

5-12-2019

Information and Communication Technology Facilities Use as Correlates of Quality Library Service in First Generation Universities, Southwest, Nigeria

Rasaq Oyekanmi Oyewo

Oyo State College of Agriculture, Igboora, Oyo State

Samuel Shina AKINTONDE

Oyo State College of Agriculture, Igboora, Oyo State, samuelakintonde@gmail.com

Idris Tunde SALAU

Oyo State College of Agriculture, Igboora, Oyo State, smartlekan@gmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Scholarly Communication Commons](#)

Oyewo, Rasaq Oyekanmi; AKINTONDE, Samuel Shina; and SALAU, Idris Tunde, "Information and Communication Technology Facilities Use as Correlates of Quality Library Service in First Generation Universities, Southwest, Nigeria" (2019). *Library Philosophy and Practice (e-journal)*. 3036.

<https://digitalcommons.unl.edu/libphilprac/3036>

**Information and Communication Technology Facilities Use as Correlates of Quality
Library Service in First Generation Universities, Southwest, Nigeria**

Rasaq Oyekanmi OYEWO*
oyekanmi97@gmail.com
08063406029

Samuel Shina AKINTONDE*
samuelakintonde@gmail.com
08030742533

Idris Tunde SALAU*
smartlekan@gmail.com
07032280085

*Library Department, Oyo State College of Agriculture and Technology, P. M. B. 10 Igboora,
Oyo State, Nigeria

Abstract

Information and communication technology (ICT) use studies in libraries are often approached by generalising the ICT facilities without categorisation, however, not all ICT facilities are available, accessible and used in libraries. In the case of libraries where they are available, the dearth of literature exists as to the contribution of each category to the overall perceived benefits of the ICT to library services. Based on the categorisation by Gama (2007), this study was carried out to determine the influence of ICT facilities viz; computing facilities, film/tape-based facilities, reproduction facilities, telecommunication facilities and broadcasting facilities on perceived benefits to library services in the first generation universities in the southwest, Nigeria. A survey of correlational type was conducted using a total of enumeration of 107 staff in the study area. Data was collected through an adapted questionnaire and Pearson's Product Moment Correlation was conducted to determine the correlation of each ICT facilities with perceived benefits to library service while multiple regression was conducted to determine the relative contribution of each independent measures to the dependent measure. The study found that only computing, broadcasting and telecommunication facilities influenced ICT benefits to library service, though all of the ICT facilities put together relatively contributed to the perceived benefits of ICT to library services. The study, therefore, recommended that film/tape-based facilities and reproduction

facilities should be given the required attention by libraries in service delivery so as to better serve the library clients qualitatively.

Introduction

Information and Communication Technologies (ICTs) are tools that facilitate the production, transmission and processing of information (Nkanu and Nkebem, 2011). The authors categorised these tools to include computer facilities (computers, scanners, printers, UPS and power point, projectors); computer software resources (online databases, CD-ROMs, library application software, Internet and storage media); audio-visual media/equipment (satellite connection, digital cameras, video compact disk (VCD), digital video disk (DVD) radio, television, audio tapes, video tapes and photocopiers; and communication media (telephone-intercom and global system of mobile communication (GSM).

ICTs have shaped identities for library staff, who are now more of information providers and facilitators than mere custodians of information/knowledge (Abdelrahman, 2009). According to Abubakar (2011), the provision of ICT is generally perceived as a crucial development that will place library service at the heart of the world's emerging "information society". Services provided by Academic libraries such as reference services, lending service, current awareness service, reprographic service etc. could be enhanced with the use of ICT facilities such as Internet, CD-ROMs, digitised materials, library catalogues, printers, scanners etc. The quality of library services in Nigerian academic libraries will equally be enhanced when ICT usage is intensified in library operations and services.

Research by Achonna (2005) shows how ICTs are affecting the services of academic libraries in India. The author emphasises the need for ICT- driven academic libraries in India by stating that ICT-driven academic libraries act as intermediary centre for improving literacy, awareness, welfare and cultural re-awakening, it is the intention to put libraries in the right perspective, to arrive at a single window interacted environment for information concerned with all aspects of human life In India as well, the emergence of rural digital libraries and application of ICTs is helping solve the problems of developing libraries.

The ICT facilities that are expected in academic library include computer hardware facilities (computers, scanners, printers, UPS, and power point projectors), computer software resources (online databases, CD-ROMs, library application software, Internet connectivity and

storage media), audio-visual media/equipment (satellite connection, radio, television, audio tapes, video tapes, DVD/VCD, digital cameras and photocopiers) and communication media (telephone-intercom and GSM).

Adekunle, Omoba and Tella, (2007) also categorised these facilities by medium into five groups as follows: computing facilities and services; film/tape-based facilities – microfiche reader, micro card reader, microprint reader, slide projector, reel to reel recorder, tape recorder, video machine etc; reproduction facilities – photocopying machine, duplicating machine etc; telecommunication facilities – telephone, GSM, telex, telegram, fax machine, satellite etc; broadcasting facilities – radio, television, cable transmission (Adebowale, Okiki and Yakubu, 2013).

Adekunle and Olorunisola (2006) categorised ICTs by usage into four viz: capturing technologies, communication technologies, storage technologies, and display technologies; while Adefarati (2002) gave another concise classification of ICTs by usage as follows: ICT-based resources, including computers connected to Internet, CD-ROM, audio cassettes, video-cassettes, photocopiers, printers, software used by libraries etc; ICT-based activities, including data processing, circulation, cataloguing, bibliography, serial control, in-house database; and ICT-based library service including CD-ROM searching, online information service, news clipping, scanning service, online reservation services etc.

However, majority of the studies about the usage of ICT in Nigerian libraries do nebulously viewed ICT in libraries as one entity while numerous studies have reported that ICTs are available and are being used in Nigerian university libraries. This general disposition to the concept is misleading as not all ICT facilities are actually available or being used for library services especially in Nigerian university libraries. It is against this backdrop that this study determined the ICT facilities' contribution to the perceived benefits to library services.

Objectives of the Study

The objectives were to:

- i. Determine the relationship between computing facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.
- ii. Determine the relationship between film/tape-based facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.

- iii. Determine the relationship between reproduction facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.
- iv. Determine the relationship between telecommunication facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.
- v. Determine the relationship between broadcasting facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.
- vi. Establish the relative contribution of ICT facilities to the perceived benefits of ICT to library services.

LITERATURE REVIEW

Library facilities are the resources needed in the library in order to facilitate effective service delivery. Facilities such as library building, photocopying and ICT network facilities, computers, micro film readers/ printers add quality service delivery. Availability of library facilities means ensuring their presence in the library for immediate use (Aguolu & Aguolu, 2002). Abubakar (2011) opined that library facilities comprised of reading carrels, air conditioners, fans, shelves, kardex, toilets facilities, projectors, television, radio, journal display racks, Circulation desks, kicks-Steps, trolleys, pick up vans/trucks, periodical racks, signage, and translators. Others includes computing facilities, film /tape based facilities –microfiche reader, micro card reader, video machine, reproduction facilities- photocopying machine, duplicating machine, telecommunication facilities- telephone, GSM, Telex, telegram, Fax machine, satellite, broad casting facilities- radio, television, cable transmission (Adekunle, Omoba and Tella, 2007).

In a research study on Users' Perceptions of the Use of Academic Libraries and Online Facilities for Research Purposes in Nigeria Adekunle, Omoba and Tella, (2007) found that, majority of the respondent visited the library to use internet facilities. Adetunji (2014) articles' on Awareness, Availability and Utilisation of ICT Facilities for Effective Service Delivery in Academic Libraries in Nigeria revealed that the academic library users visited the library purposely to use any of the following facilities computers, internet, fax machines, online public access catalogue, scarnners, printers, photocopies, mobile phones with WAP wireless application protocol and reprographic machines available in the library. However, guidance is found to be very important for the proper utilisation of services such as the use of signage; shelve guide, library catalogue cabinet or OPAC etc. (Afolabi and Abidoye, 2012).

Several scholars, more specifically Rodriguez and Wilson (2000), Akpan-Atata and Enyene (2014), all described the ICT in terms of its function of storage and dissemination of information. In this context, ICT is basically seen as a tool which when properly utilised in libraries or any other organisation could help the users achieve their aim. Ani, Esin, and Edem, (2005) described the ICT as the type of technology that link the computer to the global telecommunication network to make possible for users to acquire, process, compute, store and disseminate oral, printed and pictorial information. Although this definition adequately supports the conception of ICT as a tool, it went further to add the process characteristics, by presupposing that ICT embraces all the technologies that enables the handling of information which in turn facilitates the different forms of communication between man and the electronic systems such as the radio, television, cellular phone, computer networks and satellite systems. Anunobi and Nwakwuo (2008) defined the ICT as the possibilities offered by the convergence of data processing technologies, electronic data, media and telecommunication, a convergence that have become more manifest over the years. He further categorized ICT into groups; traditional and new ICTs. Traditional ICT includes radio, television, fixed line telephone and facsimile machine which have been in existence for some time.

The new ICTs are the modern computer and data applications, accessible through computers such as E-mails, internet, CD-ROM etc. Bello (2000) describe the ICT as a by- product of the digitization era, it is a tool for processing, storage and retrieval of information in coded form, and its transportation and exchange between sources and terminals electronically. Badaru and Oyegunle (2012) referred to the ICT as a change agent, he posit that the emergence of the ICT has completely changed the nature, attributes and behaviour of information. This view is anchored on the supposition that advances in ICT have facilitated the advancement of all professions, for instance, ICTs such as communication satellite, cable television networks, wireless telephones systems, computer network systems and the internet have made much impact on society.

Similarly, Bichi (2008) argued that the advancement of ICT facilitates the advancement of all profession through the provision of scientific research and discovery made accessible to scholars without the limiting barriers of time, space, distance and language. This therefore infers that the availability and utilisation of ICT have reduced the challenges caused by delay in information access and use, and has as well made information sharing effective and efficient. Thus, from a broad although academic perspective, information and communication technology

(ICT) facilitates communication between teachers and students. It provides students with additional opportunities to write, edit, and undertake multi-media projects.

Thus, from the various descriptions given, Information and Communication Technology (ICT) can be referred to as the combination of disciplines covering computer technology, telecommunications technology, satellite technology, reprographic technology, printing technology, and CD – ROM technology. It is also the fusion of information science and technology. Here, information science comprise of set of practices and related disciplinary studies which is concerned with the transmission, organisation, storage, retrieval and use of information.

Situating ICT in the context of Librarianship therefore conceptualizes it as the study or use of processes especially computers, telecommunications, etc. for storing, retrieving and disseminating information of all kinds. It is also in tandem with the objectives of ICT in libraries as expressed by Crosby (2001) which are: that ICT supports technical functions in libraries which are associated with technical processing and circulation work; supports information storage, retrieval and dissemination systems; supports the management of information services for librarians, especially in analysing library statistics; and can be used in services and orientation courses for practicing Librarians, continuing education programmes for teaching of library and information science, etc. Taking a similar view, but expressed in a more lucid point is the position of Aina (2004) who asserts that Information and communication technology (ICT) has radically transformed most of the services provided by a library ... is heavily utilised in the storage, processing and dissemination of information. It has made the organisation very efficient, the delivery of basic information services effective and the dissemination of information to users easier.

He also stated that these progress and impact of ICT on libraries could not have been achieved without its ability to eliminate multiplicity of repetitive task and routine within the system. Sequel to the definition of ICT highlighted, it is imperative to note that the various meanings of ICT described earlier also indicated that it is not limited to seeing ICT as a tool composed of hardware or software but acknowledged the important role of Man and the goals he sets for technology, the values employed in making these choices, the assessment criteria used to decide whether he is controlling the technology and as well as being enriched by it.

At present, ICT includes several technological components which might have been highlighted by one of the scholars reviewed. These components are: computer technology,

software technology, CD – ROM technology, communication technology, and satellite technology, reprographic, micrographic and printing technology. Thus, the summation of these components of information and communications technology (ICT) represents the body of the concept as a composite. Therefore, our conceptual framework on ICT is adequately defined while examining these separate components.

Computer Technology, which is the use of computer technology has made remarkable improvements in the information transmission process in all fields of human endeavour during the last three decades. Highly sophisticated information services ranging from elaborate abstracting and indexing services to computerized databases in most disciplines are in use all over the world. A computer can be divided into three parts: hardware, software and human ware (Aina, 2002), all three components are needed before it can perform its multiplicity of functions. The equipment and the accessories constitute the hardware, while the set of instructions that enable the computer to perform all kinds of functions is known as software. It is the software that informs the hardware on what function to carry out. The role of human therefore is to manipulate both the hardware and the software to achieve predetermined purpose thus; it is referred to as the human ware (Aina, 2002).

According to Dafiaghor (2012) a computer is a device that processes data or information. According to him, the data is normally held within the computer as it is being processed. He went further to identify seven types of computers under classification by use which includes: World processor, home computer, personal computer, desk top computer, and workshop, lap-top and embedded computer. Dike (2005) defined the computer as “a machine that can be programmed to accept data and store it away for safe keeping or later for use.” According to Aguolu and Aguolu (2002), computer technology have offered new and efficient ways of storing very large quantities of data or records, and have also an exceptional capacity to manipulate, scan and search for data, when properly programmed. They further stated that computer can search and manipulate data or records to produce outputs tailored to meet the needs of individual users on the basis of carefully constructed subject interest profiles, and this have made possible rapid production of current awareness and selective dissemination of information services highly valued by scholars. The computer has two capabilities that cannot be found in print and microform; feedback and interactivity (Aguolu and Aguolu, 2002). This implies that computers can provide instantaneous

access to information stored in the machine readable database, regardless of the location of enquirer.

Software technology, all computers need instructions to manipulate data received, these instructions known as programmes or software specify how information should be rearranged for machine storage, and how to sort and format information to suit output specifications. Computer software can either be system software or application software. Patil and Kooganuramath (1994) further subdivided the former into operating systems and programming languages. The activities of all the hardware and software in a computer system are coordinated by the operating system software. The other software is referred to as the application software, which is written individually to support general task, such as word processing, statistical processing, database management system, text retrieval etc. (Aina, 2002). Application software readily applicable in library and information science are: word processing, desktop publishing, spreadsheet, database management systems, library software and statistical applications. Other software specifically designed for libraries as compiled by Dyer and Grunson (1988) include; Mastalib, Alice, Glas, X-lib, Tinlib, CDS/ISIS etc. the relevance of these software is to carry out effective library services.

CD-ROM technology, the exponential growth of information and information sources has resulted in point Medias becoming obsolete as well as those skilled in their retrieval, while the CD-ROM takes its place. The CD-ROM is referred to as compact disc read only memory. It is an optical disc of 120mm diameter with a hole of 15mm at the centre, and thickness of 1.2mm (Okoye, 2004; Madu and Adeniran, 2005). A standard CD-ROM is estimated to support 660 Mbyte (692,060,000 bytes) and can store up to 250,000 A4 pages of text or approximately 100,000,000 words (Okoye, 2004). The CD-ROM has certain important features which makes it indispensable for library use. These are:

Storage capacity, although small in size, CD-ROM technology has very large storage capacity thereby making it possible to overcome the limits of search simulation as practice tool for teaching on-line searching. Because of its format, it is easy to publish large databases such as MEDLINE, DISSERTATION ABSTRACTS, and ERIC.

Communication Technology, the main purpose of communication technology is to transmit information in the form of signals between remote locations, using electrical or electromagnetic media as carriers of these signals. Telecommunication has achieved remarkable advances in recent years, and the major areas of achievement are; audio technology, teletex and video tex, fax, on-

line search, e-mail, satellite technology, fibre optics, ISDN, Networking, teleconference, cellular telephone, voice mail, pagination, communication etc. (Patil and Kooganuramath, 1994).

Audio-Visual Technology, televisions, motion pictures and video discs are major components of this technology. Video-tex and teletex are newer innovations, whose main is to aid the viewing of data in an interactive system for transmitting text or graphics stored in computer database through ordinary telephone line on a television screen. Specifically, the teletex is a non-interactive form of video text, while facsimile transmission, online information retrieval and electronic mail are all grouped with audio-visual technology, they are all serving as dynamic sources of information, education and recreation.

Satellite Technology, satellite technology constitutes an important component of ICT. This is because when combined with computers, processed information can be transmitted over long distance. The basic component of satellite technology is fibre optic: These are fibre of glass which has been developed with attenuation for pulses of light relatively below the attenuation copper cable for electrical impulses. It does not only allow transmission over larger distances, but carries much larger quantities of information.

ISDN, the ISDN is referred to as integrated services digital network, it is a global telecommunication network, accessed via a standard interface with the capability of supporting a range of traffic types. This digital network allows user to connect their telephones, data, full text of documents, and low speed video terminals to the same link. ISDN services as a transmission medium through which messages travel. And this message is represented by signals and codes.

Network control, networks are in various forms ranging from the local areas network (LAN), which links terminals within an organisation by linking together various computer terminals, while the wide area network (WAN), links computer terminals within building premises or neighbourhood. This network controls uses servers to control data centrally, (Okorie, 2009; Oketunji, 2000).

The Internet, the internet is critical to information and communication technology. It is a collection of information sources of inter-linked computer networks. Madu and Adeniran (2005) defined it as the collection of computer networks that connects computers around the world. However, because of the millions of interconnections, some scholars have used the expression networks of networks and information super highway to define it. Others refer to it as the cyber space which is accessible to all kinds of people; academic, the military, business, students, school

children etc. (Aina, 2005; Madu and Adeniran, 2005; Audu, 2006). A Study conducted by Ojedokun (2001) revealed that the internet has several benefits in the academic setting; these benefits include: provision of consistent and timely access to a wide variety of information sources globally as well as share intellectual experience with colleagues. However, to be able to derive maximum benefit from this important component of ICT, Nwachukwu (2005) advised that end users must possess some skills. Ojedokun (2001) further confirmed this view, when he noted that students at the University of Botswana lacked basic ICT skills, that is why their ability to carry out meaningful exploration of the internet is greatly impede. According to Aina (2005), through the internet scholars can access bibliographic and full-text databases, library catalogues or OPAC, electronic mail, newspapers etc, and most importantly, the World Wide Web (www) which consists of a series of various computers that are linked to the internet through the use of hyper-text transfer protocol (HTTP).

There are programme specifically designed for viewing documents on the internet referred to as the web browsers. Included in this list are Netscape, spry Mosaic, windows internet explorer etc. Aside the web-browsers there are sites on the internets which have special features or information referred to as websites (Adesanya, 2002). There are several services and use of internet in library and information centre. Ibegwan, (2002) outlined some of these services as: Electronic mail (E-mail); user Net or user network, a global news bulletin board where users write and post news for those who are interested in topics to read, reply or comment, Library users can share information with their colleagues through this service; telnet, which is a process whereby a computer is connected to another with the purpose of allowing a user to have access to library catalogue, electronic books, indexes and bibliographies; File transfer protocol, this is basically a process were a file is downloaded from one computer which might be called the host to another. It might even involve the uploading from a computer to the host computer.

Agbaje (2002) outlined the following as some of the benefits of internet services in libraries: the provision of easy and faster communication; provision of useful information. Since the primary aim of the library is to provide, acquire, organize and disseminate information; the use of the internet will assist library staff to affectively perform the role of answering queries on information (Ibaqwan, 2002). Another benefit is that it has economic value; this is because in some cases, the internet provides extra source of income to the library through the provision of fee-

based services to students; since the internet is used by millions of people, the library can use it to enjoy worldwide library cooperation or resources sharing.

Reprographic, Micrographic and printing Technologies, the reprographic technology has made tremendous impact on the document delivery system which is a vital component of library services. Most university libraries provide reprographic machines in order to make photocopy of any document on demand. By using reprographic and micrographic techniques, large archives and materials can be condensed thereby solving the storage problem. They also serve the purpose of preservation and help in resource sharing, as well as save the time of users. Reprography further plays a critical role in the communication of information. In this era information explosion reprography enables libraries to replace at the request of a researcher, the literature relevant, to his/her subject interest from various sources. (Patil and Kooganuramath, 1994, Enem, 2007).

METHODOLOGY

The research design employed for this study is the survey design of correlational type. The population for this study consists of professional and paraprofessional library staff of the University of Ibadan, Obafemi Awolowo University and the University of Lagos. The population of the professional and para-professional staff in the University of Ibadan is 133, Obafemi Awolowo University: 40, and University of Lagos: 39. The simple random sampling technique was adopted for the study using a sampling fraction of 50% of the population Therefore, the sample size is 107.

Table 1: Population of Professional and Para-professional Staff of selected Library

SN	UNIVERSITY	POPULATION	SAMPLE SIZE
1	University of Ibadan	133	67
2	Obafemi Awolowo University	40	20
3	University of Lagos	39	20
	Total	212	107

The research collection instrument used in this study was an adapted and structured questionnaire. Data analysis of descriptive and inferential statistics of central tendencies, PPMC and multiple regression were conducted.

Results

Demographic Description of Respondents

Table 2: Distribution of Socio-demographic Characteristics of the Respondents

The demographic details of respondents are presented as follows;

Variable	Response Category	Frequency	Percentage (%)
Sex	Male	65	60.7
	Female	42	39.3
Library Name	OAU	20	18.7
	UI	67	62.6
	UNILAG	20	18.7
Category of Staff	Liberian	71	66.4
	Library officer	36	33.6
Years of Experience	1-5	11	10.3
	6-10	31	29.0
	11-15	26	24.3
	16-20	26	24.3
	21-25	11	10.3
	26-30	1	0.9
	Above 30	1	0.9
Section/Unit	Cataloguing	19	17.8
	Circulation	18	16.8
	Systems Unit	19	17.8
	Acquisition Section	17	15.9
	Serials	16	15.0
	Reference Section	18	16.8
	Total	107	100.0

Table 2 shows the demographic distribution of respondents. It shows that based on gender; there were 65 (60.7%) male respondents and 42 (39.3%) female respondents implying that majority of the respondents were male. The library involved in the study includes OAU of which there were 20 (18.7%) respondents, UI with 67 (62.6%) respondents and UNILAG with 20 (18.7%) respondents. Majority of the respondents were from UI. Category of staff shows that majority of the respondents were Librarian.

Specifically, 71 (66.4%) of the respondents were librarian and 36 (33.6%) of them were library officers. Also result shows that 11 (10.3%) of them had 1-5 years of experience, 31 (29.0%) had 6-10 years of experience, 26 (24.3%) of them had 11-15 years of experience, 26 (24.3%) of them had 16-20 years of experience, 11 (10.3%) of them had 21-25 years of experience, 1(0.9%)

had 26 -30 years of experience and 1(0.9%) had experience above 30 years implying that majority of the respondents had had experience between 11-20 years. Section/ unit show most respondent were from cataloguing and system unit section.

Determine the relationship between computing facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.

Table 3: Relationship between computing facilities and perceived benefits to library services

Variable	Mean	Std. Dev.	N	r	Sig P	Remark
Computing facilities	5.5047	1.48815	107	.064*	.000	Sig.
Perceived benefits	16.0467	3.40472				

Table 3 shows that there was a positive significant relationship between computing facilities and perceived benefits to library services ($r = .331^*$, $N = 187$, $P < .05$). Therefore, the computing facilities is positively associated with the perceived benefits of ICT facilities to library services. It then translates that computer hardware facilities (computers, scanners, printers, UPS, and power point projectors), and computer software resources (online databases, CD-ROMs, library application software, Internet connectivity and storage media) are useful in achieving library services.

Determine the relationship between film/tape-based facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.

Table 4: Relationship between film/tape-based facilities and perceived benefits to library

Variable	Mean	Std. Dev.	N	r	Sig P	Remark
Film/tape-based facilities	23.0841	5.32903	107	-.182	.061	Not Sig.
Perceived benefits	16.0467	3.40472				

Table 4 shows that there was a negative significant relationship between film/tape-based facilities and perceived benefits to library services ($r = -.050$, $N = 187$, $P > .05$). Therefore, the Film/tape-based facilities is negatively associated with the perceived benefits of ICT facilities to library services. It therefore translates that microfiche reader, micro card reader, microprint reader, slide projector, reel to reel recorder, tape recorder, video machine etc; have not influenced library services in the selected libraries.

Determine the relationship between reproduction facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.

Table 5: Relationship between reproduction facilities and perceived benefits to library services

Variable	Mean	Std. Dev.	N	r	Sig P	Remark
Reproduction facilities	6.1589	2.38766	107	-.039	.688	Not Sig.
Perceived benefits	16.0467	3.40472				

Table 5 shows that there was a negative significant relationship between reproduction facilities and perceived benefits of ICT facilities to library services ($r = -.050$, $N = 187$, $P > .05$). Therefore, the reproduction facilities is negatively associated with perceived benefits of ICT facilities to library services.

Determine the relationship between telecommunication facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.

Table 6: Relationship between telecommunication facilities and perceived benefits library services

Variable	Mean	Std. Dev.	N	r	Sig P	Remark
Telecommunication facilities	10.2056	3.06760	107	.341**	.688	Sig.

Perceived benefits	16.0467	3.40472				
--------------------	---------	---------	--	--	--	--

Table 6 shows that there was a positive significant relationship between telecommunication facilities and perceived benefits of ICT facilities to library services ($r = .331^*$, $N = 187$, $P < .05$). Therefore, the telecommunication facilities is positively associated with the perceived benefits of ICT to library facilities.

Relationship between broadcasting facilities and its perceived benefits to library services in the first generation universities, southwest, Nigeria.

Table 7: Relationship between broadcasting facilities and perceived benefits to library services

Variable	Mean	Std. Dev.	N	r	Sig P	Remark
Broadcasting facilities	8.1495	3.37249	107	.134	.168	Sig.
Perceived benefits	16.0467	3.40472				

Table 7 shows that there was a positive significant relationship between broadcasting facilities and perceived benefits of ICT facilities to library services ($r = .331^*$, $N = 187$, $P < .05$). Therefore, the broadcasting facilities is positively associated with perceived benefits of ICT to library services. This means broadcasting facilities such as radio, television, cable transmission (e.g. CNN, BBC, Al-jazeera).

Establish the relative contribution of ICT facilities to the perceived benefits of ICT to library services.

Table 8: Contribution of ICT facilities to the perceived benefits of ICT to library services

R	R Square	Adjusted R Square	Std. Error of the Estimate
.425	.181	.140	3.15681

ANOVA

Model	Sum of Squares	DF	Mean Square	F	Sig. P	Remark

Regression	222.257	5	44.451	4.461	.001 ^b	Sig
Residual	1006.509	101	9.965			
Total	1228.766	106				

- a. Predictors: (Constant), computing facilities, film/tape-based facilities, reproduction facilities, telecommunication facilities, broadcasting facilities.
- b. Dependent variable: Perceived benefits to library services

Table 8 presents the summary of the regression analysis of benefits of ICT facilities to library services. It can be inferred from Table 8 that computing facilities, film/tape-based facilities, reproduction facilities, telecommunication facilities and broadcasting facilities significantly predicted perceived benefits of ICT facilities in library service ($F = 4.461$, $df = 5, 101$, $P < .05$). Moreover, computing facilities, film/tape-based facilities, reproduction facilities, telecommunication facilities and broadcasting facilities had significant multiple relationship with the perceived benefits of ICT facilities to library services ($adj R = 0.425$, $P < .05$). In addition, the adjusted R square = (0.140, $P < .05$) implies that computing facilities, film/tape-based facilities, reproduction facilities, telecommunication facilities and broadcasting facilities accounted for 14% variance in the perceived benefits of ICT facilities to library services.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.367	1.590		7.148	.000
	Computing facilities	.194	.219	.085	.888	.377
	Film/tape based facilities	-.035	.087	-.063	-.399	.691
	Reproduction facilities	-.078	.147	-.054	-.530	.597
	Telecommunication facilities	.729	.170	.657	4.282	.000
	Broadcasting facilities	-.335	.191	-.332	-1.758	.082

a. Dependent Variable: Perceived benefits

The coefficients table showed that only telecommunication facilities and computing facilities make significant contribution to perceived benefits of ICT facilities to library services (Beta = 0.657, $t = 4.282$ and 0.085, $t = 0.888$ respectively) while film/tape based, reproduction and broadcasting facilities does not make significant contribution to perceived benefits of ICT facilities to library facilities (Beta = -.063, $t = -0.399$, Beta = -.054, $t = -0.530$, Beta = -.332, $t = -1.758$).

Discussion

This study found that computing facilities influences library services have positive influence on services rendered in the library in the first generation universities, southwest, Nigeria. This finding shows that computing facilities such as Internet, web resources and other computing facilities prompts users to use the library more and this is same with users' perceptions of the use of academic libraries and online facilities for research purposes in Nigeria by Chiemekwe, Longe, Umar, & Shaib (2007). The authors found that majority of the respondent visited the library to use internet facilities.

It was found that relationship does not exist between film/tape-based facilities and benefits to library services in the first generation universities, southwest, Nigeria. The interpretation shows that film/tape based facilities have not been enjoying proper use since majority of these facilities are no more popular in service rendering in libraries. Gama (2007) reported that these facilities are available in libraries however those resources are no more available in many libraries in the developing words. This study shows that film/tape based facilities are no more popular in the first generation universities as most of the resources have become obsolete and many have been discarded.

The result of the study also determined the relationship between reproduction facilities and perceived benefits to library services in the first generation universities, southwest, Nigeria. Results indicated that the reproduction facilities is positively associated with the perceived benefits of ICT to library facilities. Therefore, photocopying machine, duplicating machine etc. influences library services in the selected university libraries. This result corroborates Anansi (2003) who found that ICTs such as capturing technologies (e.g. photocopying and reprographic equipment) influences library services.

It was found that telecommunication facilities positively associates with the perceived benefits of ICT to library facilities. Telephone, GSM, telex, telegram, fax machine, satellite etc. influences library services in the selected university libraries. Aguolu and Aguolu (2002), also reported that computer technology offers new and efficient ways of storing very large quantities of data or records, and have also an exceptional capacity to manipulate, scan and search for data, when properly programmed particularly for libraries that deals with lots of data. They further stated that computer can search and manipulate data or records to produce outputs tailored to meet the

needs of individual users on the basis of carefully constructed subject interest profiles, and this have made possible rapid production of current awareness and selective dissemination of information services highly valued by scholars.

This study goes against the study of Eke (2006) and Thioune (2003) who reported that that broadcasting facilities influences services in the library. It supported Eve and Brophy (2000) who found that the provision of ICT is generally perceived as a crucial development that will place library service at the heart of the world's emerging "information society" and that services provided by academic libraries such as reference services, lending service, current awareness service, reprographic service etc. could be enhanced with the use of ICT facilities such as Internet, CD-ROMs, digitised materials, library catalogues, printers, scanners etc. Akpan-Atata and Enyene (2014)'s study stated that academic library users visited the library purposely to use any of the following facilities computers, internet, fax machines, online public access catalogue, scanners, printers, photocopies, mobile phones with WAP wireless application protocol and reprographic machines available in the library was also in tandem with the findings of the study.

Conclusion

This study, based on its findings concluded that computing, broadcasting and telecommunication facilities influences library services and have positive influence on services rendered in the library in the first generation universities, southwest, Nigeria while relationship does not exist between film/tape-based and reproduction facilities and benefits to library services in the first generation universities, southwest, Nigeria.

Recommendations

Judging the outcome of this study, the following recommendations were made;

Film/tape based facilities and reproduction facilities should be given the required attention by libraries in service delivery so as to better serve the library clients qualitatively

There should be advocacy by librarians and information professionals on reactivating products and services that relies on film/tape-based and reproduction facilities so that film/tape base and reproduction ICT facilities' use in the libraries would be enhanced.

Library management should put in place strategies on how to maintain through preservation and conservation library resources which relies on film/tape-based and reproduction

facilities so as to ensure that these resources and the ICT facilities required to use them are continually available.

Efforts should be put in place by all stakeholders to ensure that gains achieved with the usage of computing, broadcasting and telecommunication facilities in library services delivery are maintained.

References

- Nkanu, W. O., Nkebem, E. N., Iyishu, V. A. & Ogar, C. E. (2011). Analytical study on availability of information and communication technology facilities in selected Nigerian university libraries, *Information Impact: Journal of Information and Knowledge Management*, 2(2), 1-13
- Abdelrahman, O. H. (2009) The state of ICT implementation and training at the University Khartoum library system (UKLIS). ICAL 2009 – *Vision and roles of the future academic libraries*.
- Abels, E. G., Kantor, P.B. and Saracevic, T. (1996) Studying the cost and value of library and information services: applying functional cost analysis to the library in transition. *Journal of American Society of Information Science*, 47(3) 21-27.
- Abubakar, B. M. (2011). Academic Libraries in Nigeria in the 21st Century. *Library Philosophy and Practice*, 1-5.
- Achonna, A.U. and Yaya, J. A. (2008). ICT register and Internet usage in libraries. In N.E. Achebe (ed). *Library and information literacy for higher education* (pp.164-189). Enugu: NLA state chapter.
- Adebowale, T.O., Okiki, O.C. and Yakubu, E.D. (2013). Circulation activities in tertiary institutions in Nigeria: a discourse on circulation transactions of Yaba College of Technology Library. *Information and Knowledge Management*, 3(4), 24-31.
- Adejoke, O.S. (2002). The impact of information technology on collection development and management libraries. In E. C. Madu and M.B. Dirisu (eds). *Technology for library schools in Africa* (pp.115-121). Ibadan: Evi- Coleman.
- Adekunle, P.A., Omoba, R.O., and Tella, A. (2007). Attitudes of librarians in selected Nigerian university libraries towards the use of ICT. *Library Philosophy and Practice*. 1-8.
- Adeleke, A.A. and Olorunsola, R (2006). ICT and library operations: more on the online

- cataloguing and classification tools and techniques in Nigerian libraries. *Electronic Library*, 28((3), 453-462.
- Adefarati E. O. (2002). *Essentials of Library in Education*, Crofess Computers, Ondo. Nigeria. American Association of School Librarians, (2007). *Standards for the 21st Century Learner*. Chicago: The American Library Association.
- Aguolu ,C.C & Aguolu , I.E. (2002) *Libraries and Information Management in Nigeria*. Maiduguri; EdLinform Services.
- Aina, I. (2004). *Library and Information Science text for Africa*. Ibadan: the World Information Services Ltd.
- Adetunji, A. (2007) Assessment of library automation by the staff in some selected first generation University libraries in Nigeria. *Pakistan Journal of Social Sciences* 4 (3): pp. 455-459.
- Afolabi and Abidoeye (2012) The integration of information and communication technology in library operations towards effective library services. A paper presented at 1st International Technology, Education and Environment Conference.
- Agboola, A. T. (2000) Five decades of Nigerian University libraries: a review. *Librijournal*, 50: pp. 280-299. Retrieved 19th Sep., 2016 from <http://www.librijournal.org.pdf/20004pp280289pdf>.
- Ajibero, M.I. (1987) Factors affecting the attitudes of librarians towards media technologies in Nigerian universities. *Lagos Librarian*, 14; 65-71.
- Ajibero, M.I. (2003) Current trends in technical services, the role of ICT. *Proceedings of Selected Papers of the Cataloguing, Classification and Indexing Section of NLA*.
- Akanni, S. B. (2008) Globalisation: challenges and opportunities for Nigerian Libraries. Abuja: *Nigeria Library Association*, 12.
- Ani, O. E., Esin, J. E. and Edem, N. (2005) Adoption of information and communication technology (ICT) in academic libraries: a strategy for library networking in Africa. *The Electronic Library*, 23(6): pp. 701 – 708.
- Akpan-Atata, E., & Enyene, E. T. (2014). Awareness, Availability, and Utilisation of ICT Facilities for Effective Service Delivery in Academic Libraries in Nigeria. *Journal of Research in Education and Society* , 5 (3), 1-10.

- Anunobi, C. V. and Nwakwuo O. (2008) The state of ICT in University Libraries in South Eastern Nigeria. Retrieved 19th Sep., 2016 from <http://www.ajol.info/index.php/sjis/article/view/40613>.
- Bello, A. A. (2000). Students' use of an academic library: University of Abuja experience. *Library bulletin: journal of the Nigerian Universities Library System* , 14-20.
- Badaru, Ayo and Oyegunle, John (2012) Impact of ICT on technical services. *Library and Information Science Materials*.
- Bichi, I. B. (2008) Management of library application software: a study of automation efforts in selected Nigerian University libraries. *Bayero Journal of interdisciplinary studies*, 1(1); p. 177.
- Crosby, O. (2001) Information experts in the information age. *Occupational Outlook Quarterly*.
- Dafiaghor, F. K. (2012) Problems and prospects of electronic resources usage in Nigerian academic libraries. *Journal of Economics and International Finance*, 4(9): pp. 220-225.
- Daniel, J.O. (1999) Electronic networking in the emerging information society: the internet at a glance. *Nigerian Libraries*, 33(1).
- Dike, V. (2005) More than Computers Information Technology in Library and Information Service Education. Ibadan: NALISE 50-59.
- Ebijuwu, A.A. (2005) Information and Communication Technology in university libraries: The Nigeria experience. *Journal of Library and Information Science*, 7(1&2).
- Ejedafiru, E.F. (2010) Lack of ICT infrastructure as a barrier to resource sharing in Nigerian libraries. *Library Philosophy and Practice*. Retrieved from: <http://unllib.unl.edu/LPP/ejedafiru.htm>.
- Emojorho, D. and Nwalo, K. I. N. (2009) Availability and use of ICTs in collection management in University and Special Libraries in the Niger-Delta Region, Nigeria. *Library Philosophy and Practice*. Retrieved 19th Sep., 2016 from <http://www.webpages.uidaho.edu/~mbolin/emojorho-nwalo.htm>.
- Erinle, E.K. (2001) Information technology education and training in Nigeria library schools. *Middlebelt Journal of Library and Information Science*, 1(1/2).

- Eseohe, G. Ebunuwele; Ola, Olalekan Simeon and Uduebor, A. Ehikioya (2014) Application of information communication technology in academic libraries in Nigeria. *International Journal of Education and Research*, 2(12): p. 426. Retrieved 19th sep., 2016 from <http://www.ijern.com>.
- Igbeka (2008), Adebisi (2009), and Uwaifor (2010) Enumerated the Impact of Information and Communication Technology (ICT) in Library Operations and Services. pp. 2-8.
- Islam, Md. Shariful and Islam, Md. Nazmul (2006) Information and Communication Technology (ICT) in libraries: a new dimension in librarianship. *Asian Journal of Information Technology (Medwell online)* 5(8): pp. 809-817.
- Krubu, E. D. and Osawaru, E. K. (2011) The impact of information and communication technology (ICT) in Nigerian University libraries. *Library Philosophy and Practice*. Retrieved 19th Sep., 2016 from <http://unllib.unl.edu/LPP/>
- Mohammed, Z. (2003) Library and information science education in Nigeria. In S.O. Olanlokun, (Ed.) *Forty Years of Library Services in Nigeria*, Nigerian Library Association, Lagos. p. 77.
- Womboh, B.S.H. and Abba, T. (2008) The state of Information and Communication Technology (ICT) in Nigerian University Libraries: The Experience of Ibrahim Babangida Library, Federal University of Technology, Yola. *Library Philosophy and Practice*.