



Assessment of ICT Skills Competency for Library Services Delivery by Librarians in Colleges of Education in Kaduna State, Nigeria

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ABSTRACT

The study examined librarians' competency in education colleges in Kaduna State, Nigeria, in ICT skills for library services delivery. The study covered two colleges of education libraries; Federal College of Education Zaria and Kaduna State College of Education Gidan-Waya. The objectives of the study were to identify the types of ICT skills possessed by librarians to facilitate library services delivery, examine the level of ICT skills competencies of librarians and identify the challenges associated with the acquisition of ICT skills by librarians in delivering library services in colleges of education in Kaduna State. The study adopted quantitative research methodology using a descriptive survey design and total enumeration as a sampling technique. The population of the study comprised 36 librarians from the Federal College of Education Zaria and Kaduna State College of Education Gidan-Waya. Questionnaires were used as an instrument for data collection in this study whereby 30 copies were returned, analyzed using mean and standard deviation and presented in tabular forms. Statistical Product and Services Solutions (SPSS) Version 20 was used to analyze the collected data. The findings revealed that the types of ICT skills possessed by librarians to facilitate library services delivery are: e-mail alert skills, e-reference skills, electronic document delivery skills, automated selective dissemination of information skills, web-based information literacy skills, automated current awareness skills etc. It was recommended that the management of the respective college libraries should continue to provide more avenues and opportunities for their librarians to acquire updated ICT skills such as artificial intelligence to facilitate effective library services delivery and address the challenges through Tetfund intervention given to most of these institutions to facilitate library services delivery.

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INTRODUCTION

Competency refers to the ability resulting from an individual's knowledge, skills, characteristics and attitudes to carry out work to achieve success (Kopaiboon, Reungtrakul and Wongwanich, 2014). ICT Competency according to UNESCO (2008), refers to knowledge, skills and ability to take advantage of ICT for the purpose of gathering, processing and presenting information in support of activities among different groups of peoples for working purposes.

Therefore, from foregoing definition of ICT competency denotes the capability of someone to used ICT gadgets to acquire, process, organize, store, retrieve as well as dissemination of information, offer resources and services regardless of the distance.

Kopaiboon et al (2014), also stated that individuals who are regarded as ICT competent or having

ICT Competency must be able to:

i. Reproduce necessary documents

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- ii. Find out solutions to problems
- iii. Choose proper ICT tools for problemsolving and effective work
- iv. Collect and share information in an ethical way
- v. Process data, and
- vi. Possess fundamental ICT knowledge as well as use ICT tools.

Obotu. Chukwuka and Gambo (2019) regard Information and Communication Technology (ICT) skill as the acquisition, analysis. manipulation, storage and distribution of information; design and provision of equipment and software for different purposes. ICT skills are generally categorized as basic and professional skills (Oyedokun, Oyewumi, Akanbi, and Laaro, 2018; Atasov, Banker and Pavlou, 2012). Basic skills are considerable to be ICT know-how needed for basic data processing and analysis which include competency in the use of generic tools such as Word Processing, statistical analysis packages, scanning and uploading of documents and pictures, spreadsheet analysis, graphical design, scanner, printer, digital cameras, and PowerPoint Presentation. Professional skills comprise a person's technical skill set and ability to perform certain functional tasks and are acquired from formal training which requires an extensive use of ICT tools for the accomplishment of core tasks and functions characterized by the development of software and hardware as well as it maintenance. Professional skills also include management. document/database content management, online book selection/acquisition, online copy cataloging, use of internet, information search strategy as well as use of library software. Hence, basic and professional skills are required for librarians to efficiently and effectively performance in public universities libraries.

According to Madu (2010) services delivery in libraries is the sum total of all library activities aimed at facilitating the use of the library and its resources. It is the activity of a librarian in an academic library within and outside available resources to provide answers to user's queries and meet their information needs, such as Inter-Library Loan Services (ILLS), Selective

Dissemination of Information (SDI), Current Awareness Services (CAS), Internet Services (IS), Reference Services (RS), and Circulation Services (CS).

Additionally, competition from other information providers such as the internet also compels librarians who want to remain relevant and keep their jobs to rise up to the challenge and get equipped through library program to acquire the requisite skills needed to remain functional in the modern library environment. Once information professionals are able to develop their capacities adequately, they will be able to provide the required services to the satisfaction of their patrons which will be translated as services quality and customer satisfaction. It is against this background that the researcher intended to explore assessment of ICT skills competency for library services delivery by librarians in colleges of education of Kaduna State, Nigeria

Statement of the Problem

Librarianship as all other profession and its professionals (librarians) cannot excel or rub shoulder without the adoption and having competency in the use or application of information communication technology (ICT) skills most especially in this information age where digital devices are almost taking the role of librarians and library services.

However, a research conducted by Ngozi (2010) on ICT competencies of Library staff at University of Abuja, FCT and University of Jos, Plateau State among the findings of the study, it revealed that many library staff in university libraries perform Microsoft Word based tasks like typing and printing documents, can provide online searches using internet but cannot perform effective professional library related duties using ICT. It is against this gap the researcher explored on the assessment of ICT skills competency among librarians in library services delivery in colleges of Education in Kaduna State.

Research Questions

The following research question will guide this study

1. What are the types of ICT skills-based library services possessed by librarians





for service delivery in colleges of education in Kaduna State?

- What is the level of ICT skills competencies possessed by librarians in library service delivery in colleges of education in Kaduna State?
- 3. What are the library automation skills possessed by librarians for library service delivery in colleges of education in Kaduna State?
- 4. What are the challenges associated with the acquisition of ICT skills by librarians in delivering library service in colleges of education in Kaduna State?

LITERATURE REVIEW Service Delivery

According to Uganneya (2011), the efficiency of library and information services depends on intricate interactions involving multiple mechanisms. He further maintains that these services comprise separate actions that, both as a whole and individually, play a role in generating and disseminating information resources. These actions establish the structure within which management develops and enforces policies to influence the procedures involved in library services.

In the contemporary world, the delivery of library and information services is undergoing a transformation, shifting away from traditional operations towards innovative manual technological methods. These technologies and communication tools are utilized to provide services to library patrons through various access channels, primarily utilizing a set of technologies known as the internet. The internet, as a technology, has the potential to complement, reinforce, and enhance educational achievements for the benefit of all (Esew and Ikyembe, 2013).

Types of ICT Skills

Nkamnebe, Okeke, Udem, Obiora and Nkamnebe (2015) surveyed the extent of Information and Communication Technology skills possessed by librarians in the universities in Anambra State, Nigeria. The research design

adopted for this study is descriptive survey. The population consists of thirty-three (33) librarians in the five universities in Anambra State. Population was small hence, the whole subjects were studied. Two instruments - achievement test and questionnaire were used for data collection. Data were analyzed usina percentages, frequencies, and mean rating. Findings of the study include: Librarians in the universities in Anambra State are weakly skilled in ICTs hence their overall average percentage score in ICT skills was 58.3%. Their average percentage scores in dimensions of ICT are as follows: Basic Computing 83%, File Management 71%, Word Processing, 76%, E-mail operations Automated Cataloguing 54%. Classification/use of OPAC 42%, use of Library Automation Software 56%, use of the Internet/WWW 61%, Information Search and Retrieval 62%. Presentation using Microsoft Point, 40%. Power Database Creation/Management 38%. Average percentage scores showed that librarians are highly-skilled in Basic Computing, Word Processing, and File Management and are moderately-skilled in Information Search and Retrieval, Internet and World Wide Web. They are weakly-skilled in Library Automation, E-mail operations, and are not skilled in Automated Cataloguing Classification/use of OPAC, presentation using Microsoft Power Point, Database Creation/Management. Challenges militating against librarians' ICT skills acquisition were identified and solutions were proffered.

Basahuwa, Unegbu and Babalola (2020) investigated the influence of ICT skills and job performance of librarians in public universities in North Central, Nigeria. Survey research design was adopted for the study. The population for the study consisted of 282 librarians in North-Central, Nigeria. Total enumeration was used to include the entire population. A validated structured questionnaire was used for data collection. Cronbach's alpha reliability coefficients for the construct ranged from 0.914 to 0.95. The response rate was 97.5%. Data was analyzed using descriptive and inferential statistics (multiple frequency regression, distribution, simple





percentage, mean and standard deviation). In their findings it revealed that there was significant influence of ICT skills (R2 = .342, F (2, 268) = 69.741, p<.05) on the job performance of librarians. The result further showed that basic ICT skills had no significant influence on job performance of librarians (R2 = .342, $(\beta$ =-.220, t (268) =-1.743, p > .05). Professional ICT skills (R2 = .342, $(\beta$ =.949, t (268) =8.016, p <.05) had a strong significant influence on job performance of librarians. On a 4-point scale, timely job delivery (M=3.57) and good interpersonal relationship (M=3.52) were high. Professional ICT skills (M=3.27) was high. The study concluded that ICT skills influenced job performance of librarians. The study recommended that stakeholders and professional organizations such as the Librarian Registration Council of Nigeria (LRCN) and the Nigerian Library Association (NLA) should strengthen plans on how to further develop librarians' ICT skills through training and retraining.

Level of ICT Skills Competency of Librarians

Tunde, Fausat, Akanbi, & Dolapo conducted a study on assessment of ICT competencies of library staff in selected universities in Kwara State, Nigeria, in the study descriptive survey design of quantitative research method was used, where sample size of one hundred and twenty-two (122) were drawn from population of one hundred and ninety-one (191). Questionnaire served as instrument for data collection, with one hundred and nine participants (which constitute 89.3% return rate) fully completed and returned. Result of findings demonstrated a high level of ICT competency on the part of library staff in selected university libraries (University of Ilorin, Kwara State University and Al-Hikmah University), most especially on skills that were considered basic and intermediate ICT skill. Verdict from the study has it that library staff in those universities can effectively deploy ICT tools for operations in the library. They identified library schools, computer training centers, workshops and seminars. personal training, watching demonstrations on YouTube, guidance from friends and relatives as

sources from which Library staff can acquire ICT skills, but more emphases are on having additional qualification in computer science. Constraints to ICT skills acquisition identified include; tight working schedule, lack of motivation, lack of experience, inadequate training, and inappropriate library and information science curriculum. Identified challenges militating against effective utilization of ICT tools in the library for dynamic information services delivery include: lack of adequate information infrastructure, absent of provision for staff training and development. limited and tighter budget for the library, lack of technological know-how, fear of technology on the part of library staff as well as epileptic power supply. Sequential to the above identified challenges and constraints, the study recommends that library management should make available adequate information infrastructure and as well make provision for staff development and training. Experienced staff should as well train the upcoming or new staff in the library. Library schools should revise curriculum and design one that will accommodate development in information and communication technology. Professional associations and regulatory bodies should organize regular seminars and workshops that will improve ICT skills of librarians.

Whong and Ezra (2016) in their study examined the Academic Librarians ICT Competency and Its Effect on Management of Information Resources in Selected Federal Nigerian Academic Libraries. A survey research method was adopted for the study, six (6) academic libraries in federal universities in the six geo-political zones of Nigeria were selected for the study. Questionnaire, interview and observation were instrument used for data collection. A total of 336 (92.3 %) copies were returned duly completed and found usable for the study, analyses and discusses of data collected for the study are frequencies and percentages. For further clarification the researchers interviewed one staff each from the selected academic libraries. Findings of the research showed that all the libraries studied except Ramat library have computers, DVD, CD, internet facilities and





integrated library software and are very effective ICTs facilities use in the management of library information resources. However, lack of electronic shelves and computerized exit doors expose the library to danger of information resources mutilations theft. Similarly, the study revealed utilization of ICTs for marketing of library and information products and services and communication with staff within and outside the library are minimal. The study encourages academic librarians to maximize ICT facilities utilization for better management of their library information resources to adhere to the mission and objectives of the respective libraries.

Challenges Associated with the Use of ICT by Librarians

Akaninwor and Emanovwe (2020) in their study investigated the Problems in the utilization of information and communication technology in teaching and learning in technical colleges in Rivers State. Five research questions and five hypotheses guided the study. The study was a descriptive survey design. The population of the study was 914 which comprised of 102 teachers and 812 students from 5 technical colleges in Rivers State. A random sampling technique was used to select 406 (50%) of the students while the entire number of teachers were selected, making a total sample size of 508. The instrument used in the study was a self-structured questionnaire. The reliability of the study was determined using test retest method which vielded an internal consistency of 0.85, thus making the

instrument reliable. Mean and standard deviation was used to analyze the data gathered while z test was used to test the hypotheses. The findings revealed that poor electric power supply, cost of ICT tools and equipment, lack of funds, school management attitudes are some major problems of that hinders the use of ICT in technical colleges in Rivers State. Based on the findings, the study recommended that government should employ skilled teachers in technical colleges for effective use of ICT, schools and government should ensure regular power supply is made available for ICT utilization and finally, funds should be given to technical colleges to purchase needed ICT software, equipment and tools for effective teaching and learning.

RESEARCH METHODOLOGY

This study adopted quantitative research methodology using descriptive survey research design with total enumeration as sampling technique, the population comprised of 36 academic librarians in two (2) academic libraries of colleges of education in Kaduna State, which are: Federal College of Education Library Zaria and Kaduna State College of Education, Gidan-Waya. Questionnaire was used as an instrument for data collection, thirty-six (36) copies of questionnaire were distributed whereby (30) copies were duly completed, returned and found useful for data analysis. The data was analyzed using mean and standard deviation followed by interpretation. The Analysis was done using Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSIONS

Table 1: Types of ICT Skills-based Library Services Possessed by Librarians to Facilitate Library Services Delivery

ICT Skills-Based Library Services	INSTITUTIONS	HL	ML	LL	M	SD	D
E-mail Alert	KSCOEL	6	6	4	5.33	0.00	Accepted
	FCEZL	5	4	5	4.67	0.47	Accepted
E-Reference	KSCOEL	2	9	5	5.33	2.87	Accepted
	FCEZL	5	5	4	4.67	0.47	Accepted
Electronic Document Delivery	KSCOEL	2	7	7	5.33	2.36	Accepted
	FCEZL	5	4	5	4.67	0.47	Accepted
Automated Selective Dissemination of	KSCOEL	1	6	9	5.33	3.30	Accepted
Information	FCEZL	4	5	5	4.67	0.47	Accepted
Web based Information Literacy	KSCOEL	3	5	8	5.33	2.05	Accepted

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	FCEZL	2	5	7	4.67	2.05	Accepted
Automated Current Awareness	KSCOEL	3	8	5	5.33	2.05	Accepted
	FCEZL	4	5	5	4.67	0.47	Accepted
Electronic charging & discharging	KSCOEL	3	7	6	5.33	1.70	Accepted
	FCEZL	4	6	4	4.67	0.94	Accepted

Source: Field Work, (2024) High Level (HL), Moderate Level (ML), Low Level (LL), M (Mean), SD (Standard Deviation), D (Decision).

Table 1 shows the response on types of ICT skills-based library services possessed by librarians for services delivery in colleges of education libraries of Kaduna State, Nigeria. Using a minimum mean of 2.00 bench mark, the opinion of the librarians revealed that all the items mentioned were above the bench mark: indicating acceptance of all the ICT skills-based library services. Therefore, an inference could be drawn that librarians in colleges of education libraries in Kaduna State, Nigeria possessed e-mail alert, ereference. electronic document deliverv. automated selective dissemination of information, web-based information literacy, automated current awareness, and electronic charging and discharging were the types of ICT skills used to facilitate library services delivery. This could be attributed to the knowledge they have gained during their attendance at workshops and seminars related to information communication technology. This is contrary to a study explored by Ibrahim, Shuaibu, Haruna and Ibrahim (2023) on the application of online

information search skills for retrieval of online information resources among selected academics of the Federal College of Education, Zaria. The findings from the studies indicated that the types of online information search skills possessed by academics in Federal College of Education Zaria were the ability to think before searching, the ability to search a specific site, the ability to search by author, the ability to search by keyword and the ability to keep it simple. The types of online information search strategies used for retrieval of online information resources by academics were the use of a search engine, the use of a file search, and the use of phrase searching. Based on the findings of the study, it was concluded that the majority of academics in FCE Zaria were not accessing and utilizing available online information resources due to a lack of online information search skills and search strategies. It could be necessitated due to the lack of information literacy skills and problems associated with the current trend in ICT.

Table 2: Level of ICT Skills Competencies Possessed by Librarians for Library Services Delivery

Application Software Skills	INSTITUTIONS	HL	ML	LL	M	SD	D
Ability to use MS word	KSCOEL	6	8	2	5.33	2.49	Accepted
	FCEZL	7	2	5	4.67	2.05	Accepted
Performing task using MS excel	KSCOEL	6	7	3	5.33	1.70	Accepted
	FCEZL	3	6	5	4.67	1.25	Accepted
Using MS PowerPoint for presentation	KSCOEL	6	6	4	5.33	0.94	Accepted
	FCEZL	3	6	5	4.67	1.25	Accepted
SPSS for statistics	KSCOEL	2	7	7	5.33	2.36	Accepted
	FCEZL	4	4	6	4.67	0.94	Accepted
Graphical task (e.g. CorelDraw)	KSCOEL	1	5	10	5.33	3.68	Accepted
	FCEZL	7	4	3	4.67	1.70	Accepted

Source: Field Work, (2024) High Level (HL), Moderate Level (ML), Low Level (LL), M (Mean), SD (Standard Deviation), D (Decision).





Table 2 depicted level of ICT skills competency possessed by librarians for library services delivery in colleges of education libraries of Kaduna State, Nigeria whereby ability to use MS word with mean value of 5.33(SD=2.49), 4.67(SD=2.05), followed by performing task using MS excel with mean value of 5.33(SD=1.70), 4.67(SD=1.25), Using MS PowerPoint for presentation with mean value of 5.33(SD=0.94). 4.67(SD=1.25), SPSS for statistics with mean value of 5.33(SD=2.36), 4.67(SD=0.94), Graphical task (e.g. CorelDraw) with mean value of 5.33(SD=3.68), 4.67(SD=1.70) respectively; They are all above the value benchmark of 2.0 which implies that all were accepted.

This finding is in harmony with Hashim (2021) who investigated on application of information skills for information retrieval by postgraduate students of federal university libraries in North Western States of Nigeria the study revealed that library and information science postgraduate students in federal university libraries in North-Western States of Nigeria were highly satisfied with the application of information skills (skill for using catalogue, indexes and abstracts, reference and information service, bibliographic skill, search strategic skills, skill for using databases, skill for using institutional repositories, Skill for using OPAC, information literacy skill and ICT skill).

Table 3: Response on Library Automation Skills

Library Automation skills	INSTITUTIONS	HL	ML	LL	M	SD	D
Acquisition	KSCOEL	3	10	3	5.33	3.30	Accepted
	FCEZL	6	5	3	4.67	1.25	Accepted
Serial control	KSCOEL	4	8	4	5.33	1.89	Accepted
	FCEZL	2	7	5	4.67	2.05	Accepted
Circulation	KSCOEL	5	8	3	5.33	2.05	Accepted
	FCEZL	5	3	6	4.67	1.25	Accepted
Cataloguing	KSCOEL	4	9	3	5.33	2.62	Accepted
	FCEZL	4	5	5	4.67	0.47	Accepted
OPAC	KSCOEL	4	7	5	5.33	1.25	Accepted
	FCEZL	6	4	4	4.67	0.94	Accepted

Source: Field Work, (2024) High Level (HL), Moderate Level (ML), Low Level (LL), M (Mean), SD (Standard Deviation), D (Decision).

Table 3 shows response on Library Automation Skills by librarians in Federal College of Education Zaria and Kaduna State College of Education Gidan-Waya libraries Using the benchmark Mean of 2.00 it clearly indicated that all the items are above the mean benchmark, therefore, the opinion are accepted. Furthermore, library automation skills acquired by librarians in both libraries under study are acquisition skills,

Serial control skills, Circulation, Cataloguing and OPAC skills. However, a further observation from the table indicated that acquisition, serial control, circulation, cataloguing and OPAC automated skills has the Mean value of 4.67 in Federal College of Education Zaria library while in Kaduna State College of Education Gidan-Waya library has the Mean value of 5.33.

Table 4: Challenges Associated with the Acquisition of ICT Skills by Librarians in Delivering Library Services

Challenges	INSTITUTIONS	SA	Α	D	SD	M	SD	D
Lack of training	KSCOEL	9	6	1	0	4.00	3.67	Accepted
opportunities	FCEZL	5	3	3	3	3.50	0.87	Accepted
lack of personal interest	KSCOEL	0	9	3	4	4.00	3.24	Accepted

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	FCEZL	3	5	5	1	3.50	1.66	Accepted
Lack of funding	KSCOEL	12	4	0	0	4.00	4.90	Accepted
	FCEZL	3	6	2	3	3.50	1.50	Accepted
High cost of ICT tools	KSCOEL	6	8	1	1	4.00	3.08	Accepted
_	FCEZL	4	5	3	2	3.50	1.12	Accepted
No support from	KSCOEL	10	6	0	0	4.00	4.24	Accepted
management	FCEZL	4	4	3	3	3.50	0.50	Accepted
Inability to purchase	KSCOEL	12	4	0	0	4.00	4.90	Accepted
software	FCEZL	3	4	2	6	3.75	1.48	Accepted

Source: Field Work, (2024) Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD), M (Mean), SD (Standard Deviation), D (Decision).

Table 4 established response on challenges associated with the acquisition of ICT skills by librarians in delivering library services, in both libraries respondents accepted that; lack of training opportunities, lack of personal interest, lack of funding, high cost of ICT tools, no support from management all has Mean value of 4.0 and 3.50 on all the options except with the statement inability to purchase software which has the Mean value of 3.75 in federal college of education Zaria library all these are the challenges associated with the acquisition of ICT skills by librarians in delivering library services.

CONCLUSION

From this study it could be concluded that e-mail alert, e-reference, electronic document delivery, automated selective dissemination of information, web based information literacy, automated current awareness, electronic charging and discharging were the types of ICT skills possessed by librarians to facilitate library services delivery in colleges of education in Kaduna State, Nigeria.

Finally, this study, concluded that lack of training opportunities, lack of personal interest, lack of funding, high cost of ICT tools, no support from management, inability to purchase software are challenges associated with the acquisition of ICT skills by librarians in delivering library services in Federal College of Education Zaria and Kaduna State College of Education Gidan-Waya

RECOMMENDATIONS

The following recommendations were made:

- The management of the respective college libraries should continue to provide more avenue and opportunities for their library staff to acquire advance ICT skills such as graphic design, library web design, library networking as well as artificial intelligence to facilitate effective library services delivery.
- The management of the respective college libraries should keep organizing workshops, symposium, training and retraining, seminars to enable their staff acquire and advance their knowledge in respect to ICT skills competency so as to deliver good library services to their targets and potential clients.
- There should be more opportunity provided by both the library and institution management to ensure an up to date knowledge acquisition for librarians due to the fact that majority of them have the prerequisite skill; on library automation skills, serial control skills, circulation, cataloguing and OPAC skills.

The management of the college libraries should seek intervention from Tetfund, local and international donors, government and non-governmental organization, individual donors, friends of the libraries, community members to address the challenges faced in acquisition of ICT skills by librarians in delivering library services, such as lack of training opportunities, lack of funding, high cost of ICT tools, inability to purchase software etc.

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REFERENCES

- Akaninwor, G.I.K. & Emanovwe, J.O. (2020).

 Problems in the Utilization of
 Information and Communication
 Technology in Teaching and Learning
 in Technical Colleges in Rivers State.
 International Journal of Innovative
 Information Systems & Technology
 Research 8(3):37-45, July-Sept., 2020
 www.seahipaj.org ISSN: 2467-8562
- Atasoy, H., Banker, R., & Pavlou, P. (2012).

 Firm-Level Evidence of the Effects of IT
 Use on Employment and Labor Wages.
 University of Illinois at UrbanaChampaign, September, 2012
- Basahuwa, C. B, Unegbu, V. E., & Babalola, Y. T. (2020). ICT Skills & Job Performance of Librarians in Public Universities in North-Central, Nigeria. *Journal of Science Technology and Education 8*(1), March, 2020
- Hashim U. (2021). Application of Information
 Skills for Information Retrieval by
 Postgraduate Students of Federal
 University Libraries in North Western
 States of Nigeria. (Dissertation)
 Department of Library and Information
 Science, Ahmadu Bello University,
 Zaria
- Ibrahim S., Shuaibu D., Haruna, A. & Ibrahim, D. (2023). Application of Online Information Search Skills for Retrieval of Online Information Resources among Selected Academics of Federal College of Education, Zaria. Samaru Journal of Information Studies Vol. 23(2)2023 119-131
- Kopaiboon, W., Reungtrakul, A., & Wongwanich, S. (2014). Developing the Quality of ICT Competency Instrument for Lower Secondary School Students.

 Proceedia-Social and Behavioural Sciences, 116(2014) 18021809.

 Retrieved from http://www.sciemedirect.com
- Madu, O. E. (2010). Book Theft and Mutilation and their Effects on the Services of the Benue State Polytechnic Library. *The*

- Electronic Library, 28(4), 555-567. Retrieved on 7th February, 2019 from: www.emeraldinsight.com/0264-0473.htm
- Ngozi O. (2010). ICT Competencies of Library Staff at University of Abuja, FCT and University of Jos, Plateau State. (Thesis) Department of Library and Information Science, University of Nigeria, Nsukka.
- Nkamnebe, E. C., Okeke, I. E., Udem, O. K.& Nkamnebe, C. B. (2015). Extent of Information & Communication Technology Skills Possessed by Librarians in University Libraries in Anambra State, Nigeria. *Information* and Knowledge Management www.iiste.org ISSN 2224-5758 (Paper) ISSN 2224-896X (Online) Vol.5, No.9, 2015
- Obotu, A. S., Chukwuka, O. O., & Gambo, S. B. (2019). The Need for the Use of Information and Communication Technology in Two University Libraries in Nigeria. *International Journal of Educational Research*, 11(1), 39-47.
- Omekwu, C.O. (2006). Nigeria Libraries and the World Summit on the Information Society: Issues, Imperatives and Implications. A Compendium of Paper presented at the 44th Annual Conference and AGM of the Nigerian Library Association, held at the National Centre for Women Development, Abuja, 18-23 June, p.77.
- 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. Https://Digitalcommons.Unl.Edu/Libphilprac/1797
- Tunde T. O., Fausat A. O., Akanbi M. L., & Dolapo M. L. (2018). Assessment of ICT Competencies of Library Staff in Selected Universities in Kwara State, Nigeria *University of Nebraska* -





Lincoln DigitalCommons@University of Nebraska – Lincoln. Library Philosophy and Practice (e-journal) Libraries at University of Nebraska-Lincoln

Uganneya, S. A. (2011). Information Service
Provision and User Satisfaction in
Agriculture Research Libraries in
Nigeria. Unpublished Ph.D. Thesis,
University of Nigeria Nsukka. 225.

UNESCO. (2008). Strategy Framework for Promoting ICT Literacy in the Asia-Pacific Region. Publication of UNESCO Bangkok Communication and Information Unit. Asia and Pacific Regional Bureau for Education, Bangkok, 10110.

Whong F. M. & Ezra. S. G. (2016). Academic Librarians ICT Competency and Its Effect on Management of Information Resources in Selected Federal Nigerian Academic Libraries. *Journal of Applied Information Science and Technology*, 9 (1) (2016)