
Capacity Building on Librarians' Use of Online Cataloguing and Application Software for Effective Innovative Services Delivery for Academic Libraries in Imo State, Nigeria.

Irunebo, Godwin Chidiebere
Acquisition Librarian

Alvan Ikoku Federal University of Education, (AIFCE) Owerri, Imo State.
chiresourcesnig@gmail.com

Dr. Ndu, Maria Ogonna (CLN)
Research Training & Statistics,
Federal University of Technology (FUTO) Owerri, Imo State
maria-flora.ndu@futo.edu.ng.

Nwagu, Oluchi Juliet
Federal University of Technology (FUTO) Owerri, Imo State
oluchi.nwagu@futo.edu.ng

Igbokwe, Nkechi A.
Reader's Services Librarian
Alvan Ikoku Federal University of Education, (AIFCE) Owerri, Imo State.
inkechiann@yahoo.com

And

Odo, Ndidiamaka Anesthesia
Circulation Librarian
Alvan Ikoku Federal University of Education (AIFUE), Owerri
anesthesiandidiamakaodo@gmail.com

Abstract

The current trends require librarians to be consistent with the professional development, skills enhancement and to be more sophisticated in the use of application software in innovative services delivery. This work investigated the perceived impact of capacity building on librarians' use of online cataloguing and application software for effective innovative services delivery for academic libraries in Imo State, Nigeria. Two (2) research questions and two (2) hypotheses were formulated to guide the study within a selected university library in Imo State Nigeria. Library staff formed the population of the study and a well-structured rating scale titled CBLOCAAS was used as instrument for collection of data. Analytically, a modified Likert scale of four points rating scale was used. The rating scale was validated by experts and reliability study computed using Cronbach alpha statistics. A reliability coefficient of 0.71 was obtained showing that the instrument was internally consistent as indicated by the coefficient and was sufficient and adequate to justify the use of the structured instrument. Mean and Standard Deviation were used to answer the research questions, while t-test statistics was used to test the hypotheses at 0.05 Alpha level. The findings of the study revealed a high level of impact on capacity building on librarians' use of

online cataloguing and application software for effective innovative service delivery in higher institution Imo State. It was concluded that capacity building in academic libraries is very crucial especially when considering the imperativeness of effective innovative service delivery. The paper recommended that Librarians should be regularly engaged with short term training or internship programmes for library professionals.

Key words: Capacity Building, Online Cataloguing, Application Software and Academic Libraries

Introduction

Academic libraries are an academic service information provider to support the knowledge and educational needs for learning and research irrespective of the age, rank, educational attainment, class or race in a university. Typologically, Academic library is a library located in a higher institution that collects, stores, and disseminates information for the use of students and university staff. Academic libraries are libraries attached to academic institutions above the secondary school level, serving the teaching, studying, learning, and research needs of students and staff (Kim and Abbas, 2020). The Universities, Polytechnics and colleges of Education libraries are types of academic libraries. This kind of libraries is one established to support learning and provide information required of tertiary institutions such that, it supports the school curriculum and research needs of the institutions. Academic libraries are funded and established along with (parent) institutions. According to Daneshgar and Parirokh (2017) Academic libraries are perceived as knowledge creating organizations, as a system of integrated activities and business processes that work collaboratively to accomplish overall parent institutional goals. University libraries are the treasure house of knowledge which caters for the needs of scholars, scientists, technocrats, researchers, students and others who are in the mainstream of higher education (Guru, 2019). Academic Librarians are acknowledged as knowledge creators through content management, organization of knowledge, and evaluating the validity and reliability of information obtained from unfamiliar sources (Sinotte, 2014). Libraries and librarians bring a set of values that are fundamental to the long-term survival of scholarship. Librarians care about access and understand that some resources may have value to disciplines and time periods beyond their initiation (Case, 2021). As academic activities of the higher institution stimulate the creation and transmission of knowledge, Academic libraries have played a significant role in supporting such activities (Kim and Abbas, 2020). In recent times, Academic libraries function beyond supporting learning activities in higher institutions, but also serve as individualized learning centers just as university itself, as the library represent an important link to the knowledge/information through innovation and management. Juceviciene and Tautkeviciene (2022) stated that educational environment of Academic libraries is characterized by the academic activities, that is; an integral part of Academic educational environment/system. It has to interact with all the educational materials associated with the academic study programs, its regular clients connote students, teachers, researchers, administrators, and staff, and the selectivity of Academic library learning materials depends on the types of clients and the educational requirements of student programs.

Remarkably, Academic libraries use some combination of resources to provide information needs of the users, and to realize parent's institutions goal. To this note, Ejimkoye (2015) stated that library and information services includes; loan services, reference services, reprographic services, bibliographic services, translational services, selective dissemination information (SDI), current awareness services (CAS), indexing and abstracting, exhibition and

display, information literacy and readership campaign, bindery services, user education, and online information access services.

Today, these services are assuming more of electronic medium availability and accessibility or hybrid of modern and conventional system which has added an innovative approach to the existing service that were obtainable in the libraries ab initio. In the words of Jain (2020) university libraries have transformed drastically from the use of MARC as well as online cataloging and ICTs enabled to metadata and web information, print collection and inter library loans to online databases and e-resources, quiet areas for learning and knowledge, application software in facilitating information literacy and bibliographic instruction to information literacy and life-long learning, information management to knowledge management circulation desk and use of application software as academic librarians also indulge in “publish or perish”.

However, against the background of this study, is yet to ascertain a coherent empirical agreement to the extent to which capacity building programs impact academic librarians on ICT use for effective services delivery in university libraries for services deliver. Hence, this study investigated the Perceived impact of capacity building on ICT use of academic librarians for effective service delivery in Federal University Libraries in South-East Nigeria.

Statement of the Problem

Research evidence has shown that librarians’ poor state of capacity building on ICTs in institutional libraries in Nigeria. Provisions of information resources and services made in the library are only justified when they are effectively used by the library patrons. However, it is not certain whether academic librarians of institution libraries in Nigeria have the capacity needed to use ICTs to provide efficient service delivery to library users (Nwofor, Chikaodi & Nwaede, 2023).

Libraries no longer have the monopoly of service delivery which they have earlier and if the service provision is not continuously enhanced libraries may be abandoned as users will explore the cutting edge service provided by others. The application of ICTs use by academic librarians in service delivery will enable librarians offer value added and cutting edge services that will attract and retain staff and students in academic libraries. These issues and more are the reasons or the gap in knowledge that this study capacity building on librarians’ use of online cataloguing and application software for effective library services delivery in institution libraries in southeast Nigeria intends to fill. It is on this basis that this research work investigated capacity building on librarian’s use of online cataloguing and application software for effective innovative services delivery for academic libraries in Imo State, Nigeria.

Purpose of the Study

This study intends to determine the perceived impact of capacity building on librarian’s use of online cataloguing and application software for effective innovative services delivery for academic libraries in Imo State, Nigeria. Specifically, the study aimed to:

- 1) Determine the perceived impact of capacity building on librarians’ use of online cataloguing for effective innovative service delivery for academic libraries in Imo State, Nigeria.
- 2) Determine the perceived impact of capacity building on librarians’ use of library application software for effective innovative service delivery for academic libraries in Imo State, Nigeria.

Significance of the Study

The findings of the study will be useful to the following groups: Librarians, administrators, university management, curriculum planners and researcher.

The findings of this study will provide Librarian with the core uses of ICTs in library services delivery and the need to improve their capacity building in order to reposition them for practice to deal with the shifting trends in instruction, learning and research.

Administrators will benefit from the publication of the findings of this work. The findings of the study will make them to understand the nature and dynamism of current library and information services, for them to upscale plans to enable the staff fit-in to the new paradigm of library work and users need.

Librarians this work will serve as a reference base worthy for decision making on issues concerning staff capacity development, needs for equipping and repositioning libraries towards achieving demands of today's information services.

The university management will benefit from the findings of the study which will enable them make policies that will encourage the establishment of mentoring relationships in the university libraries. Such relationships will enhance staff training internally thereby saving resources. Also see reasons to train librarians through capacity building in ICT use in their institutions.

Curriculum planners in library and Information science will also benefit from the findings of this study as it will help in the areas of ICT use for library practice that could be integrated in the curriculum during revision LIS curriculum. Thus, will enhance the capacity from library education training.

Researchers will benefit from the findings of this research work as they serve as a reference base for subsequent researchers.

Scope of the Study

This study is restricted to capacity building on librarian's use of online cataloguing and application software for effective innovative services delivery for academic libraries in Imo State, Nigeria. The geographical scope is all the institution in Imo State Nigeria. The content scope is delimited to capacity building, online cataloguing and application software of academic librarians for effective innovative services delivery.

Research Questions

The following research questions were formulated for the study.

1. To what extent is the perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service delivery in academic libraries in Imo State, Nigeria?
2. To what extent is the perceived impact of capacity building on librarians' use of library application software for effective innovative service in academic libraries in Imo State, Nigeria?

Research Hypotheses

Research hypothesis was structured for the study.

- 1) There is no significant mean difference between the perceived impact of capacity building on librarians' online cataloguing and effective innovative service delivery in academic libraries in Imo State, Nigeria.
- 2) There is no significant mean difference between the perceived impact of capacity building on librarians' use of application software and effective innovative service delivery in academic libraries in Imo State, Nigeria

Literature Review

Capacity building is an integral part of development assistance. It seeks to build the understanding skills and knowledge base of individuals and institutions on emerging scenario technologies. Capacity building is essentially about change. Change that enables individuals, organizations, networks/sectors and broader social systems, to improve their competencies and capabilities in carrying out functions, and to effectively manage the development processes over time. Capacity building is about improving our ability to learn and adapt through change (Macadam, 2014).

UNEP (2022) summed capacity building as a holistic enterprise, encompassing a multitude of activities; which means building abilities, relationships and values that will enable organizations, groups and individuals to improve their performance and achieve their development objectives. This includes strengthening the processes, systems and rules that influence collective and individual behaviour and performance in all development endeavours. It also means enhancing people's technical ability and willingness to play new developmental roles and adapt to new demands and situations. Capacity building is a 'strength' or 'asset based' approach to development. As a concept which is broader than organizational development, its emphasis is on the overall system, environment or context within which individuals, organizations and societies operate and interact (and not simply a single organization) (UNDP, 2018).

The recent library literature contains numerous articles on the need for change in online catalogues to better satisfy the expectations of information seekers who are accustomed to Web search engines, online bookstores and seamless linking to full text. Increasingly it is understood that an end user's expectations and work practices on the Web is a good deal whether he or she will use or revisit a library online catalogue (Pan & Hovde, 2020).

Agosti and Masotti (2022) speaking of the unlimited scope of the online catalogues and its emphasis on print, Norm Medeiros, Associate Librarian and Coordinator for Bibliographic and Digital Services at Haverford (PA) College, wrote, "More and more, users want, expect, and pursue full text. In increasing numbers they look past the catalogues when searching for e-journals, databases and Web sites. At the same time, many of the users of library online catalogues are librarians and staff. These individuals form an important catalogue user community themselves (Blandford & Buchanan, 2020). Therefore, catalogue end users (e.g., citizens, students and faculty) have information needs, preferences and expectations that need to be supported by catalog data, so do librarians who get their work done using the data underpinning the catalogues.

A close look at how users interact with OPACs helps to understand users' needs and consequently to design these systems in a way appropriate to satisfy its users. For instance, most users prefer to have less text on screen and more icons instead (Brown, 2016). Moreover, users expect to see images of materials available on OPACs. In updating and introducing a

new version of OPAC services, users should be comfortable with the new version and should not struggle to do their task and be able to “find what they need, when they need it and in a form they want it”. Designers of these systems should therefore be fully aware of users' skills and abilities.

Designers, however, are more likely to be successful in designing interfaces if they spend time with users, observing how they work. This process of interaction between designers and users is known as ‘user and task analysis’ and has been so far a methodology insufficiently used in the design of OPACs. This in spite of its obvious advantages, for observing people in action can give the designer useful information on the usability of systems. In fact usability has been shown to be of critical importance in achieving the satisfaction of users (Pan & Hovde, 2020).

As for usability requirements of OPACs themselves, previous research has confirmed that such systems should be useful and useable. In this context, the former term entails that information is made available to users in a suitable format at their requested time, while the latter captures requirements in respect of OPACs being: efficient and effective enough to satisfy the user; easy to learn; and able to support the user in his/her interactions with the system. Indeed, such considerations drive us to the conclusion that users’ needs must be considered from the earliest stages and at the deepest levels of design of such systems (Jain, 2020).

Library Application Software no doubt offers information managers many opportunities to improve Library services to their client. It makes information resources easier to be located and retrieved. Also, it enables library staff to serve library patrons better by facilitating execution of multitude operational tasks such as cataloguing, acquisition, circulation, OPAC, management of e-resources and reference services among others with less stress. Borgman (2017) remarked that library application software first flourished in the 1960’s being a period of expansion in higher education and increasing funds for library collections.

As the rate of publication increased, libraries realized that they could not acquire and process materials fast enough with traditional manual systems and that automation could help to control costs on labour-intensive operations (Dhanavandan & Tamizhchelvan, 2022). He added that the goals for library application software for libraries include:

- i. Efficiency of internal operations,
- ii. Access to local library resources
- iii. Access to resources outside the library
- iv. To achieve the interoperability between information systems necessary to build a global information infrastructure.

In his contribution to library software, Gbaje (2017) stated that the use of library application software in university libraries has evolved from managing internal library operations to providing access to information and information resources in various formats and in many locations through a combination of Information and Communication Technologies (ICT). Following this development, there is a paradigm shift from local collections to global information access, thus making it possible for the removal of geographic constraints to library services. Therefore library application software indeed is an improvement to librarians ICTs capacity building for effective innovative service delivery in Nigerian federal universities.

Library Application software is a sequence of instructions that tells the computer what to do, how to manipulate data and how to relate to users. It normally addresses one aspect of

computing need or the other. (i.e the readily available software) for microcomputers is referred to as “application software”. An essential requirement of application software is that it should have capabilities to:

- a. Store and manipulate data
- b. Provide the user with capability to create a database
- c. Enable the user to input his or her information into the database created
- d. Edit data thereby allowing for the immediate correction of entry errors or a correction at a later date.

Library Application software has been defined by different scholars based on their background, experience and orientation. One can infer that the use of application software computers and associated technologies aid librarians to do exactly what is needed to be done in the library with the justification of reduced cost or increased performance (Agosti and Masotti (2022). That is, it is the use of computers to perform library operations most especially services that are routine and repetitive. There are generally two categories of library application software Proprietary and Open source. Proprietary Software refers to any computer software that has restrictions on any combination of the usage, modification, copying or distributing modified versions of the software. Proprietary software may also be called closed source software.

Cataloguing and Application software are therefore a process whereby individuals, seek to increase their level of knowledge, refine or learn new skills, and apply these in the workplace. Several methods abound for Capacity building such as doing a course; taking advantage of experienced and expert practitioners in the field; reading readily available literature; attending conference, workshops and seminars; and belonging to a professional body (Blandford & Buchanan, 2020).

This research work has two theories to which it is based, adult learning theory andragogy by Malcom Knowles (1984) which anchored capacity building, and Prensky Marck theory of how digital natives learn. This theory is anchored on how digital natives learners had exposed the necessity of the theoretical perspectives in this 21st century teaching innovations which covered the use of online cataloguing and application software that is evolving with development within the innovative system for institutional development as a general term which is related and applicable in academic library situations. Hence, Olubiyo (2022); Nwofor, Juceviciencia and Tautkeviciencia (2022); Chikaodi and Nwaede (2023); Annune, Terna and Annune (2020) conducted studies on Capacity Building Initiatives and the use of online cataloguing and application software for effective innovative services delivery in academic libraries.

However, there is yet to ascertain a coherent agreement to the extent to which capacity building programs impact academic librarians on the use of online cataloguing and application software for effective innovative services delivery of librarians for services delivery have not been empirically evidenced. Therefore the study investigated the perceived impact of capacity building and use of online cataloguing and application software for effective service delivery in Federal University Libraries in Imo State Nigeria.

Materials and Methods

The design of this study was a cross sectional survey design. The population of the study comprises of all the seven (7) Government own institutions in Imo State which includes Federal University of Technology, Owerri (FUTO), Imo State University, Owerri (IMSU), Alvan Ikoku Federal University of Education, Owerri (AIFUE), Imo State University Agriculture and Environmental Sciences Umuagwo (IMSUA), Kingsley Ozurumba Mbadiwe University Ogboku (KOMU), Federal Polytechnics Nekeedy, Owerri, and College of Education Ihitt-Uboma. As at the time of the study the entire population was one hundred and thirty nine (139) librarians. Cluster sampling technique was used to select the entire population as the sample size for the study. A structured rating scale titled Capacity Building on Librarians Online cataloguing and Application Software (CBLOCAAS) was used as instrument for data collection and the instruments were validated and reliability study was done using Cronbach Alpha statistics and a reliability coefficient of 0.71 was obtained. In analyzing the data obtained, mean and standard deviation were used to answer the research questions, while t-test statistics at 0.05 Alpha level was used to test the hypotheses. The cut-off mean was 2.50 any score below 2.50 will not be accepted.

Results

The presentation and interpretation of data obtained from field work were done in line with the research questions and hypothesis for the study.

Research Question 1: To what extent is the perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service delivery for academic libraries in Imo State, Nigeria?

Table 1 Perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service delivery

S/No;	Questions	N	$\sum X$	$\bar{X}$	SD	Remark
1	Under the guidance of a senior colleague I can use KOHA to catalog books easily.	139	401	2.884	1.698	Accepted
2	The use of cataloging and classification scheme like LC AND DDC is made possible with the help of knowledge acquired capacity building such as mentoring.	139	451	3.244	1.801	Accepted
3	Generating bibliographic information of a book online is made easy with knowledge obtained through capacity building such as mentoring.	139	462	3.323	1.822	Accepted
4	Determining subject entries of information resources online has become easier through capacity building.	139	414	2.978	1.725	Accepted
5	A computer system was given to me by my mentor as my working tool during capacity building program; I was able to master online cataloging.	139	429	3.086	1.756	Accepted
6	Sourcing international cataloging number (ICN) is easy to me now as a result of capacity building program.	139	436	3.136	1.770	Accepted
	Grand mean			18.65		
	Mean of item means			3.109		Accepted

Sample Size (n), Summation ($\sum X$), Mean ($\bar{X}$), Standard Deviation (S), and Remarks

Table 1 shows the mean scores and standard deviations used in answering research question one revealed the perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service delivery for academic libraries in Imo State, Nigeria. Based on the item criterion decision mean, the result points out that item numbers 2, 3, 5 and 6 with 3.244, 3.323, 3.086 and 3.136 respectively as the highest mean values, while no item was below 2.50. All the items with mean values above 2.50 were accepted as part of the perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service delivery. The values of standard deviations are seen to be small indicating that the scores in the distribution are homogeneous. Therefore, mean of item means of 3.12, revealed a high extent impact of capacity building on librarians' use of online cataloguing for effective innovative service for academic libraries in Imo State, Nigeria.

Research Question 2: To what extent is the perceived impact of capacity building on librarians' use of library application software for effective innovative service for academic libraries in Imo State, Nigeria?

Table 2 Perceived impact of capacity building on librarians' use of library application software for effective innovative service delivery

S/No;	Questions	N	$\sum X$	$\bar{X}$	SD	Remark
1	Capacity building has enable me use power point in teaching information education literacy to library user	139	415	2.985	1.727	Accepted
2	Capacity building has assisted me in developing powerful slides for presenting my topics in library serial management	139	433	3.115	1.764	Accepted
3	Capacity building has enabled me use power point slides on new arrivals for library user in acquisition	139	448	3.223	1.795	Accepted
4	Capacity building has facilitated my use of power point for training my colleagues on topics of interesting cataloging	139	409	2.942	1.715	Accepted
5	Capacity building has enabled me present my papers during conferences and workshops through PowerPoint	139	410	2.949	1.717	Accepted
6	Capacity building has empowered me to use power point to present library statistics	139	444	3.194	787	Accepted
	Grand mean			18.408		
	Mean of means			3.068		Accepted

Sample Size (n), Summation ($\sum X$), Mean ($\bar{X}$), Standard Deviation (S), and Remarks

Table 2 shows the mean scores and standard deviations used in answering research question two revealed the perceived impact of capacity building on librarians' use of application software for effective innovative service delivery in Imo State, Nigeria. Based on the item criterion decision mean, the result points out that item numbers 2, 3, and 6 with 3.115, 3.223 and 3.194 respectively as the highest mean values, while no item was below 2.50. All the items with mean values above 2.50 were accepted as part of the perceived impact of capacity building on librarians' use of application software for effective innovative service delivery. The values of standard deviations are seen to be small indicating that the scores in the

distribution are standardized. Therefore, mean of item means of 3.068, revealed a high extent of perceived impact of capacity building on librarians' use of application software for effective innovative service delivery for academic libraries in Imo State, Nigeria.

Hypothesis 1: There is no significant mean difference between the perceived impact of capacity building on librarians' use of online cataloguing and effective innovative service delivery for academic libraries in Imo State, Nigeria?

Table 3: t-test statistics on perceived impact of capacity building on librarians' use of online cataloguing and effective innovative service delivery

N	$\bar{X}$	μ	S	S.E	df	T-cal	T-tab	Decision
139	18.65	30	4.319	0.564	137	2.354	1.96	No significant

Sample Size (n), Mean ($\bar{X}$), Standard Deviation (S), Standard Error (S.E), degree of freedom (df), one sample t-test statistics and Decision

Table 3 showed the result of the t-test for hypothesis one to establish the significant difference on the perceived impact of capacity building on librarians' use of online cataloguing and effective innovative service delivery for academic libraries in Imo State, Nigeria. The outcome indicates that the t-calculated value of **2.354** is more than the t-tabulated value of **1.96**. Hence, accepting the null hypothesis, and revealing, there is no significant difference. This implied that there is no significant difference on the perceived impact of capacity building on librarians' on librarians' use of online cataloguing and effective innovative service delivery for academic libraries in Imo State, Nigeria.

Hypothesis 2. There is no significant mean difference between the perceived impact of capacity building on librarians' use of application software and effective innovative service delivery for academic libraries in Imo State, Nigeria?

Table 4: t-test statistics on perceived impact of capacity building on librarians' use of application software and effective innovative service delivery

N	$\bar{X}$	μ	S	S.E	df	T-cal	T-tab	Decision
139	18.41	30	4.291	0.432	137	3.471	1.96	No significant

Sample Size (n), Mean ($\bar{X}$), Standard Deviation (S), Standard Error (S.E), degree of freedom (df),

Table 4: showed the result of the t-test for hypothesis one to establish the significant difference on the perceived impact of capacity building on librarians' use of application software and effective innovative service delivery for academic libraries in Imo State, Nigeria. The outcome indicates that the t-calculated value of **3.471** is more than the t-tabulated value of **1.96**. Hence, accepting the null hypothesis, and revealing, there is no significant difference. This implied that there is no significant difference on the perceived impact of capacity building on librarians' on librarians' use of application software and effective innovative service delivery for academic libraries in Imo State, Nigeria.

Discussion of Findings

Discussion of findings was discussed based on the results of the analyses in accordance with the research questions and hypotheses of the study. This research work investigated the perceived impact of capacity building on librarians' use of online cataloguing and application software for effective innovative services delivery for academic libraries in Imo State, Nigeria.

Research question one sought to find out the a high extent of perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service for academic libraries in Imo State, Nigeria. The results in table 2 revealed a high extent of perceived impact of capacity building on librarians' use of online cataloguing for effective innovative service delivery for academic libraries in Imo State, Nigeria. Like LC and DDC is made possible with the help of knowledge acquired through capacity building such as ICT use. The use of KOHA to catalog books easily and the availability of information resource on line filled the gap of easy access to information resource. Hence, the hypothesis revealed no significant difference. This research is in line with the study of Nwofor, Chikaodi and Nwaede (2023) conducted a research work on Capacity Building for Effective Services Delivery of Library Staff in Festus Aghagbo Nwako Library (FANL), Nnamdi Azikiwe University, Awka. The study found that online cataloguing service delivery in university library improves capacity building of library staff. The study recommended that the university library management should improve on the capacity building Programme for their staff to enable them acquire new skills such as online cataloguing service delivery in university library.

Research question two sought to find out the extent of perceived impact of capacity building on librarians' use of application software for effective innovative service delivery for academic libraries in Imo State, Nigeria. The results in table 3 showed a high extent of perceived impact of capacity building on librarians' use of application software for effective innovative service delivery for academic libraries in Imo State, Nigeria. This will fill the research gap on how to use reference services using web (lib) 2.0 during workshop use database providers (EBSCOHOST, EMERALD etc) and how to patronize/subscribe them. Hence, exposed librarians to various means internet resources and computer packages like (MS Office) can be used to provide library services. Hence, the hypothesis revealed no significant difference. This research is in line with the study of Olubiyo (2022) conducted a study on Capacity Building for Sustainable Digital Information Services in 21st Century Administration of Academic Libraries in Nigeria; the study is on capacity building for sustainable digital information services in 21st century administration of academic libraries in Nigeria. The study concluded that capacity building in academic libraries is very essential and crucial especially when considering the imperativeness of the services rendered by librarians through the use application software for the general satisfaction of the intellectual quests of patron. The services must be rendered with ethics, principles and standard in mind in order to maximize the output of the libraries. Also the study recommended that library staff should be trained and re-trained on use of application software for the benefit of delivering a well-rounded service in the library. Also, resources should also be provided for the both junior and senior library staff in academic libraries to sustain the network of policy fulfillment in the organization.

Conclusion

Capacity building in academic libraries is very crucial especially when considering the imperativeness of effective innovative service delivery rendered by Academic Librarians for

the general satisfaction of the intellectual quest of ICTs. Based on the results of the study it was deduced that there is a high extent impact of capacity building on librarians' use of online cataloguing and application software for effective service delivery for academic libraries in Imo State, Nigeria. Hence, the hypotheses revealed that there is no significant difference on the impacts of capacity building on librarians' use of online cataloguing and application software for effective service delivery for academic libraries in Imo State, Nigeria.

Recommendations: recommendations were made based on the results of the study.

1. Capacity building in academic libraries is very crucial especially when considering the imperativeness of effective service delivery to user academic libraries, therefore librarians should be motivated or encouraged by Management and Government.
2. Short term training or internship programmes for library professionals, staff exchange programmes, and librarian's development programmes.
3. Engage Librarians with workshop and seminars for library professionals are very essential programs to make competent and adaptive with the ongoing ICTs trends of library system.

References

- Agosti, M. & Masotti, M. (2022). "Design of an OPAC database to permit different subject searching accesses in a multi-disciplines universities library catalogue database". N. Belkin, P. Ingwersen and A.M. Pejtersen (Eds), *Proceedings of the 15th annual international ACM SIGIR conference on Research and development in information retrieval*, pp. 245-255.
- Blandford, A. & Buchanan, G. (2020). "Usability of digital libraries: a source of creative tensions with technical developments", *IEEE-CS TC Bulletin*, available at: <http://www.ieeetcdl.org/Bulletin/summer2003/blandford/blandford.html>.
- Borgman, C.L. (2017), "The invisible library: paradox of the global information infrastructure". *Library Trends*, 51(4), pp. 652-674.
- Brown, C. (2016). "Digitisation projects at the University of Dundee Archive Services", *Program: electronic library and information systems*, *Journal of Library Administration* 40(2), pp. 168-177.
- Case, M. M. (2021). Partners in knowledge creation: an expanded role for research libraries in the digital future. *Journal of Library Administration*, 48 (2): 141-156.
- Daneshgar, F. & Parirokh, M. (2017). A knowledge schema for organisational learning in academic libraries. *Knowledge Management Research & Practice*, 5: 22–33. Available at: <http://faculty.fims.uwo.ca/koziol/781/documents/A%20knowledge%20schema%20for%20organisational.pdf> (Retrieved on 9 July, 2013).
- Ejimkeonye, N. C. (2015). *Basic librarianship: a text book for library and information science*. Owerri: Cel-bez & co. P.24.
- Gbaje, D. & Ukachi, K. (2021). Professional development program: Training for success within academic librarianship. *College and Research Libraries*, 54(1), 17-24.

- Jain, P. (2020). An empirical study of knowledge management in academic libraries in east and southern Africa. *Library Review*, 56(5): 377-392.
- Juceviciene, P. & Tautkeviciene, G. (2022). Academic library as a learning environment: how do students perceive it? Paper presented at *the European Conference on Educational Research (Education Line)*, University of Hamburg, 17-20.
- Kim, Yong-Mi & Abbas, D. (2020). Adoption of library 2.0 functionalities by academic libraries and users: a knowledge management perspective. *The Journal of Academic Librarianship*, (36) 3: 211–218.
- Malcom, Knowle`s. S. (1984). *The adult learning theory-the Andragogy*. San Francisco: Jossey-Bass.
- Macadam, R. (2014). Growing the Capital of Rural Australia: the task of capacity building. *RIRDC Publication No 04/034*. Canberra
- Nwofo, F. A., Chikodi, H.C.I. & Nwaede, V.U. (2023). Capacity building for effective service delivery of library staff in Festus Agbagbo Nwako Library (FANL) Nnamdi Azikiwe University, Akwa. *International journal of researcher and innovation in social*
- Pan, J. & Hovde, K. (2020). Professional development for academic librarians: Needs, resources, and administrative support. Retrieved from: *Chinese Librarianship: an International Electronic Journal* URL: <http://www.iclc.us/cliej/cl29PH.pdf>. Accessed 28/03/2014.
- Prensky, M. (2001). *Digital Natives, Digital Immigrants on the Horizon*, 9 (5), 1-6
- Spencer, B. & Ard, A. R. (2020) *Nurturing new careers*; preparing future librarians for their careers through pre- professional development sessions at the university of Alabama libraries, *Electronic Journal of Academic and special Librarianship*,7 (2); 1-10.
- Sinotte, M. (2014). Exploration of the field of knowledge management for the library and information professional.A paper presented at *the International Conference on Academic Libraries (ICAL) held at the University of Delhi, India*. P. 52
- UNEP (2022). *Capacity building for sustainable development: an over view of UNEP environmental capacity development activities*. Geneva: ISBN: 92-807-2266-2
- United Nations Development Programme (UNDP) (2018). *Human development report*. New York, NY: UNDP.