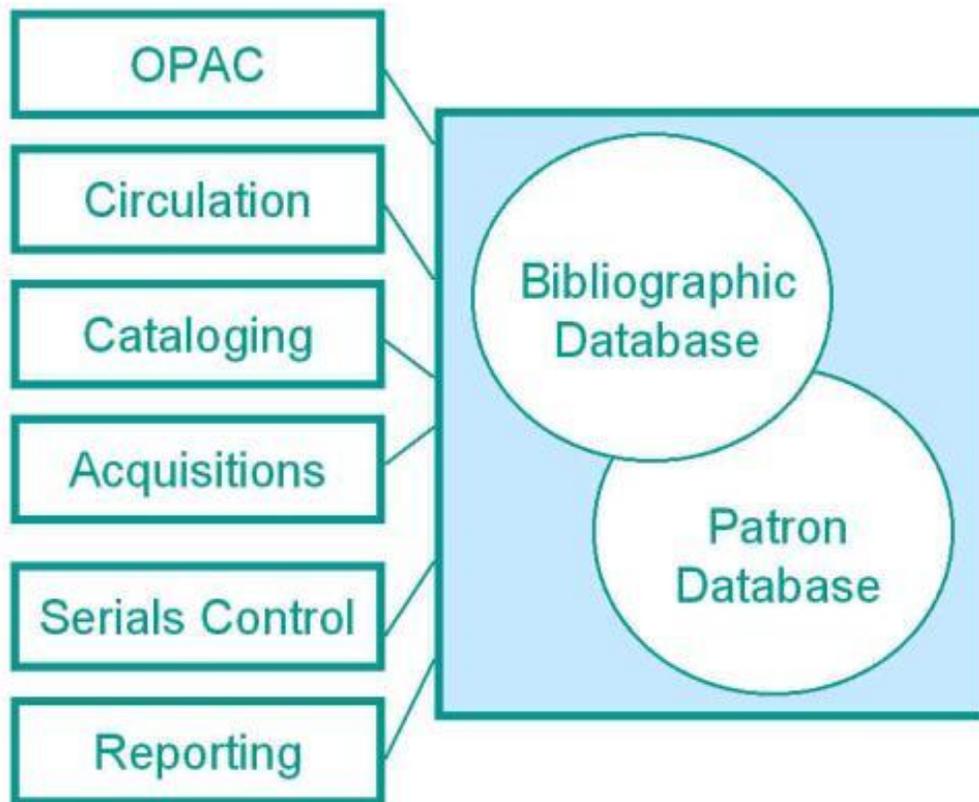


Fig. 1 Automation of library functions

The Use/Application of ICT in Nigerian Academic Libraries

Through the great advances being made in the field of communication, there are great possibilities for the application of ICT in academic libraries. In Nigeria, despite the great challenges (some of which are discussed below). There is room for ICT application in the academic libraries in many ways including the following:

Online Access to Educational Resources: Through the internet, for example, diverse resources could be accessed, transmitted and retrieved. “The internet brings more information to more people and within reach of each other than any other communication vehicle yet invented (Oniyide P. 103). Knowing that “ICTs are being continuously updated or introduced and traditional formats are being replaced or supplemented by digital formats (such as e-journals and e-books)”. Ashcroft and watts 2005, p 6, there is need for internet access in the Nigerian academic libraries to enable them key into these online resources, which could be transmitted electronically and this faster and cheaper.

Another aspect of the internet is the electronic mail (e-mail). “E-mail is a fast, easy and in expensive way to communicate with other internet users around the world. It is used to

obtain important new resources for learning a detaching in schools. It is possible to send out orders to publishers and producers of the learning and teaching materials and equipment. “Oniyide, Ibid, P. 104. Through the internet, current ICT has provided a means for Nigerian academic libraries to access online digital resources like online bookshops such as the Amagon” (www.amagon.com), free encyclopedia (www.wikipedia.com) as well as enable the use of search engines such as “google” (www.google.com) and all the web (www.alltheweb.com) and free e-mail services such as yahoo mail (www.yahoo.mail.com). Unless Nigerian academic libraries develop a reliable internet connectivity and via efficient internet service provider (ISP), they will be denying both themselves and their patrons access to valuable academic resources outside the libraries.

The Digital Reference Services: The use of ICT skills spill over into all aspects of library works and the explosion of electronic information delivery has resulted into the need for electronic user support. Over the past few years, a number of electronic reference services have developed in response to this need (Ashcroft and Watts, 2005, p 7). The Digital Reference Services, (DRS) aim at pooling the resources of various libraries into common users are given access to information and resources till now unavailable in their local libraries. Collaboration is at the heart of the DRS system and requires that libraries use it within local groups or join the global consortium taking it on an individual basis these developments indicates the importance of users focus into wider areas of collaboration. The example also indicates the increasing importance of ICT skills (Ashcroft and Watts, 2005, pp 7-8). The use of Digital Reference Services has created access to more data online, some examples of which include. All exports (www.Aska-librarian.org.UK) and Answers Now (<http://richland.lib.sc.us.answersnow.htm>).

In Nigeria, the NuNet, this is a project to connect all the Nigerian Universities on a wide area network and to the internet, is perhaps the nearest approximation to a digital reference service. NuNet provides dial up e-mail services to 27 universities and inter-university centers across the country. Unfortunately, “of those Nigerian University libraries surveyed, only 38.8% were using NuNet, the collaborative approach is identified as important or digital reference services. The development of NuNet could encourage collaboration between university libraries in Nigeria, which could eventually work towards collaborative digital reference services (Ashcroft and Watts, 2005 pp 9). The emphasis should not only be on the university library, but on all other Nigerian academic libraries. The libraries must continue to explore areas of cooperation, such as the sharing of access to this electronic cataloguing system with other academic libraries both within and outside the country. Unless efforts towards a collaborative digital reference services are intensified among the Nigerian academic libraries, any success in ICT application recorded in one cannot easily be accessible to other academic libraries, thus in the long run will work against the effective application of ICT in Nigerian academic libraries.

Manpower Development: Besides the use of ICT to provide access to educational resources to library patrons, ICT can be used to facilitate on the job training and retraining of information professionals. As noted above ICT is developing at a paid very difficult to keep up with, as such there is need for the information professionals to know and follow trends in ICT. Since information professionals are being called upon the work with ICT users and collaboration with others in the profession, some group of users lack the

necessary IT skills to obtain quality information and information professional will therefore be called upon to act as both educators and intermediaries given these circumstances, information professionals are required to have increased teaching and communication skills” (Ashcroft and Watts, 2005 p 6). Thus, unless the relevant manpower is developed or acquired within our academic libraries, all advances in ICT application will not be fully utilized. Unfortunately, too much emphasis has been placed upon the development of ICT information in developing countries and not enough consideration has been given to human resource development.

Stein, (2001) suggests that many ICT users are self - taught and are capable of developing an understanding of ICTs through the experience of utilizing them. If thus be the case, the countries unable to provide extensive access to ICTs are inevitable marginalized, as they are less likely to produce capable self - taught persons (Ashcroft and Watts 2005, p 9). For the Nigerian academic libraries to make full advantage of the opportunities offered by ICT and its application in the library environment it must create extensive access to ICT and relevant tutorial packages on new technology applications, software and software management and CD-ROMS which will enable the ICT professionals within the library setting to install, manage, maintain and repair ICTs easily and to assist other ICT users to maximize the opportunities offered by ICT as well as ensure effective collaboration such as in a digital reference service.

Library Personnel: The information and communication technology slowly changing the roles of library personnel in academic libraries. Librarians are becoming more and more technologically literate and getting involved in the organization of information on electronic networks. They are acquiring skills in electronic networking, electronic publishing and information brokering, instructors and advisors on how to sue information and electronic networks. Information communication technology has also brought librarians and technologist closer “as librarians realize the importance of the internet, and the technology realize that resources discovery is an issue they are not necessarily equipped to deal with (Smith, 1994). They are working together on the development and utilization of the library resources, new nomenclatures, such as internet librarian, have also started appearing.

Types of ICT Facilities Found in Academic Libraries

Information and communication technology (ICT) provided an opportunity to implement electronic networks and achieve the provision of access to remote computerized information services products much easier than before. Libraries are taking advantage of the facilities on the internet and integrating them into their daily operations.

The following are the types of ICT found in academic libraries (Chisenga, 2007).

1. Computers
2. Internet
3. Library worldwide wave
4. Online catalogues and electronic data base
5. E-mail communication

6. Digital library.

Computer: This is an electronic machine device that is capable of accepting data or information, holding a list of instructions in its memory, processing the information given by following those instructions to carry out a task without human intervention at the end and supplying the results of the processing. Basically a computer does four things: It accept data, stores the data, processes the data and issues out the results.

It is virtually impossible to imagine any sphere of human endeavor today where computers are not in use as the mainstay or as a support. In the library, computers are used for check out, reference services, record keeping, network communication etc. (Alfred, 1999).

Internet Facilities: Are the high speed fiber optic network of networks that use TCP/IP protocols to interconnect computer networks around the world, enabling users to communicate via e-mail, transfer data and programme files via FTP, find information on the worldwide web, and access remote computer system such as on-line catalogues and electronic data base easily and effortlessly using an innovative techniques called packet obit.

The internet serves as a reference tool and one big virtual library to supplement information resources found in libraries. Thousands of website on the internet contained information that is being use to answer specific reference questions in libraries. Information on stock market, government and politics, population, banking and finance, geography and travels, sports and entertainment, health and medicine, education etc. on-line dictionaries, directorate and encyclopedias are also available on the internet (Chisenga, 2008).

Online Catalogues and Electronic Data Base: Over the years, libraries shave been using manual card catalogue systems to guide users to library collections. They have also cooperated and established union catalogues which have been using for co-operative cataloguing. Inter library lending and other forms of resources sharing. Information technology brought about a replacement of manual card catalogues with on-line electronic catalogues. Dedicated telecommunication lines (local, national, regional and international) have been used to access remote on-line catalogues and electronic commercial databases. Sitting at computer terminals, librarians and their charts have access not only to information on their local library collections but also to their collections located in their remote libraries and database. ICT also provide libraries with the infrastructure and facilities through which access to on-line public access catalogues, electronic data bases and co-operative resource sharing can be done. All that is required is for the libraries to put up their library computer services on the internet and thus making available their information. Olamigoke, (2001) states that the ability of a library to provide accurate and timely information will be determined to a large extend by the quality of the information communication technology facilities such as data bases.

Library World Wide Services Wave: The introduction of World Wide Web (www) facilities on the internet opened the way for organizations and individuals to start publishing information on the internet. Business institutions, academic and research institutions, religious organizations, governments, etc. are using the www to advertise their

products. Libraries have not been left out in using the facilities particularly academic libraries. They have been setting up their own web servers and home pages.

Publishers, booksellers and distributors of library materials are also taking advantage of the internet, especially the www and e-mail facilities, to market and sell their products and communicate with clients. They are setting up web sites providing online catalogues, abstracts, bibliographic citations, ordering information and announcements of forthcoming publication. This information is up dated on a regular basis and is and is therefore, very useful for collection development purposes in academic libraries. This is speeding up the process of collection development in the library and to achieve the set up goals of MDG's by 2015.

E-mail Communication: E-mail, a computer mediated communication system in which message in electronic form are transmitted by various means between the sending and receiving computers in libraries e-mail is being used for both official and personal communication. It is being used for the transmission of inter library loan request, making of order inquiries and placing order, receiving reference questions to others libraries and receiving answers to reference questions. E-mail is also being used to set up library based news groups through which information about the library can be disseminated on a personal and professional level. Librarians are using e-mail facilities to access electronic conferences, discussions groups and information servers.

Digital Library: A library in which significant portion of the resources are available in machine-readable format, as opposed to print or microform, accessed remotely via computer networks. In libraries the process of digitalization began with the catalogue, moved to periodical indexes and abstracting services, then to periodicals and large reference works and finally to book publishing. (Reitx, 2004) p 217. Information and communication technology pave the way for the establishment of global digital library which will be made up of an inter connection of libraries' computer servers (and other servers not necessarily located in libraries)" (Gore, 1994). This will enable the librarians and library users to have access to digital information in a way that is not feasible in the traditional library setting. Geographical, technical and physical barrier to information and library cooperation will disappear. Through the use of computer terminals, library users will be able to access information being held in data bases in various types of libraries and electronic network.

Factors Affecting the Use of Information and Communication Technologies (ICTs) in Academic Libraries

There is an overwhelming awareness that there are great potentials in the availability and use of information and communication technologies. The use of ICT promotes development and improves services in any organization. It brings changes in today's business environment. In academic environment, it speeds up information delivery, facilitates teaching, learning and research. In spite of the above observation about the potentials, and benefits of using ICT, the level of awareness and use in Nigeria appears to be very minimal. Organizational, environmental and cultural factors stand against the good and perceived will of the use of ICTs. Omolayole, (2002) points out three strong reasons

that stand against the effective use of ICTs in Nigerian academic libraries. Each of the factors she has mentioned has a resultant effect on availability and use of ICT. The factors are: low level of computer culture; poor telecommunications infrastructure; and general lack of awareness. Another constraint that affects the use of ICTs in Nigerian academic libraries is low level of computer culture. When librarians are not computer literate, utilizing the facility would be a problem. In other words, having a good background in computer skill makes the use of computers in work places very practicable. Lack of awareness on the other hand makes availability impossible. Library managers must be aware of the advantages of using ICTs in libraries and information sector. Training workers on the use of computers and other related technologies for services in any organization including academic libraries is very important. A well trained worker can perform effectively and efficiently in his/her work place than he/she who is not trained at all. Youngman (1999) carried out a study on library staffing considerations in the age of technology in Kansas State University. The study found out that human resource is essential to the success of any technology-based service. It means that any library or organization that ignores the human factor is likely to appreciate ignorance which may lead to underuse. Experienced librarians can be a significant resource in managing libraries with technology. Chisenga, (2004) surveyed the use of ICTs in public libraries in ten (10) Anglophone African countries. The study revealed that all libraries studied pointed out lack/inadequate ICT personnel and lack of fund. The most interesting aspect of the findings is that libraries in South Africa express lack of burglaries to protect computers from being stolen whereas findings from two Nigerian libraries reveal erratic power supply as one of the barriers for ICT use. Out of the ten countries studied, only Nigeria has a very unique problem (power supply). Okiy, (2005) points out poor and inadequate telecommunication facilities; poor level of computer literacy, even within the academic community; poor level of computer facilities; poor level of awareness of Internet facilities among policy makers, government officials and the ruling class in general; and minimum involvement of academic institutions in network building in Africa as challenges militating against the use of ICTs. Low level of ICT skills; lack of functional ICT policy; economic barriers (funds); ICT infrastructure; resistance to change; low capacity of communication facility; absence of digital or electronic libraries except in South Africa; lack of policy for manpower development etc. are common barriers mentioned as factors undermining the use of ICTs.

Gardner (1994) points out human resources, vendor and maintenance, culture, funding, education and training as key factors for ICT use in developing countries. According to him, unskilled and untrained human resources lead to the employment of expatriates and African governments cannot pay or sustain expatriates. Vendor's main concern is also making money without maintenance plan. Without adequate training, organizations may not be able to effectively use them. Other factors that contribute to the under-use of ICTs are culture. System designers need to understand or undertake a systematic study of the organization and country within which the system will be used (implemented). Supporting this Odedra, (1992) opines that culture is a strong factor that dictates if technology be accepted or not accepted. The challenge goes to system planners and programme writers to consider the local way of thinking, cultural setting, level of education and awareness. Culture may have different levels of analysis. Yacob, (2011) analyzed culture as functional, professional, organizational, industrial, regional and national. To this study however, professional and national cultures appear to be more suitable. Professional culture has

cultural peculiarities, the way they (people) take training, supervision and socialization. National culture is about where someone is born, undergoes training etc. Tully, (2003) states that the environment where one grows up can determine his or her ability to fully use modern technologies. German Youth Institute conducted an empirical research from 1998 to 2001. Quantitative survey of 4,500 young people between ages 15 and 26 was used. The findings reveal that young people are interested in the name 'technology' and make absolute use of the technology without any hindrance. The same study also reveals that these young people started using computers right from their childhood and this has a positive influence towards their level of performance. However, the same cannot be said in Africa especially when it comes to the older generation who schooled and obtained their academic qualifications without sighting a PC. Some of these do occupy key positions in administration and find it very difficult to think even an innovative way of doing things.

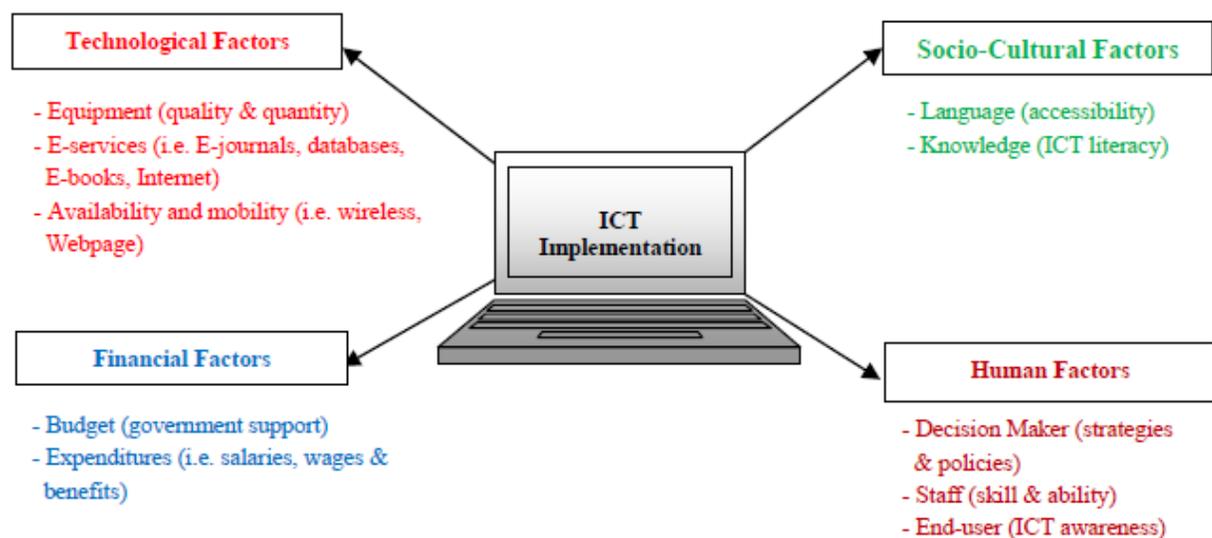


Fig. 2 The factors that affect ICT Implementation in Academic Libraries

As other scholars have stated above on the challenges faced by academic libraries in the process of making ICTs available and used, the report submitted by the Mortenson Center for International Library Programs at Illinois, Urbana-Champaign (2005) pointed out that lack of government funding; limited and expensive Internet bandwidth; unstable power sources; and insufficient staff development affected job performance of academic librarians.

Summary of Literature Review

An academic library plays a significant role in the context of this new learning paradigm. Together with the university departments and teaching staff, the academic library strives to realize the study aims. The library becomes one of the potential learning environments that function at the university. It is characterized by the abundance of information sources.

Literature reviewed also revealed the ICT based products and services and its benefits in the libraries which help to deal with new challenges and increasing demand of users, libraries are reconsolidating; reshaping, redesigning and repackaging their services and information

products by incorporating ICT based products and services. Owing to ICT enabled products & services, libraries have changed the way, in terms of the provision of information services. These products and services are the integration of computer and communication technologies, which can be applied, to store, process and disseminate information. They have changed the traditional practices of libraries in delivery of services (Ahmad & Fatima, 2009). In the present scenario, users can have access to a variety of information and digital archives of libraries from any corner, as well as can get update activities of libraries by the SMS on their mobile phones. It also helps users to access, manage, integrate, evaluate, create, and communicate with other users more easily than ever.

There is room for ICT application in the academic libraries in many ways which revealed in this study such as the online access to educational resources through the internet, for example, diverse resources could be accessed, transmitted and retrieved. “The internet brings more information to more people and within reach of each other than any other communication vehicle yet invented. The Digital Reference Services: The use of ICT skills spill over into all aspects of library works and the explosion of electronic information delivery has resulted into the need for electronic user support. The use of Digital Reference Services has created access to more data online. Manpower Development: Besides the use of ICT to provide access to educational resources to library patrons, ICT can be used to facilitate on the job training and retraining of information professionals.

This chapter also revealed the types of ICT facilities found in Academic Libraries which include: computers, internet, library worldwide wave, online catalogues and electronic database, e-mail communication and Digital library. It revealed factors affecting the use of ICTs in libraries. Omolayole, (2002) points out three strong reasons that stand against the effective use of ICTs in Nigerian academic libraries such as: low level of computer culture: poor telecommunications infrastructure; and general lack of awareness.

In the light of these, the major objective of the study was to assess how the library patrons (staff) of UAM and BSU consider the need for the use of ICT facilities in their institutions.

RESEARCH METHODOLOGY

This chapter deals with the methodology employed for the study under the following subheadings: research design, population of the study, sample and sampling techniques, data collection instrument, validity of the instrument, method of data collection and method of data analysis.

Research Design

The research design employed in this study was a case study. This technique has been used by many researchers and it yields positive result.

The Population of the Study

The population of this study is centered on UAM and BSU. With regard to this, only the staff of the institutions is put to study. The population in essence comprises of the users of the libraries of the respective institutions. This is shown in the table below:

Table 1: Population of the study

STAFF	UAM	BSU	TOTAL
Professional Librarians	29	26	55
Para-professional Librarians	21	19	40
Non Para-Professional Librarians	54	53	107
Total	104	98	202

Table 1 above shows that the total number of Professional Librarians in UAM Library is 29, Para-professionals Librarians is 21, and Non Para-professional Librarians is 54, which give the total number of 104 staff in UAM Library. While in BSU Library, the number of Professional Librarians is 26, Para-professional Librarians is 19 and Non Para-professional Librarians is 53, which give the total number of 98 staff in BSU Library. Hence the total number of staff in these two libraries is 202.

Sample and Sampling Techniques

Purposive sampling was used due to compactness of the population. The total population of 202 was used.

Instrument for Data Collection

The instrument for data collection is Questionnaire.

Validity of the instrument

To ensure effectiveness, legitimacy and promote easy understanding of the questionnaires, they were presented before the supervisor for correction and certification. Eventually, the corrected version of the instrument was distributed to the various respondents.

Method of Data Collection

The data was retrieved by the researcher and her research assistant.

Method of data analysis

The data collected from the instrument was analyzed using simple statistical tools like frequency counts and percentage.

DATA ANALYSIS AND PRESENTATION

This chapter is focused on the analysis and presentation of data collected in UAM and BSU libraries, which provide evidence for the research questions asked in the statement of the problem. Hence this will in turn, facilitate the drawing of conclusion and making of recommendations.

Data Analysis

The data for this analysis and interpretation were collected through the use of questionnaire administered to the respondents, coupled with interview of the respondents. The questionnaires were designed to cover the information intended from the respondents (staff) of UAM and BSU libraries.

A total number of 202 questionnaires were administered to both academic libraries made up of three categories of staff in the library sections/units but only 190 (94%) copies of the questionnaires were completed and returned to the investigator for analysis. Moreover, it was discovered in the course of the analysis that 6 out of the returned questionnaires were not correctly filled and were therefore rejected leaving the investigator with 184 questionnaires to analyze. This analysis will be presented in a tabular form.

Table 2: Age by Respondent

Item	Frequency	Percentage (%)
16-20	0	0
21-25	6	3.26
26-30	35	19.02
31-35	79	42.94
36 and above	64	34.78
Total	184	100

Table 2 reveals that 79(42.94%) of the respondents are of the age of 31-35years, 64 (34.78%) are of the respondents age of 36 and above, 35(19.02%) of the respondents are of the age of 26-30years, 6 (3.26%) of the respondents are of the age 21-25years. However, the table also shows that none of the respondent is of the age of 16-20years.

Table 3: Qualifications of the Respondent

Item	Frequency	Percentage (%)
NCE	52	28.26
ND/HND	64	34.78
B. Sc./B. Tech	57	30.98
MSc.	8	4.35
PHD	3	1.63
Total	184	100

Table 3 shows that 64 (34.78%) of the respondents obtained ND/HND, 57 (30.98%) of the respondents obtained B. Sc. /B. Tech., 52 (28.26%) of the respondents obtained NCE, 8(4.35%) of the respondent obtained MSc and 3 (1.63%) of the respondent obtained PHD.

Table 4: Years of Working Experience

Item	Frequency	Percentage (%)
1-5 years	48	26.09
6-10 years	62	33.69
11-15 years	40	21.74
16-20 years	19	10.33
21-25 years	13	7.06
26-30 years	0	0
31 years and above	2	1.09
Total	184	100

Table 4 shows that 62 (33.69%) of the respondents have 6-10 years working experience, 48 (26.09%) of the respondents have 1-5 years working experience, 40(21.74%) of the respondents have 11-15 years working experience, 19(10.33%) of the respondents have 16-20 years working experience, 13(7.06%) of the respondents have 21-25 years working experience, 2 (1.09%) of the respondents have 31 and none of the respondent has 26-30 years working experience.

Table 5: Access to ICT facilities in the Library

Item	Frequency	Percentage (%)
Yes	83	45.11
No	101	54.89
Total	184	100

Table 5 reveals that 101(54.89%) of the respondents do not have access to computer in the library, and while 83(45.11%) have access to the computer in the library.

Table 6: Reason(s) for not having access to ICT facilities in the library

Item	Frequency	Percentage (%)
ICT Phobia	71	38.59
ICT Illiteracy	65	35.33
Inadequate of ICT facilities	48	26.08
Others	0	0
Total	184	100

Table 6 indicate that 71 (38.59%) of the respondents have phobia of using ICT facilities in the library, 65(35.33%) of the respondents are ICT illiterates and 48 (26.08) of the respondents acknowledge that they do not have access to ICT facilities because of inadequate of ICT facilities.

Table 7: Is there Internet Access in the Library?

Item	Frequency	Percentage (%)
Yes	184	100
No	0	0
Total	184	100

Table 7 shows that 184 (100%) of respondents agree that there is internet access in the libraries.

Table 8: What do you use ICT facilities for?

Item	Frequency	Percentage (%)
Acquisition	0	0
Cataloguing	0	0
Records keeping	98	53.27
Research	30	16.30
Games	56	30.43
Total	184	100

Table 8 signifies that 98 (53.27%) of the respondents acknowledge that ICT facilities are used for records keeping, 56(30.43%) of the respondents use ICT facilities for playing games, 30 (16.30%) of the respondents use ICT facilities for research purpose, while none of the respondent uses ICT facilities for acquisition and cataloguing in the library.

Table 9: Is your Library Automated?

Item	Frequency	Percentage (%)
Yes	0	0
No	184	100
Total	184	100

Table 9 reveals that 184 (100%) of the respondents indicate that their library is not automated.

Table 10: Are your Library materials Digitized?

Item	Frequency	Percentage (%)
Yes	27	14.67
No	0	0
Partially	157	85.33
Total	184	100

Table 10 reveals that 157 (85.33%) of the respondents indicate that their library materials are partially digitized, 27 (14.67%) of the respondents indicate that their library materials are digitized, while none of the respondent answered no.

Table 11: How satisfactory are you in the use of ICT facilities in your Library?

Item	Frequency	Percentage (%)
Very High	0	0
High	0	0
Average	50	27.17
Low	123	66.85
very Low	11	5.98
Total	184	100

Table 11 implies that 123 (66.85%) of the respondents indicate that they derive low satisfaction in the use of ICT facilities in the library, 50(27.17%) of the respondents indicate that they derive average satisfaction, 11 (5.98%) of the respondents indicate that their satisfaction is very low and none of the respondent signifies that their satisfaction is high or very high.

Table 12: What are the problems faced in utilizing ICT facilities in the Library

Item	Frequency	Percentage (%)
Power Failure	14	7.61
Network	51	27.72
Hardware/Software	41	22.28
Inadequate Funding	78	42.39
Total	184	100

Table 12 indicate that 78 (42.39%) of the respondents acknowledge that, inadequate funding is a problem faced in utilizing ICT facilities in the library, 51 (27.72%) of the respondents face network problem, 41 (22.28%) of the respondents acknowledge that there is no sufficient hardware/software in the library and 14 (7.61%) of the respondents face the problem of power failure.

Summary of Findings

The following are the findings that arise from the research:

1. There is internet access in the libraries.
2. Majority of the respondents do not access the internet because of phobia of using ICT, they are not ICT literates and inadequate of ICT facilities.
3. Majority of the respondents indicate that ICT facilities are mainly used for records keeping and playing of games in the library implying that acquisition, cataloguing and other clerical processes are done manually in the library.
4. Their libraries are not automated.
5. Their library materials are partially digitized.
6. Majority of the respondents acknowledge that they derived low satisfaction in the use of ICT facilities in the library.
7. The problems faced mostly by the respondent are inadequate funding, network and hardware/software issues.

The major factors that serve as hindrance to the use of ICT on Nigerian academic libraries are inadequate funding which has resulted to issues like poor infrastructure and maintenance, lack of proper education and training of librarians and other library staff (lack of competent search skills). Other factors include epileptic power supply which has become a great problem on an average Nigerian organization or establishment which also disrupts or acts as a breakdown to computers. And network caused by poor electronic gadgets etc. All these factors act as impediments to the use of ICT in Nigerian academic libraries.

In this research work, respondents were given the opportunity to air their view in regards to the areas in which Nigerian academic libraries need further improvement on the use of ICT. In all indications, most of the respondents suggested appropriate or adequate funding of Nigerian academic libraries in order to facilitate these libraries with quality and quantity ICT equipment couple with proper maintenance (system upgrade) which will make Nigerian academic libraries to be of good standard to carryout clerical processes done in the libraries and aid research. Other respondents also suggested library automation in their academic libraries which will enhance easy and quick access to library materials. And adequate training of staff by the management of Nigerian Academic Libraries to be ICT oriented in order to enable them cope with the advancement in technology.

Conclusion

From the report and discussions above on the need for the use of ICT in academic libraries in Nigeria, it is certain that there is need for improvement. More progress is required if Nigerian academic libraries will be relevant within the global academic community. The attitude of librarians and funding are major factors that can affect the deployment of ICT in the libraries. These are surmountable factors that can be transformed into productivity with the right motivation.

In spite of the huge problems affecting ICT application in UAM and BSU academic libraries, the prospect and possibilities are abundant. Therefore, there is a great need to

improve ICT facilities in these libraries in order to facilitate the clerical processes (acquisition, cataloguing and classification, circulation and serial) including the administrations in the libraries and also promoting effective research.

Recommendations

With regard to the findings of this research and effective application of ICT in UAM and BSU libraries the following recommendations are put in place:

- The government should increase the funding of academic institutions. It is only when the funding of academic institution is increased that these academic libraries will have the required funds to increase their ICT applications and support with local infrastructure such as LAN and local data bases such as electronic cataloguing systems and e-publication.
- Effective and efficient power supply supplement with standby generators should be made available to solve the problem of epileptic power supply which has become a thorn in the flesh of an average establishment or act as a breakdown to computers.
- Since Information and Communication Technology has become the order of the day with its advancement, all library users (staff) should be trained to be computer literates so as to flow along with the reforms and possess competent search skills.
- NUC should implement and make effective, as soon as possible, its proposal to sponsor university librarians to tour university libraries in Nigeria. This will enable library staff to be exposed to the ways in which ICT is used in offering modern library services.
- There should be automation in every division of the Nigerian academic libraries, this will facilitate and give room for effective and efficient services.
- There is also a great need for orientation programs on the use of computer for information retrieval and this should be made compulsory for new entrants into the library.
- Regular maintenance should also be made effective.

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