

Librarians' ICT Competency in the 21st Century: A Study of Federal University Libraries in Southern Nigeria

Okuchukwu Chukwuka Eromesele*, Ademola Ferdinand Omosekejimi**,
Emuejevoke Paul Ogo***

Author's Affiliation:

*Science & Engineering, University of Derby, United Kingdom

E-mail: c.okuchukwu1@unimail.derby.ac.uk

**Federal University of Petroleum Resources, Effurun, Nigeria

E-mail: Omosekejimi.ademola@fupre.edu.ng

***Federal University of Petroleum Resources, Effurun, Nigeria

E-mail: Ogo.paul@fupre.edu.ng

Corresponding Author: Ademola Ferdinand Omosekejimi, Federal University of Petroleum Resources, Effurun, Nigeria

E-mail: Omosekejimi.ademola@fupre.edu.ng

Received on 26.04.2021, Accepted on 30.07.2021

How to cite this article: Eromesele, O.C., Omosekejimi A.F., Ogo, E.P. (2021). Librarians' ICT Competency in the 21st Century: A Study of Federal University Libraries in Southern Nigeria. *Library Progress (International)*, 41(2), 215-226

ABSTRACT

This study examines librarians' Information Communication Technology (ICT) competency in the 21st Century using federal university libraries in Southern Nigeria as a case study. The total population for this study comprised of 362 librarians from eighteen (18) federal university libraries in Southern Nigeria. Total enumeration technique was adopted because of the small and manageable size of the population. The data collected were analyzed using simple percentage/frequency counts and weighted mean. Findings from this study revealed among others that computers, printers, E-mail, CD-ROMs, mobile phones, photocopiers, Uninterrupted Power Supply (UPS), Internet connectivity, scanners, power point projectors and integrated library management software are available for use by the librarians in federal university libraries in Southern Nigeria; ICT skills such as skills to power on and off a computer system, skills to browse the web, skill to download files from the Internet, skills to navigate and use library automation software and its modules such as OPAC, skills to send and receive emails, skills to copy to and from a CD-ROM and flash drive/hard discs among other necessary skills are all needed by librarians to be able to properly utilize 21st Century ICT facilities and that the competency level of librarians on the use of 21st Century ICT facilities in federal university libraries in Southern Nigeria is high. Recommendations made based on the findings of the study include: The government should increase budgetary allocations to academic libraries across Nigeria so that university library administrators can purchase and maintain ICT facilities that will be useful in providing ICT related services to library users, as this will allow for effective information service delivery in the 21st Century among others.

KEYWORDS: Librarians, ICT competency, 21st Century, University Libraries.

INTRODUCTION

The emergence and proliferation of Information Communication Technology (ICT) and its usage has brought a new dimension to the ways libraries and librarians render services to their users in the 21st Century. ICT is one of the greatest inventions of mankind which over the years have played unprecedented roles in changing the landscape of human and organization activities around the globe, libraries are not exempted. Corroborating the aforementioned, Dhanavandan, Esmail, Mohammed and Nagarajan (2012) stressed that ICT has drastically changed every facet of human endeavors and libraries are not exempted, such that libraries are now deeply engaged in digitization of almost all their resources in order to provide fast, interactive and dynamic information services to users. ICT has drastically changed the entire human activities including library and information science field. Recently, libraries are deeply engaged in modernizing operations and activities to provide fast, integrated, interactive and comprehensive services to their users (Dhanavandan, Esmail, Mohammed & Nagarajan, 2012). In reflection to that information has therefore been disseminated speedily around the globe due to advancement in the channels of communication. Library resources are being transformed from print to digital and web resources, which is being used extensively and has subsequently resulted to tremendous growth of information dissemination and service delivery in the library (Oyedokun, Oyewumi, Akansu & Laaro, 2018).

Kamba (2011) asserted that the influence ICT has on education in general and library and information science profession in particular is undeniable and is considered all encompassing to library and information practice and training. This influence of ICT propels librarians to seek for skills that will make them competent in the use of the ICT facilities so as to be able to efficiently deliver information services to the users of the library using the ICT technologies that are available in their libraries. ICT tools and services are now being used in libraries to manage libraries

more efficiently and to properly cater for users' demand thereby becoming indispensable tools in library operations. In this 21st Century and the changing library scenario, librarians and information professionals must possess adequate ICT skills to manage the modern library that is characterized by the use of sophisticated ICT facilities. Due to the advancement of new technologies, users consider libraries only as a last resort for their information needs; it therefore becomes a challenge for library professionals to satisfy the users without being competent with the use of ICT facilities when the information need of the user becomes very precise and authentic (Sudhakaran, & Sivankutty, 2011).

It is also worthy of note that, the roles of librarians keep changing; not only in the face of changes in users' preference for web based services but also changes in job specification that requires ICT skills for the position of a librarian (Itseko & James, 2012). This development has consequences on repositioning librarians for the new digital environment that the libraries find themselves. Librarians therefore have the obligation to do the needful by acquiring adequate ICT skills and competence that will make them relevant in today's digital library world. It is on the backdrop of aforementioned that this study seeks to examine ICT competency among librarians in federal university libraries in South South, Nigeria.

STATEMENT OF THE PROBLEM

In recent times, the use of ICTs is inevitable for any library, especially academic libraries. It is therefore no gain saying that libraries of the 21st Century cannot function to full capacity without the adoption of ICT and its several sophisticated facilities. Librarians on the other hand are the drivers of information services in libraries. Despite the tremendous impact of ICT on libraries services in higher institution of learning in Nigeria, the Nigerian academic libraries still encounter some hindrances in the effective adoption and use of the ICT resources in the library. These hindrances may however be attributed to the poor ICT skills possessed by librarians which has the capacity

to make them incompetent in properly utilizing ICT facilities in rendering services to their users. Librarians therefore need to be conversant with the application of the numerous ICT facilities in vogue to library services to be regarded as competent with the use of ICT facilities. It is also very worrisome that, some librarians still prefer to render services to their users primitively due to their poor ICT skill and lack of competence as affirmed by Oyedokun, Oyewumi, Akanbi and Laaro (2018) that uncertainty still exists whether library staff possesses adequate competencies to examine ICT competency among librarians in two colleges of education in Lagos State while the specific to operate ICT facilities effectively or not. These uncertainties necessitated the need for this study.

OBJECTIVE OF THE STUDY

The main objective of this study is objectives are to:

1. Find out the 21st Century ICT facilities available in federal university libraries in Southern Nigeria;
2. find out the core ICT skill required by librarians to properly utilize ICT facilities in the 21st Century;
3. ascertain the competency level of librarians on the use of 21st Century ICT facilities in federal university libraries in Southern Nigeria and
4. Know the factors militating against the acquisition of 21st Century ICT skills by librarians' in federal university libraries in Southern Nigeria.

LITERATURE REVIEW

The emergence and proliferation of ICT and its diverse facilities is no longer new to the library. The ICT adoption by libraries have moved from the early stage of automating selected library operations to the stage where ICT have permeated into almost all spheres of library services and routines (Anyaku, 2012). With the implementation of ICT in the field of library and information science, lot of changes have taken place and it has made a great impact on the library services and its users in various capacities (Maan, 2012). Bansode and Viswe (2015) asserted that the library and information scenario is changing at a dynamic pace; there is a paradigm shift from print media to web media; from ownership of

documents to access to information; intermediary to end-user model of services; and from location of specific libraries to digital/virtual/hybrid libraries. In this changing library scenario, the librarians who are the information professionals must possess adequate knowledge and skills of ICT and be competent with the use of the many types of ICT facilities available at their disposal to better provide information services to their users. There are several ICT facilities which the librarians needs to acquire skills and gain expertise to be able to use effectively in this 21st Century.

Commenting on the ICT facilities used in library to render services to users, Anaehobi (2007) asserted that ICT tools such as Internet, telecommunication, Computer, UPS, Printers, Telephone, websites, library networks, CD-ROM, electronic database (computerized catalogue), E-mail are some of the facilities used for online services delivery in academic library. Nwabueze and Ozioko, (2011) Umana (2018) identified computers, Internet, e-mail, WWW, OPAC, Printers, scanners, CD ROM, video conferencing tools among other as the primary ICT resources that are imperative to libraries if they are to help in actualizing Nigeria's sustainable development goal. In the same vein, Agim, Iroeze, Osuji and Obasi-Haco (2018) asserted that computers, printers, Intercoms, scanning machines, OPAC, CD-ROM, flash drives, radio phone, television set, Tele-facsimile, LAN, WAN, Modem and UPS are ICT facilities that should be available in an academic library if they are to meet up with the changing demands of their users. Also, Mishra and Mishra (2014) while encouraging libraries to perform library operations with sophisticated technologies posited that the ICT facilities that are now being adopted in the library for effective library service include: Bar-code technology, bulletin boards, CAS SDI service TOC alerts, chat services, computer technology, database technology, document scanning device, electronic books/journals, electronic mail, facsimile transmission/Tele-fax, institutional repositories, internet, library management software, CD-ROM technology, micrographic and reprographic technology, networked electronic information resources, networking technologies, NPTEL services, online full text services, online instruction, online public access catalogue (OPAC), open source

software, printing technology, RFID technology, storage technology, Tele-text technology, teleconferencing, video conferencing, video text service, voice mail and web technology among others.

To utilize the ICT facilities available in the library, librarians have to be skillful in the handling of these facilities. Chanetsa and Ngulube (2016) in their study found that respondents possess core skills which include presentation and Information literacy course design skills, reference and research skills, including information and search retrieval skills. Over a third of respondents believe that they needed new skills which include web design, online cataloguing, classification, knowledge of HTML, virtual reference and online chats, knowledge of the use of mobile technologies like cell-phones and tablet in education, knowledge of the construction of subject portals in teaching, learning, research. Mathews and Pardue (2009) examined the IT skills that employers deemed essential for librarians to include Web development, project management, systems development and systems applications. Other specific IT skill sets are as indicated: programming languages (such as Visual Basic, Java, C#, C, C, SQL), networking (LAN administration, network design, network security and network management), Web development (HTML/XML, FrontPage, Dreamweaver, authoring web pages, maintaining websites, Web 2.0 functions), project management (managing IT projects, production scheduling and supervising personnel), systems development (systems design and analysis, object modeling/UMI, CASE tools, database creation) and systems applications (installation of software, upgrading software, maintenance, installation and troubleshooting of hardware, performing systems maintenance and backups) which according to the author needs to be acquired through training and retraining. Also, Omosekejimi, Eyaufe, Nwobu and Angela (2019) found that the type of training and retraining required by librarians in the 21st Century for effective library service in university libraries are training on information literacy skill acquisition, application of computers to library services, application of library management software to library services, digital library management, digitization of library resources, media literacy

skill acquisition, ICT literacy skill acquisition, database searching skill acquisition and research skill acquisition among others.

The ICT facilities available in libraries will however remain dormant and unused if the librarians do not have the degree of competency required to put these materials to proper and judicious use. Competency is the ability to do something successfully and efficiently. It is the skills, quality, and ability needed to perform a task. It also tends to describe the level of proficiency of an individual in executing a particular task or job (Oyedokun, Oyewumi, Akanbi & Laaro, 2018). Commenting on librarians' ICT competence, Adomi and Anie (2013) assessed the computer literacy skills/competencies of professional librarians in Nigerian university libraries. Results revealed that a majority of the librarians are not yet very competent in computer use. Also, Kattimani and Naik (2013) in a study looked at the librarianship, ICT skills, and constraints to acquire ICT skill of library professionals working in the engineering college libraries in Karnataka state. A structured questionnaire was used to collect data. Results showed that deputy librarian and librarian category showed relatively high skills in ICT related tasks compared to assistant librarian, library assistant and others. Similarly, Batool and Amen (2010) investigated the level of technology skills possessed by academic librarians and their study revealed that respondents which are librarians are only proficient in computer hardware and word processing that they still need IT skills to implement library automation. The result of Adedoyin (2005) study of eighteen university libraries in Nigeria revealed that 32% of the respondents are ICT competent which infer that librarians in Nigeria are yet to achieve the desired level of competency needed for today's changing environment driven by technology.

Satapthy and Maharana (2012) studied the ICT skills of LIS professionals in engineering institutions of Orissa. Maximum numbers of respondents have knowledge of LibSys automation software (62.13%). The analysis also revealed that the most of the professionals possess knowledge of e-mail,

followed by e-resource, search engines and use of OPAC. A more recent study conducted by Oyedokun, Oyewumi, Akanbi and Laaro (2018) found that librarians are now demonstrating high level of ICT competency in basic skills such as word processing, data analysis, electronic presentation as well as digitization of library information resource through scanning and uploading. They were also found to be proficient in intermediate ICT skills such as use of internet, library management software, search engines, database management, and online selection and acquisition of library materials. They were also not found wanting in the level of proficiency with the use of advance ICT tools such as programming, networking, hyper-linking, knowledge taxonomy and library automation.

Certain factors have been confirmed by several authors to be militating against the acquisition of ICT skills among librarians around the world. Ayoku and Okafor (2015) study of ICT skills acquisition and competencies among librarians in Nigeria universities, indicated some constraint to ICT skills acquisition by librarians to include: lack of interest in ICT skills acquisition (conservative), technophobia (fear of technology), nonchalant attitude, ignorance and apathy, poor funding of library, insufficient skilled personnel to trained librarian in the country, limited training opportunities, and lack of motivation. Oyedokun, Oyewumi, Akanbi and Laaro (2018) confirmed that tight working schedule, lack of motivation and incentive on the part of management, inadequate ICT training and lack of awareness of ICT training programmes are all constraint to ICT skills acquisition

among librarians. Also, Mathew and Baby (2012) study of developing technological skills for academic librarians in universities in Kerala, India underscored that constraints librarian encounter in utilization of ICT tools in delivering information services include: inadequate training in ICT applications, lack of information infrastructures, lack of support from management, lack of coordination among library staff and lack of initiative from professional associations to conduct specialized training programs. In the same vein, Seena and Pillai (2014) found that significant number of library professionals identified that the main issue relating to the application of ICT in libraries is the lack of training (40.20%) which is followed by lack of infrastructure & network facility (17.65%). Lack of cooperation of authority in implementing the technology is another problem faced by library professionals.

RESEARCH METHODOLOGY

Survey research design was employed for this study. The population of the study comprised of 362 librarians from eighteen (18) federal university libraries in Southern Nigeria. The federal universities libraries understudy are presented in the population table below. The entire population was used as sample due to the small and manageable size of the population. Questionnaire was the research instrument used for the study. A total of 362 copies of the questionnaire were administered to the librarians understudy in their offices and 341 were duly completed and found usable, thus there was 94% response rate. The data collected were analyzed using percentage/frequency counts and weighted mean.

Table 1: Population of the study

S.N	Name of Institutions	Zone	Ownership	No of Librarians
1	Federal University of Technology, Owerri, Imo State.	South-East	Federal	32
2	Federal University, Ndufu- Alike, Ebonyi State.	South-East	Federal	10
3	Michael Okpara University of Agriculture, Umudike, Imo State	South-East	Federal	13
4	Nnamdi Azikiwe University, Awka, Anambra State.	South-East	Federal	13
5	University of Nigeria, Nsukka, Enugu State.	South-East	Federal	64

Okuchukwu Chukwuka Eromesele, Ademola Ferdinand Omosekejimi, Emuejevoke Paul Ogo / Librarians' ICT Competency in the 21st Century: A Study of Federal University Libraries in Southern Nigeria

6	Federal University Otuoke, Bayelsa State.	South-South	Federal	11
7	Federal University of Petroleum Resources , Effurun, Delta State	South-South	Federal	09
8	University of Benin, Benin City, Edo State.	South-South	Federal	20
9	University of Calabar, Cross River state.	South-South	Federal	16
10	University of Port-Harcourt, Rivers State.	South-South	Federal	22
11	University of Uyo, Akwa Ibom State.	South-South	Federal	23
12	Federal University of Technology, Akure , Ondo State.	South-West	Federal	10
13	Federal University of Oye Ekiti , Ekiti State.	South-West	Federal	08
14	Obafemi Awolowo University, Ile-Ife, Osun.	South-West	Federal	21
15	University of Agriculture, Abeokuta, Ogun State.	South-West	Federal	16
16	University of Ibadan, Ibadan. Oyo State.	South-West	Federal	30
17	University of Lagos, Lagos State.	South-West	Federal	23
18	National Open University, Lagos State.	South-West	Federal	21(as broken down below)
	Lagos	South-West	Federal	6
	Ibadan	South-West	Federal	3
	Abeokuta	South-West	Federal	2
	Benin	South-South	Federal	2
	Asaba	South-South	Federal	1
	Awka	South-East	Federal	3
	Enugu	South-East	Federal	4
	Total			362

FINDINGS AND DISCUSSION

Research Question 1: What are the 21st Century ICT facilities available in federal university libraries in Southern Nigeria?

Table 2: 21st Century ICT facilities available for use in university libraries in Southern Nigeria

S.N.	ICT Facilities	Agree	%	Disagree	%
1	Computers	341	100	--	--
2	UPS	287	84	54	16
3	Scanner	261	77	80	23
4	Printer	341	100	--	--
5	E-mail	341	100	--	--
6	CD-ROM	341	100	--	--
7	Video Conferencing Tools e.g. Zoom, Skype, Google Meet, GoToMeeting etcetera.	67	20	274	80
8	Mobile Phones	341	100	--	--
9	Internet Connectivity	267	78	74	22
10	Power Point Projector	251	74	90	26
11	Digital Cameras	109	32	232	68
12	Photocopier	341	100	--	--

13	Web 2.0 Tools	101	31	240	69
14	Interactive White Board	71	21	270	79
15	Integrated Library management System	209	61	132	39
16	3D printer	12	4	329	96

Table 2 revealed that 341(100%) representing all the respondents unanimously agreed that computer, printer, E-mail, CD-ROM, mobile phone and photocopier are 21st Century ICT facilities that is available for use in their library while 287(84%), 267(78%), 261(77%), 251(74%) and 209(61%) of the respondents respectively agreed that Uninterrupted Power Supply (UPS), Internet connectivity, scanner, power point projector and integrated library management software are all available for use in their library. However, majority of the respondents disagreed to the fact that Video Conferencing Tools e.g. Zoom, Skype, Google Meet, GoToMeeting 274 (80%), Digital Cameras

232(68%), Web 2.0 Tools 240(69%), Interactive White Board 290(79%) and 3D printer 329(96%) are available for use in their library. This means that the 21st Century ICT facilities that is available for use in federal university libraries in Southern Nigeria are: computer, printer, E-mail, CD-ROM, mobile phone, photocopier, Uninterrupted Power Supply (UPS), Internet connectivity, scanner, power point projector and integrated library management software.

Research Question 2: What are the ICT skills required by librarians to properly utilize 21st Century ICT facilities?

Table 3: ICT skills required by librarians to utilize 21st Century ICT facilities.

S.N.	ICT skills required by librarians to utilize 21st Century ICT Facilities.	Strongly Agree	%	Agree	%	Disagree	%	Strongly Disagree	%
1	Skills to power on and off a computer system	341	100	--	--	--	--	--	--
2	Skills to browse the web	341	100	--	--	--	--	--	--
3	Skill to download files from the Internet	341	100	--	--	--	--	--	--
4	Skills to navigate and use library automation software and its modules such as OPAC	341	100	--	--	--	--	--	--
5	Skills to send and receive emails	341	100	--	--	--	--	--	--
6	Skills to copy to and from a CD ROM and Flash Drive/Hard Discs	341	100	--	--	--	--	--	--
7	Document Digitization skills	341	100	--	--	--	--	--	--
8	Skills to operate and utilize projectors	341	100	--	--	--	--	--	--
9	Skills to scan and send documents online	341	100	--	--	--	--	--	--
10	Skills to convert documents from one formats to another, e.g., word document to PDF file etc.	341	100	--	--	--	--	--	--
11	Skills to design databases	341	100	--	--	--	--	--	--
12	3D printers utilization skills	341	100	--	--	--	--	--	--
13	Skills to utilize Web 2.0 Tools	341	100	--	--	--	--	--	--
14	Skills to utilize Interactive White Board	341	100	--	--	--	--	--	--

Table 3 shows clearly that 341(100%) representing all the respondents strongly agreed collectively that librarians in federal university libraries in Southern Nigeria, needs the following skills: skills to power on and off a computer system, skills to browse the web, skill to download files from the Internet, skills to navigate and use library automation software and its modules such as OPAC, skills to send and receive emails, skills to copy to and from a CD ROM and Flash Drive/Hard Discs, Document Digitization skills, skills to operate and utilize projectors, skills to scan

and send documents online. skills to convert documents from one formats to another, e.g., word document to PDF file etc., skills to design databases, 3D printers utilization skills, skills to utilize Web 2.0 tools and skills to utilize interactive white board to be able to properly utilize 21st Century ICT facilities.

Research Question 3: What is the competency level of librarians on the use of 21st Century ICT facilities in federal university libraries in Southern Nigeria?

Table 4: Competency level of librarians on the use of 21st Century ICT facilities.

S.N.	Competency level of librarians on the use of 21 st Century ICT Facilities	Very High Level	High Level	Low Level	Very Low Level	Weighted Mean
1	I can power on and off a computer system.	65	232	38	6	3.0
2	I can adequately browse the web.	80	239	22	--	3.2
3	I can conveniently download files from the Internet.	102	167	68	4	3.1
4	I can easily navigate and use library automation software and its modules such as OPAC.	89	129	107	16	2.9
5	I can send and receive emails	101	127	89	24	2.9
6	I can copy to and from a CD ROM and Flash Drive/Hard Discs.	78	146	79	38	2.8
7	I can properly digitize a hard copy document.	21	54	121	145	1.9
8	I can properly operate and use projectors.	24	87	149	81	2.2
9	I can scan and send documents online.	67	102	123	49	2.5
10	I am able to convert documents from one format to another, e.g., word document to PDF file etc.	18	69	201	53	2.2
11	I am able to design databases.	6	17	311	7	2.1
12	I can properly operate and use 3D printers.	12	43	266	20	2.1
13	I am able to conveniently use Web 2.0 Tools	45	91	189	16	2.5
14	I can properly use Interactive White Board	33	78	193	37	2.3
Aggregate Mean						2.6

Table 4 revealed that with a weighted mean of 2.6 which is a little bit greater than the criterion mean of 2.5, it can be concluded that the competency level of librarians on the use of 21st Century ICT facilities in federal

university libraries in Southern Nigeria is high.

Research Question 4: What are the factors militating against the acquisition of 21st Century ICT skills by librarians' in federal university libraries in Southern Nigeria?

Table 5: Factors militating against librarians' acquisition of 21st century ICT skills

S.N.	Factors Militating against Librarians acquisition of 21 st Century ICT skills.	Strongly Agree	%	Agree	%	Disagree	%	Strongly Disagree	%
1	Poor/inadequate training	341	100	--	--	--	--	--	--
2	Technophobia	--	--	--	--	341	100	--	--
3	Inadequate ICT facilities in libraries	341	100	--	--	--	--	--	--
4	Lack of interest in training by librarians	--	--	--	--	341	100	--	--
5	Managements' poor commitment to training	341	100	--	--	--	--	--	--
6	Lack of governments' intervention for training	341	100	--	--	--	--	--	--
7	Poor Internet Facilities in Libraries	341	100	--	--	--	--	--	--

Table 5 shows that 341(100%) representing all the respondents strongly agreed collectively that poor/inadequate training, inadequate ICT facilities in libraries, libraries managements poor commitment to training, lack of governments' intervention for training and poor Internet facilities in libraries are all some of the factors militating against the acquisition of 21st century ICT skill while 341(100%) representing all the respondents also disagreed unanimously with technophobia and lack of interest in training by librarians as factors militating against the acquisition of 21st century ICT skill in federal university libraries in Southern Nigeria. This means that some of the factors militating against the acquisition of 21st Century ICT skills by librarians in federal university libraries in Southern Nigeria are poor/inadequate training, inadequate ICT facilities in libraries, libraries managements' poor commitment to training, lack of governments' intervention for training and poor Internet facilities in libraries.

DISCUSSION OF FINDINGS

From table 2, this study found that 21st Century ICT facilities available for use in federal university libraries in Southern Nigeria are: computer, printer, E-mail, CD-ROM, mobile phone, photocopier, Uninterrupted Power Supply (UPS), Internet connectivity, scanner, power point projector and integrated library management software while video

conferencing tools (Zoom, Skype, Google Meet, GoToMeeting etc.) digital cameras, Web 2.0 tools, interactive white board and 3D printer are not available. This finding is in partial agreement with that of Umana (2018) who in his study identified computers, Internet, e-mail, WWW, OPAC, Printers, scanners, CD ROM, video conferencing tools among other as the primary ICT resources that are imperative to libraries if they are to help in actualizing Nigeria's sustainable development goal while slightly contrasting in the area of video conferencing tools. To further corroborate this finding, Osuji and Obasi-Haco (2018) asserted that computers, printers, Intercoms, scanning machines, OPAC, CD-ROM, flash drives, radio phone, television set, Tele-facsimile, LAN, WAN, Modem and UPS are ICT facilities that should be available in an academic library if they are to meet up with the changing demands of their users.

The study also revealed clearly in table 3 that skills to: power on and off a computer system; browse the web; download files from the Internet; navigate and use library automation software and its modules such as OPAC; send and receive emails; copy to and from a CD-ROM and flash drive/hard discs, digitize document; operate and utilize projectors; scan and send documents online; convert documents from one formats to another, e.g., word document to PDF file etc.; design databases; utilize 3D printers; utilize Web 2.0 tools and skills to utilize interactive

white board are all needed by librarians to be able to properly utilize 21st Century ICT facilities. This Finding is in line with that of Chanetsa and Ngulube (2016) who found that respondents possessed core skills which include presentation and Information literacy course design skills, reference and research skills, including information and search retrieval skills while over a third of the respondents professed that they needed new skills which includes web design, online cataloguing, classification, knowledge of HTML, virtual reference and online chats, knowledge of the use of mobile technologies like cell-phones and tablet in education, knowledge of the construction of subject portals in teaching, learning, research.

This study also found in table 4 that the competency level of librarians on the use of 21st Century ICT facilities in federal university libraries in Southern Nigeria is high. This finding while contrasting older literature such as Adedoyin (2005); Batool and Amen (2010); Satapthy and Maharana (2012); Adomi and Anie (2013); Kattimani and Naik (2013) which all reported low level of ICT skills as most librarians in those studies were only proficient on the use of computer and computer applications such as Microsoft word and Excel, a more recent study by Oyedokun, Oyewumi, Akanbi and Laaro (2018) found that librarians are now demonstrating high level of ICT competency in basic skills such as word processing, data analysis, electronic presentation as well as digitization of library information resource through scanning and uploading as librarians are now found to be proficient in intermediate ICT skills such as use of internet, library management software, search engines, database management, and online selection and acquisition of library materials.

From table 5, the study revealed that some of the factors militating against the acquisition of 21st Century ICT skills by librarians in federal university libraries in Southern Nigeria are poor/inadequate training, inadequate ICT facilities in libraries, libraries managements' poor commitment to training, lack of governments' intervention for training and poor Internet facilities in libraries. Oyedokun, Oyewumi, Akanbi and Laaro

(2018) confirmed that tight working schedule, lack of motivation and incentive on the part of management, inadequate ICT training and lack of awareness of ICT training programs are all constraint to ICT skills acquisition among librarians. Also, Seena and Pillai (2014) found that significant number of library professionals identified that the main issue hindering the application of ICT in libraries is the lack of training, lack of infrastructure & network facility and lack of cooperation of the authorities in implementing the technology is another problem faced by library professionals in that regard.

CONCLUSION AND RECOMMENDATIONS

It is crystal clear from this study that computers, printers, E-mail, CD-ROMs, mobile phones, photocopiers, Uninterrupted Power Supply (UPS), Internet connectivity, scanners, power point projectors and integrated library management software are available for use by the librarians. Also, ICT skills such as skills to: power on and off a computer system; browse the web; download files from the Internet; navigate and use library automation software and its modules such as OPAC; send and receive emails; copy to and from a CD-ROM and flash drive/hard discs among other necessary skills are all needed by librarians to be able to properly utilize 21st Century ICT facilities. It is safe to infer from this study that, the competency level of librarians on the use of 21st Century ICT facilities in federal university libraries in Southern Nigeria is high and that some of the factors militating against the acquisition of 21st Century ICT skills by librarians in federal university libraries in Southern Nigeria are poor/inadequate training, inadequate ICT facilities in libraries, libraries' managements' poor commitment to training, lack of governments' intervention for training and poor Internet facilities in libraries. In view of the foregoing, the following recommendations were made:

1. The government should increase budgetary allocations to academic libraries across Nigeria so that university library administrators can purchase and maintain ICT facilities that will be useful in providing ICT related services to library

- users, as this will allow for effective information service delivery in the 21st Century.
- Library management should make finances available to librarians for ICT training and re-training in order to create new skill sets that are required and necessary for providing services in the virtual library environment using ICT facilities.
 - Library management should endeavor to acquire 21st Century ICT facilities that can meet up to the sophisticated and dynamic needs of the 21st Century users. This is because; the level (sophistication) of ICT facilities at librarians' disposal will determine the quality and effectiveness of the services that will be rendered to the library users.

REFERENCES

- Adomi, E. E., & Anie, S. O. (2006). An assessment of computer literacy skills of professionals in Nigerian university libraries. *Library Hi Tech News*, 23(2) 10-14. DOI: 10.1108/07419050610660735
- Agim, N. C., Ireze, P. C., Osuji C. E. & Obasi-Haco, C. (2018). Level of availability and utilization of information and communication technology facilities by students: A case study of Federal Polytechnic Nekede, Owerri, Imo State Nigeria. *International Journal of Library and Information Science Studies*, 4(3), 26-39.
- Anaehobi, E. S.(2007). Availability of ICT facilities in academic libraries of Anambra State. *Anambra State Library and Information Science Digest: Journal of NLA, Anambra State*, 1(1), 58-59.
- Anyaku, E. (2012). Computer skills set of librarians in Nigeria: Confronting the stereotype. *Annals of Library and Information Studies*, 59(2), 128-134. Retrieved from https://www.researchgate.net/publication/281297620_Computer_skills_set_of_librarians_in_Nigeria_Confronting_the_stereotype
- Ayoku, O. A., & Okafor, V. N. (2015). ICT skills acquisition and competencies of librarians. *The Electronic Library*, 33(3), 502-523. Retrieved from <http://dx.doi.org/10.1108/EL-08-2013-0155>
- Bansode, S. Y. & Viswe, R. R. (2015). Exploring ICT literacy among library professionals working in university libraries in Marathwada region. *International Journal of Digital Library Service*, 5(4), 24-43.
- Batool, S. H., & Ameen, K. (2010). Status of technological competencies: A case study of university librarians. *Library Philosophy and Practice*. Retrieved from www.webpages.uidaho.edu/mbolin/batool-ameen.htm
- Chanetsa, B., & Ngulube, P. (2016). The changing roles, responsibilities and skills of subject and learning support librarians in the Southern African Customs Union region. *Journal of Librarianship and Information Science*, 48(2), 151-176.
- Dhanavandan, S., Esmail, S. M., & Nagarajan, M. (2012). Access and awareness of ICT resources and services in Medical College Libraries in Puducherry. *Library Philosophy and Practice* (e-journal), Paper 750. Retrieved from <http://digitalcommons.unl.edu/libphilprac/750>.
- Istekor, V. O., & James, J. I. (2012). Influence of digital literacy on career progression and work motivation of academic library staff in south-west, Nigeria. *Library Philosophy and Practice* (e-Journal). Retrieved from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2029&context=libphilprac>.
- Kamba, M. A. (2011). ICT competency framework for library and information science schools in Nigeria: The need for model curriculum. *International Journal of Library and Information Science*, 3(4), 68-80.
- Kattimani, S. F., & Naik, R. R. (2013). Evaluation of librarianship and ICT skills of library and information professionals working in the engineering college libraries in Karnataka, India: A survey, Program. *Electronic Library and Information Systems*, 47(4), 345-369.
- Maan, I. S. (2012). Usages of ICT products and services: A case study of Adesh Institute of Engineering & Technology, Faridkot (Punjab). *International Journal of Information Dissemination and Technology*, 2(4), 296-300.
- Mathews, J. M., & Pardue, H. (2009). The present of IT skill set in librarian position announcement. *College and Research*

- Libraries*, 70(3), 250-257. Retrieved from: <https://crl.acrl.org/index.php/crl/article/view/16009>
15. Mishra, L., & Mishra, J. (2014). ICT resources and services in university libraries. *International Journal of Digital Library Services*, 4(3), 243-250
16. Nwabueze, A.U., & Ozioko, R.E. (2011). Information and communication technology for sustainable development in Nigeria. *Library Philosophy and Practice*. Retrieved from <http://digitalcommons.edu/libphilprac/600>.
17. Omosekejimi, A. F., Eyaufe, O. O., Nwobu, B. K., & Nweke, C. A. (2019). Training and retraining: A catalyst for retooling 21st century librarians for effective information service delivery in academic libraries in South South, Nigeria. *Information Impact: Journal of Information and Knowledge Management*, 10(1), 105-122.
18. Oyedokun, T. T., Oyewumi, F. A., Akanbi, M. L., & Laaro, D. M. (2018). Assessment of ICT competencies of library staff in selected universities in Kwara state, Nigeria. *Library Philosophy and Practice (e-journal)*. 1797. Retrieved from <https://digitalcommons.unl.edu/libphilprac/1797>
19. Satpathy, S. K., & Maharana, R. K. (2011). ICT skills of LIS professionals in Engineering Institutions of Orissa, India: A Case Study. *Library Philosophy and Practice (e-journal)*. Paper 627. Retrieved from <http://digitalcommons.unl.edu/libphilprac/627>.
20. Seena, S. T., & Pillai, K. G. S. (2014). A study of ICT skills among library professionals in the Kerala University Library System. *Annals of Library and Information Studies*, 61, 132-141.
21. Sudhakaran, J., & Sivakutty V. S. (2011). Skills of new genre librarians: An exploratory survey of the Web 2.0 skills of library and information science professionals in India. *International Journal of Information Dissemination and Technology*, 1(4): 253-257.
22. Umana, K. (2018). ICT resources for sustainable development in Nigeria. Retrieved from <https://researchcyber.com/icr>

Members Copy and Not for Commercial Sale (<https://www.ijpsjournal.com/>)