

APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES FOR LIBRARY SERVICES IN FEDERAL COLLEGE OF EDUCATION, ZARIA, NIGERIA

Abdulfatah Abdulrahim

Ahmadu Bello University, Zaria

Amishe Dauda,

Kaduna State College of Education, Gidan Waya, Kaduna,

Abstract

This study looks into the Application of Information and Communication Technologies for Library Services in Federal College of Education, Zaria, Nigeria. In order to carry out this study, three (3) research questions were formulated. The research questions sought to find out which library services are ICT facilities are applied for in the College of Education Library, Zaria; to what extent are ICTs utilized for library services in the College of Education Library, Zaria; and what are the challenges facing the application of ICT facilities in the library services in the College of Education Library, Zaria. The research methodology adopted was quantitative and survey design. The total population of the study is 490 registered students of the Federal College of Education Library, Zaria, which was derived from the student's register of the Circulation Service Division of the Federal College of Education Library, Zaria from the years 2017 to 2020. The sample size was chosen to be 30% (147) of the total population (490). A self-developed questionnaire was used for the collection of data. The findings revealed that ICT resources applied for library services in FCE Zaria include computers, printers and storage technology such as CD-ROM, CD, and DVD and also indicated that shortage of manpower, occasional system failure, lack of ICT skills, poor maintenance of ICT equipment, staff attitude towards ICT utilisation/technophobia, nonchalant attitude of users towards ICT resources, power outages, inter-connectivity problems, and obsolete equipment were the challenges faced in accessing and utilizing ICT facilities at the Federal College of Education Library, Zaria among others. It was concluded that the application of ICT to library services in the Federal College of Education Library, Zaria, was not fully available and utilized. It was recommended that College Management should adequately make a provision for those ICT resources that are not available in the library, such as the internet, online instructions on the use of the library, library web site, smart card for user's identification, scanner, online public access catalogue, e-mail, teleconferencing technology, RFID use in tracking and managing library resources, library management software package, institutional repositories, chat services such as Facebook, Whatsapp, barcode sensors or readers, database services, electronic bulletin boards, close circuit television (CCTV) and CAS & SDI services.

Key words: Application, ICT, Library Services, Challenges, College Library, Federal College of Education

Introduction

The ability to access information at the appropriate time and in the appropriate format is crucial to knowledge growth as well as to all other development efforts. Rapid developments of Information and Communication Technologies (ICTs) have changed the traditional concept of libraries. Modern academic libraries are more powerful, dynamic and can reach their users without the restrictions of geographical boundaries. According to Mishra and Mishra (2014), the

rapid expansion of knowledge has made it more challenging to manage information manually. ICT is important for libraries to accomplish their objectives for information management, efficient services, and extending boundaries beyond the four walls to the world. Information and communications technologies have had a significant impact on academic libraries. Over the past ten years, computers and networked electronic resources have become an essential aspect of academic libraries. Globally, library and information services have been revolutionized by information and communications technology (ICT).

According to ICT covers any product that is capable of storing, retrieving, manipulating, transmitting or receiving information electronically in a digital form. The term ICT is also used to refer to the convergence of audio-visual and telephone networks with computer networks through a single cabling or link system. ICT was described by Vijayakumar and Vijayan (2011) as the use of computers and related technologies for the gathering, organizing, storing, retrieving, and dissemination of information. Malanga (2015) elaborated on the term, defining it as a revolution that offers the technical infrastructure and platform for handling information and communication. With the aforementioned definitions, it is accurate to say that ICT serves as a catalyst for the creation, processing, storage, and dissemination of information. A robust definition was reported by Dunmill and Arslanagic (2006), referring to ICT as a variety of tools (hardware: personal computers, scanners, and digital cameras), computer programs (software: database programs and multimedia programs), and telecommunications infrastructures (phones, faxes, modems, video conferencing equipment, and web cameras) that enable users to access, retrieve, store, organize, manipulate, present, send, and communicate locally, nationally, and internationally through digital media (as cited in Mishra and Mishra (2014)).

A person in the most remote locations can now successfully access information from anywhere in the world thanks to information and communication technology (ICT). According to Akintunde (2006), ICT placed an emphasis on using computers, phones, and the Internet to process, transport, and transfer voice and data separately or together in libraries. The way library patrons learn and access information in libraries has evolved and been updated as a result of the new technologies. The foundation of these transformations and alterations is strongly reliant on the accessibility of ICT resources. ICT facilities are described by Oyedum (2007) as devices including computers, printers, televisions, radios, telephones, GSM, scanners, video recorders, Internet, and e-mail services, among others, that significantly advance information communication in Academic Libraries.

Additionally, the use of ICT in college libraries has enhanced the caliber of the library and its offerings to its users in terms of the selection, acquisition, organization, and dissemination of information required by the campus community to achieve the university's main objective. According to Nkanu (2010), ICTs have given Nigerian libraries more effective means to gather, arrange, store, and disseminate information. To satisfy the current needs of their students and staff, many Nigerian libraries have incorporated ICT into portions of their activities. By implementing ICT, libraries can offer customers less time-consuming, repetitive services while also raising expectations among both its patrons and institutions.

Statement of the Problem

It is now feasible to access a variety of information sources and databases that are spread around the globe thanks to the development and availability of the ICT. According to Kehinde and Tella (2012), some of the priceless resources that are freely accessible online have evolved into crucial tools for the spread of knowledge. In light of that, Adebisi (2009) asserted that ICT

enable users to have unlimited access to information and as a result, enhance anytime and anywhere access to information in time and space with little or no consideration to the location of such information. The development and availability of information and communication technologies (ICTs) in libraries have today not only increased and broadened the impact of information resources at their doorsteps, but also placed more emphasis on effective and efficient services delivery.

However, the Researchers observed that some students of Federal College of Education, Zaria were complaining about lack of accessibility and use of online information resources and services for their assignments and research work. Could it be as a result of lack of ICT application and utilization in Library services in College of Education? This prompt the Researcher to investigate the Application of Information and Communication Technologies for Library Services in Federal College of Education, Zaria, Nigeria.

Research Questions

The following research questions guided the study:

1. Which library services do ICT facilities apply for in the College of Education Library, Zaria?
2. To what extent are ICTs utilized for library services in the College of Education Library, Zaria?
3. What are the challenges facing the application of ICT facilities in the library services in the College of Education Library, Zaria?

Literature Review

Application of ICT facilities to library services is paramount to research, teaching and learning in college of education institutions. According to Ali (2019), ICT applications in libraries have helped to facilitate easy access to information resources that are available all over the world and to promote timely access to those resources. Computers, DVDs, CDs, the internet, and telephones are just a few of the ICT facilities Nwalo (2005) mentioned in his study on the accessibility and use of ICTs in library services. Similarly, DeWatteville and Gilbert (2000), alluded that ICT encompasses things like computers, the internet, digital cameras, webcams, smart cards, scanners, printers, electronic journals, WEB-OPACs, animation, e-mail, CD-ROMs, and RFID technologies. Mishra and Mishra (2014) succinctly summarize most of the ICT facilities or resources that can be apply for effective library operations and services such as internet, online instructions on the use of library, library web site, smart card for user's identification, scanner, online public access catalogue, e-mail, tele conferencing technology, RFID use in tracking and managing library resources, library management software package, institutional repositories, chat services such as face book, what app, barcode sensors or readers, database services, electronic bulletin boards, close circuit television (cctv) and CAS & SDI services.

The access and use of information communication technology, especially, in libraries cannot be over-emphasized because an automated library has the potentials for satisfying library patrons' needs beyond the capabilities of the manual system. Igben and Akobo (2007) studied the state of Information and Communication Technology (ICT) in libraries in Rivers State, Nigeria. The general objective of the study was to establish the number of computers, the

existence of local area networks, the extent of automation and types of software in use. They found that 75% of the libraries studied used computers for the operations of their libraries. Adeniji *et al* (2011) found out in their study that the Internet is the most used ICT resource, with 50 (42%), while computer, E-publication, printers, and scanners were also used by the respondents to source for information in their various fields of learning. Adeniji *et al* (2011) also noted that 45% respondents from Ibogun, Aiyetoro, Sagamu and Ikenne campus of the High institutions were satisfied with the ICT facilities of the university while some respondents from Ibogun were not satisfied with the facilities.

Pertaining to the challenges ICT applications in library services encounter. According to Krubu and Osawaru (2011), there are a number of things that prevent ICT from having a positive impact on libraries in Nigeria, including poor search abilities, unstable power supplies, costly software and hardware, and the high cost of generator fuel. Other obstacles or limitations listed by Ashcroft and Watts (2005) include a lack of technology-savvy library workers, a lack of qualified personnel to set up and maintain computer networks, and inadequate funding to train current staff in ICT. ICT availability was examined by Etebu (2010), who discovered that the situation is not favorable. According to Adeniji *et al.* (2011), there are a number of issues that make it difficult for respondents to use the ICT facilities on the various campuses of Nigerian universities, including power outages, expensive connectivity, a lack of ICT expertise, interconnectivity issues, and outdated technology. Before they can meet the information needs of their numerous customers on a regular basis, library administration and information suppliers must first address the majority of these issues.

Research Methodology

The research methodology adopted for this study was quantitative approach and Survey is the research method used for the study. 490 Federal College of Education Library, Zaria registered students make up the study's total population, which was gathered from data from the student register of the library's circulation service division from 2017 to 2020. The sample size was chosen to be 30% (147) of the total population (490). Nwana, who was mentioned by Ukih (2012), asserted that if a population is only a few hundreds, a sample size of 30% of that population can be chosen. A self-developed Questionnaire were the research tool employed in this study to gather data. Descriptive statistics were used in the study to display and analyze the data. Tables, frequency distributions, and percentages were used in the analysis. The benchmark for the nominal percentage answers was set at 50%. Any response that was lower than the specified % was considered negative.

Findings and Discussions**Table 1: Type of ICT Resources in Federal College of Education Library,Zaria**

Type of ICT Resources	Frequency	Percentage
Computer	101	75%
Internet	60	44%
Online Instructions on the use of library	57	42.2%
Library Web site	60	44%
Smart Card For user's Identification	35	26%
Scanner	23	17%
Printers	101	75%
Online Public Access Catalogue	40	30%
E-Mail	35	35%
Storage Technology such as CD-ROM, CD, DVD	80	59%
Tele Conferencing Technology	18	13%
RFID use in tracking and managing library resources	30	22%
Library Management Software Package	34	25%
Institutional Repositories	50	37%
Chat Services Such As Face Book, What App	55	41%
Barcode Sensors Or Readers	34	25%
Database Services	45	33%
Electronic Bulletin Boards	20	15%
Close Circuit Television (Cctv)	15	11%
CAS & SDI Services	15	11%

Source: Researcher's Field Survey, 2021

Table 1 shows that respondents with more than 50% agreed that the Federal College of Education library, Zaria has computers, printers, and storage technology such as CD-ROM, CD, and DVD as types of ICT resources available, whereas the majority of respondents with 44% and less agreed that the Federal College of Education library, Zaria has internet, online instructions on how to use the library, library web site, smart card for user identification, scanner, online public access catalogue, e-mail, tele conferencing technology, RFID use in tracking and managing library resources, library management software package, institutional repositories, chat services such as face book, what app, barcode sensors or readers, database services, electronic bulletin boards, close circuit television (cctv) and CAS & SDI services. This finding is corroborated by the submission of Nwalo (2005), who listed the following ICT facilities used in the management of library services to include; computers, DVDs, CDs, the internet, and telephones. This implies that the impact of the availability of ICT resources has not been really felt by the users of the Federal College of Education library, Zaria, since only three out of the twenty listed ICT resources are confirmed available with a bench mark of 50% and above, which is not good for this digital age.

Table 2: ICT Services Utilize at Federal College of Education Library, Zaria

Type of ICT services	Often	Rarely	Never
Computer	40(30%)	80(59%)	15(11%)
Internet	20(15)	40(30%)	75(55%)
Online Instructions on the use of library	15(11%)	23(17%)	97(72%)
Library Web site	30(22%)	20(15%)	100(74%)
Smart Card For user's Identification	10(7%)	23(17%)	102 (76%)
Scanner	23(17%)	40(30%)	72(53%)
Printers	80(59%)	40(30%)	15(11%)
Online Public Access Catalogue	40(30%)	40(30%)	55(40%)
E-Mail	15(11%)	18(13%)	102(77%)
Storage Technology such as CD-ROM, CD, DVD	34(25%)	80(59%)	21(16%)
Tele Conferencing Technology	7 (5%)	18(13%)	110(82%)
RFID use in tracking and managing library resources	3(2%)	7(5%)	125(93%)
Library Management Software Package	34(25%)	34(25%)	67(50%)
Institutional Repositories	20(15%)	15(11%)	100(74%)
Chat Services Such As Face Book, What App	15(11%)	15(11%)	105(78%)
Barcode Sensors Or Readers	10(7%)	18(13%)	107(80%)
Database Services	7 (5%)	18(13%)	110(82%)
Electronic Bulletin Boards	7 (5%)	7(5%)	121(90%)
Close Circuit Television (Cctv)	3(2%)	3(2%)	129(94%)
CAS & SDI Services	15(11%)	40(30%)	80(59%)

Source: Researcher's Field Survey, 2021

Table 2 discovered that the majority of the respondents with 50% and above scores indicated that they never make use of the internet, online instructions on the use of library, library web site, smart card for user's identification, scanner, online public access catalogue, e-mail, teleconferencing technology, RFID use in tracking and managing library resources, library management software package, institutional repositories, chat services such as Facebook, Whatsapp, barcode sensors or readers, database services, electronic bulletin boards, close circuit television (CCTV), and CAS & SDI services in the Federal College of Education Library, Zaria. One item received an 80 (59%) response rate, indicating that they frequently use the printer in the library, whereas computer and storage technology such as CD-ROM, CD, and DVD received an 80 (59%) response rate, indicating that they rarely use them. This finding contradicts the findings of Adeniji *et al.* (2011), who found in their study that the Internet is the most used ICT resource, with 42%, while computers, E-publications, printers, and scanners were also used by the respondents to source for information in their various fields of learning. The implication is that the college library will continue to lose its customers on a daily basis as a result of a lack of accessibility and utilization of ICT resources for learning and research.

Table 3: Challenges Faced in Accessing and Utilizing ICT Facilities

Challenges	Frequency	Percentage
Shortage of manpower	101	75%
Occasional system failure	125	93%
Lack of ICT skills	80	59%
poor maintenance of ICT equipment	100	74%
Staff attitude towards ICT utilisation/technophobia	80	59%
Nonchalant attitude of users towards ICT resources	90	67%
Power outage	100	74%
Inter-connectivity problem	105	78%
Obsolete equipment	107	80%

Source: Researcher's Field Survey, 2021

Table 3 revealed that the majority of the respondents with 59% and above agreed that shortage of manpower, occasional system failure, lack of ict skills, poor maintenance of ict equipment, staff attitude towards ICT utilisation/technophobia, nonchalant attitude of users towards ict resources, power outages, inter-connectivity problems, and obsolete equipment were the challenges faced in accessing and utilizing ICT facilities at the Federal College of Education Library, Zaria. It can be deduced that the majority of the respondents agree with all the listed challenges facing the Federal College of Education Library, Zaria. These findings corroborate with the position of Adeniji *et al.* (2011), submitting that there are several factors militating against the respondents using the ICT facilities in their various campuses in Nigerian universities. Such factors include power outages, the high cost of connectivity, lack of ICT skills, interconnectivity problems, and obsolete equipment. This finding suggests that the college of education's Zaria students and staff will not benefit from the many advantages that ICT library services have brought to academic libraries, including staying current with the digital age and having access to current E-books, E-journals, and other materials for study and research. The results showed that out of the twenty mentioned ICT resources, computers, printers, and storage technologies such as CD-ROM, CD, and DVD are confirmed to be available in Federal College of Education, Zaria, with a benchmark of 50% and above.

The research found that only the printer was used frequently in the college library, whereas Computers, CD-ROM, CD, and DVD were only sometimes used. The study found that the challenges encountered in using ICT facilities at the Federal College of Education Library, Zaria included a lack of manpower, occasional system failure, lack of ict skills, poor maintenance of ict equipment, staff attitude toward ICT utilisation/technophobia, nonchalant attitude of users toward ict resources, power outages, interconnectivity issues, and outdated equipment.

Conclusion

From the analysis and summary of the findings of this study, it can be concluded that the application of ICT for library services in the Federal College of Education Library, Zaria, was not fully available and utilized. The study indicated that only printers were the ICT resources accessible and utilized in the library, while computers and storage technology such as CD-ROM, CD, and DVD were rarely used in the library. Poor maintenance of ICT equipment; staff attitude towards ICT utilization/techno-phobia; nonchalant attitude of users towards ict resources; power outages; inter-connectivity problems; and obsolete equipment were the challenges faced in

accessing and utilizing ICT facilities at the Federal College of Education Library, Zaria. College management needs to step up with the use of ICT resources to serve their 21st century customers.

Recommendations

The following recommendations were made in line with the findings of this study:

1. The management of the Federal College of Education library, Zaria, should secure and create awareness of the availability of ICT library services to their users through the internet; online instructions on the use of the library; web site; smart card for user's identification; scanner; online public access catalogue; e-mail; teleconferencing technology; RFID use in tracking and managing library resources; library management software package; institutional repositories; chat services such as Facebook, What's App, barcode sensors or readers; database services, electronic bulletin boards, close circuit television (CCTV), and CAS & SDI services.
2. College library management should endeavor to make those available ICT resources functional for access and use by library customers.
3. College management should make adequate provision for ICT resource funding and manpower training in the college library.

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