

APPRAISING THE ROLES OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AS A CHANGE AGENT FOR UNIVERSITY LIBRARIES IN KWARA STATE, NIGERIA

Kamal Tunde OMOPUPA

Dr., Department of Library and Information Science, University of Ilorin, Nigeria

ORCID: <https://orcid.org/0000-0003-4252-4681>

omopupa_kt@yahoo.com

Kennedy Arebamen EİRİEMİOKHALE (CLN)

Department of Library and Information Science, College of Information and Communication Technology,
Kwara State University, Malete, Nigeria

ORCID: <https://orcid.org/0000-0001-9687-1780>

kennedy.eiriemiokhale@kwasu.edu.ng

Israel Segun OGUNDELE

Department of Business and Entrepreneurship Education,
Kwara State University, Malete, Nigeria

ORCID: <https://orcid.org/0000-0001-6323-5323>

kennedy.eiriemiokhale@kwasu.edu.ng

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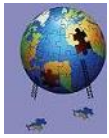
Abstract

This study investigated the role of Information and Communication Technology (ICT) as a change agent for university libraries in Kwara State, Nigeria. The study objectives include: (i) identifying types of Information and Communication Technology (ICT) facilities used in university libraries in Kwara State; (ii) examining the roles of ICT in university libraries in Kwara State; (iii) investigating the challenges militating against the use of ICT in university libraries in Kwara State. In order to achieve the study objectives, three research questions were designed to guide the study, the two null hypotheses were tested at 0.05 level of significance. The study adopted descriptive survey research design. The study comprised 50 professional librarians population in selected university libraries in Kwara State, Nigeria. A structured questionnaire was the instrument used for data collection. Descriptive and inferential statistics were used for the analysis while the study used Chi-Square in analysing the two null hypotheses. The results revealed that (i) numerous ICT tools are used in the university library in Kwara State, Nigeria; (ii) ICT has changed the roles of university libraries in Kwara State, Nigeria; and (iii) numerous challenges militates against the use of ICT in university libraries in Kwara State. Based on the findings, the study recommended that the Federal and State government including proprietors of private universities and other stakeholders should ensure adequate funding of university libraries in the light of active investment rather than a passive obligation, There is urgent need for the improvement of power supply in university libraries in order to enhance maximum use of the ICT facilities because they depend on light (electricity) to function.

Keywords: Appraise, change agent, information and communication technology, university libraries.

INTRODUCTION

Universities are established to promote scholarship, research and learning in the various fields of learning. Behind the mission and vision of university education is the university library, which is the academic library serving the university community (Eze & Uzoigwe, 2013). University libraries are at the vanguard of providing information services to their respective communities which comprise of lecturers, researchers and students in order to support their teaching, learning and research needs. Scholars have emphasised the crucial role of university libraries in research and scholarship in universities. University libraries as the heart or nerve centres of universities remain where all academic activities revolved (Abubakar, 2011).



Consequently, Yusuf and Iwu (2010) opined that university libraries as the center around which academic activities revolves. University libraries are indispensable instrument for intellectual development, being a storehouse of information to which users may turn to for accessing information. Nwezeh and Shabi (2011) posited that librarians have information dissemination as one of their primary functions in the institution of learning at assisting users in fulfilling teaching and research roles. The university library has a potential educational force in the university community for staff and students at different levels especially in this era of Information and Communication Technologies facilitates the university libraries' capability to assist users within the library as well as remote access users.

Information and communication technologies (ICT) are an indispensable part of the contemporary world and have become part of culture and society that have to be adjusted to meet the challenges of the information age. Information and Communication Technologies (ICT) is a force that has changed many aspects of people's ways of life, affecting human lives positively. Considering such fields as travel, business, law, medicine, tourism, librarianship, banking and architecture, the effects of ICT in the recent years has been huge. The way the professional fields operate today is vastly different from the way they operated in the past (Yusuf, Afolabi and Loto, 2013).

Over the past few decades, the library environment has changed considerably in terms of collection, organisation and facilities. The e-resources have occupied considerable space in the library collection, the transaction of library materials are fully automated, new web-based services are offered by libraries to appeal for users participation in redesigning the library system and services. These changes are mainly due to the development and impact of information and communication technology (ICT) in libraries which have also made changes. The ICT tools and services are being used in libraries to manage libraries more efficiently and to cater to users demand (Satpathy & Maharana, 2011).

Information and Communication Technologies has changed the landscape of libraries and librarianship. Libraries are growing from the four walls to the cyber environment where library users can remotely access information to meet their varying needs in different formats ranging from print to digital and web resources. The ICT has assisted information to be disseminated speedily around the globe due to advanced means of telecommunication, and it is being used extensively and has resulted in the growth of information (Ansari, 2013).

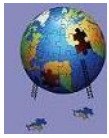
The objectives of this study are to:

- i. identify the types Information and Communication Technologies (ICT) used in university libraries in Kwara State;
- ii. examine the roles of ICT in university libraries in Kwara State; and
- iii. investigate the challenges militating against the use of ICT in university libraries in Kwara State.

Research Questions

The study formulated the following research questions;

- i. What are the types of Information and Communication Technology (ICT) facilities available in university libraries in Kwara State?
- ii. What are the types of Information and Communication Technology (ICT) facilities used in university libraries in Kwara State?
- iii. What are the roles of ICT in university libraries in Kwara State?



iv. What are the challenges militating against the use of ICT in university libraries in Kwara State?

The following null hypotheses were tested at 0.05 level of significance:

- i. Ho1 – There is no significant difference in ICT facilities available in federal, state and private universities in Kwara State, Nigeria.
- ii. Ho2 – There is no significant difference in the usage of ICT facilities in federal, state and private universities in Kwara State, Nigeria.

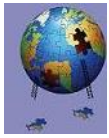
Literature Review

Information and Communication Technology Facilities used in University Libraries

The conception of the library as a storehouse of knowledge by some writers has altered by trends in the information and communication technology (ICT) fields; much emphasis placed on access. There are wide ranges of technologies available in university libraries today. Oketunji (2001) stated that the ICT facilities available for library use include: personal computers, CD-ROMs, telefacsimile, (fax), network, electro-copying (scanning), and the internet. Combining the technology and services, Daniel and Matthew (2000) described the new development as tools for information delivery in the new millennium. Computer is an electronic device that accept data and instruction (input); processes data according to instructions given (processing); stores the processed data (storage); and display the result of the processed data (output). The use of computer has permeated all aspects of human life such that no aspect is left unturned by computer revolution. It is a technology that is affecting the sectors of education, economy, health, manufacturing industries and libraries inclusive. In education, the use of computers in teaching large number of students, thereby solving the problem of distance learning programme through the application of computer technology, (Mabawonku, 2003).

The internet is a global collection of many different types of computers and computer networks that are linked together. It enables individuals, organisations, companies, libraries and government to share information across the world. Asogwa, Ugwu and Idoko (2016) described the internet as an information superhighway of information infrastructure to emphasise the expectation that it would transform the creation, manipulation, storage, retrieval, transfer and utilisation of information. The internet is the fastest-growing computer network with millions of users worldwide and has been found to assist users in obtaining and sharing available information worldwide. The network is a type of information and communication technology that allows the link of separate computers to share their resources. Oni (2004) described a network as a way of connecting computers so that they can communicate with each other and share resources like printers and storage spaces. Anunobi and Nwakwuo (2008) discussed ICTs application in libraries to include personal computer application, CDROM searching, telefacsimile, networks, electro copying, electronic mail, online-searching and the internet. ICT application in libraries all over the world has brought about more efficient technical services and improved reader's services. ICT application in libraries has enhanced the library services than ever known in the delivery of right information to users, especially in the higher institution of learning.

Anunobi and Edoka (2010) examined the use of ICT facilities in Nigeria university libraries and discovered that personal computers, photocopiers and CD-ROM were the ICT facilities mostly used in serial units of the universities. Other facilities identified were printers, LAN, scanner, fax machine and the internet. Similarly, Omekwu and Eruvwe (2014) examined the Application of information and communication technology (ICT) in Delta State Polytechnic Library, Nigeria. The data analysis shows that different ICT facilities are available in the library. The facilities included connected computers, stand-alone computers, telephone, network facilities, online databases, photocopiers, printers, scanners, internet facilities, e-mails, CD-ROM, DVDROM, projectors, library-based software such as Xlib, local area network LAN, wide-area network WAN, and wireless internet access. Ajayi and Ekundayo (2009) listed information technologies to include:



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

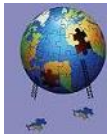
Also, Olatokun (2007) found from a study that ICT facilities available in academic libraries include:

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

Information and Communication Technology as a Change Agent in University Libraries in Nigeria

The functions of university libraries are to collect, process, disseminate, store and utilise information to provide services to the university community (Olayemi, Umar, Yemi-Peters, Sokari, & Haliru, 2017). However, the continually increasing amount of information generated and published, the expanding formats of information storage and retrieval, and ever-changing educational and research needs of library users make it difficult for any library to be a useful learning resource centre (Afolabi & Abidoye, 2011). Since the ultimate goal of the library is to provide services in a manner most useful to the library's users and rendering useful and efficient services. The development in ICT applications came as a saviour to this predicament by providing speedy and easy access to information from different sources and facilitates the reformatting and combination of data from different sources (Saleem, Tabusum and Batcha, 2013). Many libraries have embraced the use of information technology for effective library services (Afolabi and Abidoye, 2011). Such services include reference service, document and technical services, and e-library service also in the form of the library collection development strategies, library building and consortia (Krubu and Osawaru, 2011).

The library has a unique position as a potential educational force in the university community of staff and students of different levels, especially in this era of information and communication technology. The library can facilitate the capability to reach out to direct users as well as remote access users. Agboola and Bamigboye (2011) maintained that the quality and strength of any educational programme depends on the library; not the library as a magnificent building but the use of it. University libraries are at the forefront of providing information services to the different categories of the user such as students, lecturers and researchers to support their teaching, learning and research needs. Singh and Kaur (2009) noted that preservation and access to knowledge and information is the primary mandate of academic libraries alongside supporting the mission of their parent institution. The university libraries are playing their supportive role to the university education by providing necessary resources and services more so in this information era. These enable the libraries to meet up the needs of their teaming patrons. Such resources range from print to non-print and electronic materials in line with what Yusuf and Iwu (2010) asserted that different users of academic libraries utilise different materials provided by these libraries that include reference materials, textbooks, journals, newspapers, past projects and electronic journals. (Nwezeh and Shabi, 2011); also resources like books, journals, newspapers,



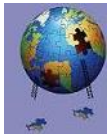
government publications, indexes and abstracts as common information materials provided and utilised by academic libraries.

According to Aina (2004), the evolution of Information and Communication Technology promotes the new changes and services in modern libraries has made the organisation of information very efficient, the delivery of necessary information effective dissemination of information faster. ICT has also eliminated the conventional time and space that are familiar with the traditional library system. With ICT, libraries are now positioned to play an active role in information services delivery for national development.

The emergence of ICT has affected the role and services of academic libraries. As Etim (2004) noted, the rapid pace of development in the field of IT and the emergence of networked information services have prompted a comprehensive review of the library and information science profession. There is a clear paradigm shift from old-fashioned ways of carrying out information services powered by analogue data to electronic ways of accessing and retrieving information powered by electronic gadgets. According to Abubakar (2011), ICT is being introduced and included all aspects of library services, E-library and e-resources are becoming the order of the day in library and information practice. In a nutshell, the libraries, especially the university libraries have to adapt to the e-environment in line with the indications of Kumar (2009). For the university library to be where their users are, they have to fully recognise the fact that the world is living in virtual realities as was indicated by Omekwu and Echezona (2008) where library services are in cyberspace and are not affected by opening and closing hours. Users of university libraries now expect to be given what they need, when they need it and from whichever location they may be (Ajogboye, 2010). Anaeme (2006), highlighted that the emerging and fast-growing ICT application in libraries especially university libraries have continued to revolutionaries the pattern and scope of library services. University libraries are now expected to provide to users a range of information and communication technologies and e-resources necessary for retrieving information quickly from both immediate and remote databases, as well as creating a need for library cooperation and consortium initiatives (Okoye, 2005). Achieving 'education for all initiative' in Nigeria will be much more attainable when sound library and information services are provided in different institutions, especially electronically. Through e-resources, education can get to people from physical as well as remote locations.

The information environment has changed rapidly with technological developments to facilitate easy access to information by different users. The developments in Information and Communication Technology (ICT) have revolutionised changes in information processing, storage, dissemination, distribution and access. ICT in the library involves the Information, and Communication Technology facilities use in libraries to perform library operations. It has resulted in a paradigm shift from the traditional library system of handling information packaged in printed format to a technological system. ICT in the library operations has changed the format of library operations and services placed much emphasis on access as against ownership of the collection. The ease and speed of access to information resources have increased tremendously (Omekwu & Eruvwe, 2014).

Akanni (2007) pointed to the globalisation of library services engendered by the advances in ICT and the emergence of virtual libraries is perhaps the most significant development of our time. Traditionally, the library has its role as the place for collection, organisation, preservation and dissemination of information materials gathered in a place. It has however changed as libraries now lay more emphasis on dissemination of information that has been collected, organised and stored not only in a given library but from one library to another or between libraries. Consequently, this is the birth of virtual library using modern technology to facilitate dissemination of information to information seekers (Madu, 2006). The current library services in the 21st-century focus more on digital, virtual or libraries without borders. The transformation and transition, according to Abubakar (2011), are accompanied by sophistication in the changing pattern as the information needs of users continue to multiply. One of the beauties of the concept of the virtual library system lies in its ability



to provide access to a wide range of services to users or members of a virtual library community irrespective of their locations.

The development of ICT has provided an opportunity for online reference services based on the questions and answer type of assistance provided in the traditional inter-personal reference. Asynchronous tools such as e-mail, subject gateways and interactive social media tools like chat rooms (Whatsapp, 2go, facebook), virtual reference desk and 'ask- me' are rapidly replacing the conventional means of post or in-person reference enquiries. Ask-a-Librarian allows the user to click on ask a librarian link to send a formatted enquiry to the reference librarian (Ndukwe, 2012). The reference librarian either provides an answer, links to resources or a link to a subject specialist. Interactive tools now allow reference interviews online thereby improving access to information

The advent of the virtual library has begun to transform the collection development of libraries. Akanni (2007) opines that a lot of electronic publications abound to which library can subscribe to, in addition to converting its texts into digital formats. Such electronic information resources include e-journals, ebooks, e-databases (EBSCOHOST, HINARI, JSTOR, OARE, MIT, AGORA, Science direct, IEE) OPAC, e-thesis and dissertations. It can empower libraries to develop blended and hybrid collections towards meeting the information needs of their clientele.

Current Awareness Services (CAS) has been a necessary means for keeping users updated in their areas of interest. According to Ndukwe (2012), a current awareness service may be as simple as a copy of the table of contents or a bulletin containing bibliographic records of articles selected from the current issues of journals and other materials and usually organised by subjects. Libraries now compile current awareness bulletins using predefined search strategy and running on the database either on CD-ROM or online periodically and getting the desired output. Subject to copyrights, the output can also be stored on a local system, and disseminated online (internet, intranet) and offline (print, CD-ROM, mail). With CAS powered by ICT, library users, especially researchers are kept abreast with latest development, thus opening up the frontiers of research for nation-building.

The terms library co-operation, library networking, library collaboration, library consortia, interlibrary loan and document delivery and access services are some of the terms used interchangeably to describe formal and informal cooperation, partnership and resource sharing activities among libraries. Rydling (2007) cited in Muhammad (2014), defines library resource sharing as the process whereby resources of a group or network of libraries are made available to the total of persons (users) entitled to use one of the libraries. The necessity of resource sharing was born out of the fact that no single library, irrespective of its level of funding, can acquire all information resources needed to satisfy the information needs of its clients. With the advent of ICTs, resource sharing among libraries such as library co-operation, interlibrary loans, co-operative acquisition, co-operative storage like National Union Catalogue (NUC), bibliography of bibliographies and reference services have adequately made available library resources to users with ease, irrespective of their needs and proximities. Advances in ICTs have enabled sharing and exchange of information for various purposes worldwide. This development has placed libraries in an advantageous position that will enable them to serve the information needs of the global village. It has become imperative for Nigerian libraries to make their intellectual collections available for global access via the internet in order to fit into the new direction (Nkanu and Okon, 2010).

Saleem, Tabusum and Batcha (2013) revealed that the use of ICT in libraries enhances users' satisfaction. It provides numerous benefits to library users. Some of the benefits are:

- i. Provide speedy and easy access to information
- ii. Provides remote access to users
- iii. Provides round the clock access to users
- iv. Provides access to unlimited information from different sources
- v. Provides information flexibility to be used by any individual according to his/her requirements



- vi. Provides increased flexibility
- vii. Facilitates the reformatting and combining of data from different sources
- viii. Provision of Web access to OPACs
- ix. Electronic document delivery
- x. Networked information resources
- xi. Delivery of information to user desktops
- xii. Online instructions
- xiii. Online readers advisory services

Vijayakumar and Vijayan (2011) argued that ICT has a wide-ranging impact on library and information works. They summarised the impact on a Table 1, as shown below:

Table 1. Library and information works

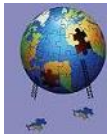
S/N	Information Activity	Conventional Method	New Technology
1	Generate, Originate	Writing, Typing	Word Processing, Text editing, Character Recognition, Voice Recognition
2	Preserve, Store	Manuscript, Paper-Print Media	Electronic Publishing, Magnetic Storage, Videotext, Tele-text. Computer disk, ROM
3	Process	Classification, Cataloguing, Indexing	Electronic data processing, Artificial intelligence/ Expert systems.
4	Retrieval	Catalogues, Indexes	Database management system, Information retrieval off-line, On-line.
5	Disseminate/ Communicate	Lists, Bibliographies, Abstracts, Hard Copies	Electronic mail, Electronic document delivery, Computer conferencing
6	Destroy	Physical weeding	Magnetic erasers, Optical erasers, re-use the medium

Issues in ICT Application in Nigerian University Libraries

A good number of factors hinder the adequate provision of library and information services and resources by university libraries in Nigeria. Government-owned university libraries, according to Ifijeh (2011), are suffering from a low budgetary allocation for education. Akin and Ajayi (2008) also noted that the Nigerian education sector and in particular Nigerian university libraries are yet to recover from the economic downturn of the 1980s and the subsequent impact of this is the under-funding of the university libraries. Ojuade and Ochai (2000) earlier on took note of funding as the crisis facing the Nigerian university libraries and the book industry. If the university libraries want to meet the expectations of their clientele and the current wave of technological developments in the library and information services which will even facilitate their contribution to achieving education for all, improved funding is needed (Akin and Ajayi, 2008). Many other improvement strategies emanate from this; like automation, acquisition, installation and utilisation of electronic resources and facilities including the internet, subscribing to and maintenance of access to databases in different disciplines as well as training and re-training of staff when the fund is adequately available. Nwezeh and Shabi (2011) recommended that to serve the patrons better, the university libraries should re-address the issue of library orientation for first-year students, aggressive and large scale user education, providing functional library building and making library environment pleasant and comfortable amongst other things.

Fagbe, Amanze, Oladipo, Oyenuga and Adetunji (2015) identified the following constraints to adequate ICT availability and application in academic libraries in Nigeria:

- i. Lack of trained ICT workforce
- ii. Peoples negative attitude to changes in ICT
- iii. Technical problems in the course of using ICT
- iv. The conversion of analogue information into digital format and its storage capacity place a high demand on the bandwidth of the University



- v. Crashing of a computer due to virus, malware, hackers can have a negative effect of loss of data and exposure of information to non-users
- vi. Non-availability of funds
- vii. Poor maintenance culture

Philip, Oluwagbemi and Oluwaranti (2010) observed that tertiary institutions in Nigeria lack adequate ICT infrastructure to key into the opportunities offered by the cyberspace. The study stated that personal computers are available in most Nigeria tertiary institutions, but they are not readily accessible to students because of the few computers available to students. Also, the necessary software needed for practical works are not available where they are available; they are not accessible because of the low ratio. Philip, Oluwagbemi and Oluwaranti (2010) also remarked that for internet connectivity in most tertiary institutions in Nigeria, the bandwidth subscribed is too small to support any meaningful activity during peak period. He also noted that, where ICT infrastructures like multimedia projectors are available, other infrastructures like interactive whiteboards are lacking.

Akomolafe (2009) investigated the strategies and challenges of ICT infrastructure development for university education in Nigeria. The study further stated that the available infrastructure for ICT in most Nigeria universities was grossly inadequate. It identified that most university students still visit the internet off campus because of too much demand on internet on-campus. Respondents in the study indicated that computers available for internet browsing were inadequate to meet the demand for its usage. He observed that much attention was given to computers and the internet while other ICT infrastructures such as CD-ROM, radio, tape, television, mobile phones and others were lacking and that the level of awareness on the extent to which ICT could be useful in education was still low, noting that many lecturers were not conversant with ICT usage in classroom situations.

Research Design

The descriptive survey research design was adopted for this study to determine the roles of Information and Communication Technology (ICT) as a change agent for university libraries.

The population of the Study

The population of this study comprised of all the professional librarians in selected university libraries in Kwara State, Nigeria. The selected university libraries include University of Ilorin Library, Ilorin, Kwara State University Library, Malete and Al-Hikmah University library, Ilorin. The professional librarians in the three university libraries were fifty (50).

Sample and Sampling Techniques

The sample for this study consists of the entire population. Since the population is a manageable size, the study adopted a total enumeration sampling technique in sampling the entire population.

Instruments for Data Collection

The researchers used a questionnaire for data collection. A structured questionnaire titled; Role of Information and Communication Technology (ICT) As Change Agent for University Libraries Questionnaire (RICTCAULQ) designed and administered to the respondents for data collection.

Validation of the Instruments

At ensuring that the questionnaire is capable of eliciting the required information from the respondents the only instrument for this study, it was subjected to face and content validation. It means that the draft instrument was made available to three experts in a library and information Science at Kwara State University, Malete to peruse and raise necessary observations, corrections and amendment to strengthen the instrument.



Methods of Data Analysis

All duly completed copies of the questionnaire from the respondents were and subjected to analysis. The use of descriptive and inferential statistics for the analysis was adopted. Descriptive statistics such as frequency counts and percentages were used to analyse the research questions. The Chi-Square was used test of hypotheses in analysing the two null hypotheses.

RESULTS, and DISCUSSION

Response Rate

Out of the 50 copies of the questionnaire distributed to university library staff, a total of 49 were returned, representing an overall return rate of 98.0%. The breakdown shows that 23 (46%) were received from University of Ilorin library; 16 (32%) were from Kwara State University Library, Malete; while 10 (20%) were from Al-Hikmah university library, Ilorin.

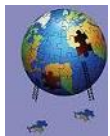
Research Question 1: What are the types of Information and Communication Technology (ICT) facilities available in university libraries in Kwara State?

Table 1. Frequency and percentage distribution of responses on the types of ICT facilities available in university libraries

S/N	Items	Available		Not Available	
		F	%	F	%
1.	Personal computers	48	98.0	1	2.0
2.	CD-ROMs	47	95.9	2	4.1
3.	fax machine	29	59.2	20	40.8
4.	Internet connectivity	47	95.9	2	4.1
5.	Printers	49	100	0	0.0
6.	Scanners	44	89.8	5	10.2
7.	Marker space facilities	28	57.1	21	42.9
8.	Webinar Facilities	33	67.3	16	32.7
9.	Webcast facilities	35	71.4	14	28.6
10.	Podcast facilities	34	69.4	15	30.6
11.	network facilities,	44	89.8	5	10.2
12.	online databases	49	100	0	0.0
13.	photocopiers	49	100	0	0.0
14.	DVDROM,	48	98.0	1	2.0
15.	projectors,	43	87.8	6	12.2
16.	Library Management Software	48	98.0	1	2.0
17.	Radios	36	73.5	13	26.5
18.	Television sets	38	77.6	11	22.4
19.	electronic notice boards	33	67.3	16	32.7
20.	Videoconferencing and teleconference technologies	31	63.3	18	36.7
21.	UPS	46	93.9	3	6.1
22.	VSAT Main Server	37	75.5	12	24.5
23.	VSAT Proxy Server	34	69.4	15	30.6
24.	Satellite Dish	34	69.4	15	30.6
25.	Websites	42	85.7	7	14.3
26.	Local Area Network	38	77.6	11	22.4
27.	Municipal Area Network	34	69.4	15	30.6
28.	Wide Area Network	41	83.7	8	16.3
	Weighted Average	40	81.6	9	18.4

Source: Field Survey, 2019

The result of data in Table 2 showed an overall percentage where the majority of the respondents 40 (81.6%) indicated that all the types of ICT facilities identified were available in their university library. It implied that numerous ICT facilities are available in the university libraries in Kwara State. This finding is in agreement with Anunobi and Edoke (2010) who examined the use of ICT facilities in Nigeria university libraries and discovered that several ICT facilities are available in Nigerian university libraries. This finding is also in consonance with Omekwu and Eruvwe (2014) who examined the application of information and communication technology (ICT) in Delta State



Polytechnic Library, Nigeria and revealed that different ICT facilities are available in the library. It is evident from the results that Nigerian university libraries have fully embraced ICT facilities for library operations and services. It is a welcome development.

Research Question 2: What are the types of Information and Communication Technology (ICT) facilities used in university libraries in Kwara State?

Table 3. Frequency and percentage distribution of responses on the types of ICT facilities used in university libraries

S/N	Items	Utilised		Not utilised	
		F	%	F	%
1.	Personal computers	46	93.9	3	6.1
2.	CD-ROMs	44	89.8	5	10.2
3.	fax machine	33	67.3	16	32.7
4.	Internet connectivity	47	95.9	2	4.1
5.	Printers	49	100	0	0.0
6.	Scanners	44	89.8	5	10.2
7.	Marker space facilities	35	71.4	14	28.6
8.	Webinar Facilities	32	65.3	17	34.7
9.	Webcast facilities	30	61.2	19	38.8
10.	Podcast facilities	38	77.6	11	22.4
11.	network facilities,	45	91.8	4	8.2
12.	online databases	49	100	0	0.0
13.	photocopiers	49	100	0	0.0
14.	DVDROM,	48	98.0	1	2.0
15.	projectors,	49	100	0	0.0
16.	Library Management Software	46	93.9	3	6.1
17.	Radios	36	73.5	13	26.5
18.	Television sets	39	79.6	10	20.4
19.	electronic notice boards	37	75.5	12	24.5
20.	Videoconferencing and teleconference technologies	35	71.4	14	28.6
21.	UPS	42	85.7	7	14.3
22.	VSAT Main Server	32	65.3	17	34.7
23.	VSAT Proxy Server	30	61.2	19	38.8
24.	Satellite Dish	41	83.7	8	16.3
25.	Websites	43	87.8	6	12.2
26.	Local Area Network	42	85.7	7	14.3
27.	Municipal Area Network	33	67.3	16	32.7
28.	Wide Area Network	39	79.6	10	20.4
	Weighted Average	40	82.6	9	17.4

Source: Field Survey, 2019

Table 3 revealed that majority of the respondents 40(82.6%) indicated the utilisation of all the ICT facilities identified in their university libraries. The result implies that university libraries in Kwara State are using various ICT facilities in services delivery and resources management. This finding is in agreement with Afolabi and Abidoye (2011) revealed that many libraries had embraced the use of information technology to help them for effective library services. The finding is also corroborated by Aina (2004) who extensively discussed several ICTs applied in Nigerian university libraries. It indicated the utilisation of all the ICT facilities available in university in Kwara State Nigeria to the maximum, a heartwarming situation.

Research Question 3: What are the roles of ICT in university libraries in Kwara State?

Table 4. Frequency and percentage distribution of responses on the roles of ICT in university libraries

S/N	Items	Agreed		Disagreed	
		F	%	F	%
1.	Speedy and easy access to information	49	100	0	0.0
2.	ICT Facilitates the reformatting and combining of information from different sources	49	100	0	0.0



3.	It enhances effective library services	48	98.0	1	2.0
4.	ICT provide remote access users	48	98.0	1	2.0
5.	Electronic information storage	48	98.0	1	2.0
6.	Electronic processing of information	47	95.9	2	4.1
7.	E-library and e-resources are becoming the order of the day in library and information practice	49	100	0	0.0
8.	Automated Teller Machine (ATM) Library services	35	71.4	14	28.6
9.	Marker space services	25	51.0	24	49.0
10.	Webinar services	29	59.2	20	40.8
11.	Webcast services	26	53.1	23	46.9
12.	Podcast services	31	63.3	18	36.7
13.	Libraries turning into cyberspace (Virtual library services)	45	91.8	4	8.2
14.	Speedy information services delivery	49	100	0	0.0
15.	Online reference services (Chat rooms	48	98.0	1	2.0
16.	e-databases	46	93.9	3	6.1
17.	Online current awareness bulletins	47	95.9	2	4.1
18.	Resource sharing with other libraries	47	95.9	2	4.1
19.	Provides round the clock access to users (24 hours services)	44	89.8	5	10.2
20.	Provides access to unlimited information from different sources	48	98.0	1	2.0
21.	Provides information flexibility to be used by any individual according to his/her requirements	48	98.0	1	2.0
22.	Provision of Web access to OPACs	49	100	0	0.0
23.	Electronic document delivery	45	91.8	4	8.2
24.	Delivery of information to user desktops	46	93.9	3	6.1
25.	Online readers advisory services	41	83.7	8	16.3
26.	Magnetic erasers, Optical erasers, re-use the medium	38	77.6	11	22.4
27.	Electronic mail, Electronic document delivery, Computer conferencing	46	93.9	3	6.1
	Weighted Average	43	88.5	6	11.5

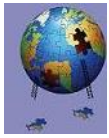
Source: Field Survey, 2019

Table 4 showed an overall percentage where 43 respondents representing 88.5% agreed that all the constructs are roles of ICT in university libraries in Kwara State. The Table showed that the respondents agreed that speedy and easy access to information, ICT facilitates the reformatting and combining of information from different sources, speedy information services delivery, provision of Web access to OPACs among others. Findings of the study corroborated by Saleem, Tabusum and Batcha (2013) revealed that the use of ICT in libraries enhances users' satisfaction. It provides numerous benefits to library users. The result is also in alignment with Afolabi and Abidoye (2011) reported that many libraries had embraced the use of information technology to help them for effective library services.

Research Question 4: What are the challenges militating against the use of ICT in university libraries in Kwara State?

Table 5. Frequency and percentage distribution of responses on the challenges militating against the use of ICT in university libraries

S/N	Items	Agreed		Disagreed	
		F	%	F	%
1.	Low budgetary allocation to libraries	41	83.7	8	16.3
2.	Lack of trained ICT workforce	32	65.3	17	34.7
3.	Staff and users negative attitude to changes in ICT	33	67.3	16	32.7
4.	Technical problems in the course of using ICT	40	81.6	9	18.4
5.	The conversion of analogue information into digital format and its storage capacity place a high demand on the bandwidth of the University	32	65.3	17	34.7
6.	Crashing of a computer due to virus, malware, hackers that can have a significant adverse effect of loss of data and exposure of information to non-users	36	73.5	13	26.5
7.	Poor maintenance culture	34	69.4	15	30.6
8.	Bandwidth subscribed is too small to support	26	53.1	23	46.9
9.	Available infrastructure for ICT in most Nigeria universities was grossly inadequate	36	73.5	13	26.5



Weighted Average	34	70.3	15	29.7
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Source: Field Survey, 2019

The result of data in Table 5 showed the percentage distribution of respondents on the challenges militating against the use of ICT in university libraries in Kwara State. The table revealed an overall percentage where the majority of the respondents, 34 (70.3%) agreed to all the constructs as challenges militating against the use of ICT in university libraries. The Table revealed that that low budgetary allocation to libraries, technical problems in the course of using ICT, Crashing of a computer due to virus, malware and hackers have a huge negative effect of loss of data and exposure of information to non-users. These among others are all challenges militating against the use of ICT in university libraries in Kwara State. This finding is in agreement with Fagbe, Amanze, Oladipo, Oyenuga and Adetunji (2015) who revealed several constraints to sufficient ICT availability and application in academic libraries in Nigeria. The results also agreed with Ifijeh (2011) who earlier reported that Nigerian university libraries are suffering from a low budgetary allocation for education.

Test of Hypotheses

The two null hypotheses of the study were tested using Chi-Square Tests. The summary of the test of hypotheses are presented in Tables 5 and 6 as follows:

H₀₁: There is no significant difference in ICT facilities available in federal, state and private university libraries in Kwara State, Nigeria.

Table 6. Summary of Chi-Square Tests regarding the difference in ICT facilities available among federal, state and private university libraries in Kwara State

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	170.411	27	.000
Likelihood Ratio	203.328	27	.000
Linear-by-Linear Association	10.247	1	.001
N of Valid Cases	1372		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.0

Analysis of data in Table 6 revealed that the Chi-Square value for the differences in ICT facilities available in federal, state and private universities was as 170.4 with 27 degrees of freedom and a Significance Probability less than 0.00001, showing a very highly significant result. It showed that Chi-square = 170.4, $p < 0.05$. Therefore, the null hypothesis was rejected; it states that there is no significant difference in ICT facilities available in federal, state and private universities in Kwara State. It implied that ICT facilities available in universities in Kwara State differs significantly.

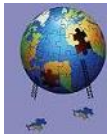
H₀₂: There is no significant difference in the usage of ICT facilities in federal, state and private universities in Kwara State, Nigeria.

Table 7. Summary of Chi-Square Tests regarding the difference in the usage of ICT facilities among federal, state and private universities in Kwara State

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	153.922	27	.000
Likelihood Ratio	183.611	27	.000
Linear-by-Linear Association	9.917	1	.002
N of Valid Cases	1372		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.54

Analysis of data in Table 7 revealed that the Chi-Square value for the differences in the usage of ICT facilities among federal, state and private universities was 153.9 with 27 degrees of freedom and a Significance Probability less than 0.00001, showing a very highly significant result. This showed that



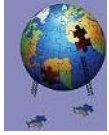
Chi-square = 153.9, $p < 0.05$. Therefore, the null hypothesis that states that there is no significant difference in the usage of ICT facilities in federal, state and private universities in Kwara State, Nigeria was rejected. It implied that the level of usage of ICT facilities in universities in Kwara State differs significantly.

Conclusion, and Recommendations

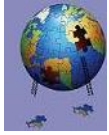
The study concludes that Information and Communication Technology has changed the face of university libraries in Kwara State. University libraries are making a serious effort to meet user's information need in this era by making ICTs available and applied to university library's services. The Federal and State government, including proprietors of private universities and other stakeholders, should ensure adequate funding of university libraries in the light of active investment rather than a passive obligation. Adequate funding will help libraries in the provision of necessary ICT infrastructures and facilities. There is an urgent need for the improvement of power supply in university libraries in order to enhance maximum use of the ICT facilities because they depend on light (electricity) to function. The current efforts of the Federal Government of Nigeria aimed at providing stable energy to federal universities should be implemented and sustained. Librarians in Nigeria should now realise that ICT is now the tool needed to move university library forward and also to meet client need, thereby making their library relevant and increased funding of ICT facilities should be sustained by the university management.

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