**CAPACITY BUILDING AND ICT SKILLS ACQUISITION OF LIBRARIANS' IN THE FEDERAL UNIVERSITY OF TECHNOLOGY IN MINNA IN CHANGING LANDSCAPE OF LIBRARY INFORMATION SERVICES**

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# Abstract

Service delivery and ICT skill acquisition by university library staff is aimed at meeting the information need of users who make up the university community in order to achieve the objective of promoting learning and research. This study adopted survey research design. The study population comprised 95 of library staff in Federal University of Technology Minna library. Total enumeration method was used to determine the sample size of 95; the entire staff was the respondents to the study. Structured and validated questionnaire was the instrument for the study. The instrument’s Cronbach’s alpha coefficient ranged from 0.724 to 0.97. The collected data was analysed using descriptive statistics (frequency, percentages, and mean). The findings of the study showed that library staff delivered very highly rated library services at Federal University of Technology Minna library were internet services, information provision on library website, user education, assisting users to locate information on materials not held locally, providing bibliographies of library holdings to users, providing a platform for research and communication through serials’ services and circulation of new arrivals list, were rated at high extent with tangible mean of (Mean = 4.00 above). The findings showed that workshop/seminars (X = 4.46), self-instruction (X = 4.35), regular certificated education programme (X = 4.34), staff retraining (X = 4.23) and on-line development courses (X = 4.13) were types of CBPs that the library personnel mostly participated in.. The study further found out that the staff ICT skills were majorly acquired through self-instruction (X = 4.29); formal training by the producers/vendors (X = 4.36) and workshops/seminars (X = 4.36). The study therefore concluded that providing additional chances for library professionals to engage in capacity building programs such as conferences and sabbatical appointments will improve the ICT abilities of the staff of federal university of technology Minna Library. The study recommends that university library board and administrators should make available and accessible, appropriate training/ICT policies for sustainable capacity building and effective service delivery and also library personnel should endeavor to build their own capacities in the event of inadequate sponsorship from the university/ library management so as to enhance service delivery.

**Keywords**

Capacity building, Information Communication Technology, Nigerian, Librarian and skill acquisition

# Introduction

University libraries are established concomitantly with the parent institution in order to facilitate the educational, scholarly, and research endeavors of its community through the provision of current and readily accessible information. The library accomplishes this objective by amassing, storing, categorizing, safeguarding, and disseminating information to both the parent organization and the community. This is the rationale behind the library being likened to a dynamic organism (University of Potomac, 2020), as it must constantly acquire up-to-date information for its primary users, who are predominantly students, faculty, and external patrons. The library staff consists of librarians, paraprofessionals, and support personnel. According to the Librarians' Registration Council of Nigeria (LRCN, 2015), a qualified professional in Nigeria possesses a minimum of a bachelor's degree in Library and Information Science (LIS) and may also possess a degree in a different field of study along with a postgraduate degree, such as a Master in Library Science (MLS). The term "librarian" refers to its equivalent and similar terms. The paraprofessional personnel are LIS graduates with at least a Diploma or certificate who have been educated in library processes to give technical support to professionals. These individuals are also known as library officers. Support personnel are those who have qualifications in the desired field, such as a secretary or a driver. According to LRCN (2015), the librarian-to-paraprofessional-to-supporting-library-staff ratio in academic institutions is determined by the library's operations, services, and total workload.

Iqbal and Khan (2017) observed that the traditional library offerings encompass various services such as the Online Public Access Catalogue (OPAC), User Services, Reference Service, Current Awareness Service, Document Delivery, Inter-library loan, Audio-Visual Services, and Customer Relations. On the other hand, the novel services entail access to the Internet and its associated tools and services, which include electronic information sources and a digital library containing local and institutional documents. These services consist of current awareness services, selective dissemination of information (SDI), circulation of new arrivals list, electronic document delivery (EDD), Web/Online Public Access Catalogue (OPAC), and information provision on the library website. Additionally, they comprise Internet services, assistance in locating information materials not available locally, provision of bibliographies of library holdings to users, a platform for research and communication through serials services, digitization, interlibrary loan, loan services, multimedia service, CD/DVD based service, consortia collaboration, online reference services, indexing and abstracting, user education, referral service, reprographic services, and translation services.

Librarians, along with educators, learning technologists, and researchers, are key catalysts in fostering ICT in the HE sector, as their role extends beyond platform and information management, because they are enormously responsible for building capacities in ICT access and use among educators, scientists, policymakers, and their own peers, while putting ICT use in practice through publications, data, repositories, and library resources (Santos-Hermosa and Atenas 2022) believe that training library and information professionals in ICT is strategic.

Experts insist on the importance of investing in training strategies for future and qualified professionals to develop and promote ICT use across all levels, from information access to data management, various information platforms, and OERs (Atenas and Havemann, 2013; Atenas et al., 2015;; Ferreira Borges et al., 2020, Santos-Hermosa and Atenas 2022), and on the need to update the syllabi to integrate new educational approaches (Ramírez-Montoya et al., 2021). As a result, LIS schools should use an ICT education strategy to create capacities in order to improve their contribution and influence on society in terms of democratizing access to knowledge. Since the conventional nature of curriculum design is one of the challenges with LIS professional training programs (Fabián Maina et al., 2020)

An Information and Communication Technology (ICT) environment can simply be defined as an information system comprised of organized information managers and users, computer hardware and software, communication networks, and data/information resources that acquires and collects, organizes and transforms, stores and retrieves, as well as disseminates and transfers relevant information to the relevant users, regardless of their location, time of accesses, and need, and in any case, in any case, in any case, in any case, in any case, in any case as a result, a library or information center formed in an ICT environment to function as an information system or rather a veritable channel of communication would have a range of ICT physical devices (hardwares), information processing and retrieval devices/instructions (software), and so on. Data storage (information/data resources) and communication routes (networks). This type of library and information center might be described as digitized, automated, or virtual.

The primary roles of these ICT-based libraries and information centers are as follows: - to assist library operations aid in policy and administrative decision making - aid in strategic competitive advantage in the provision of library and information services the delivery of information on a global scale has been greatly improved through the utilization of Information and Communication Technology (ICT) in information centers and libraries. This has facilitated the immediate provision of documents, albeit in electronic form. Consequently, there has been a surge in the digitization of library materials. This involves the conversion of physical prints such as images, maps, script, and sound into electronic files that can be accessed through computer screens. One noteworthy library service is the Multimedia service, which encompasses the integration of various digital media elements such as text, graphics, audio, and video within a computer application. Most multimedia offerings are interactive in nature and are highly valued by users. Another notable library service is consortia collaboration, which is more prevalent in developed countries compared to its nascent stage in Nigeria. In this model, a group of libraries enters into a formal agreement to share resources. Membership in such consortia is often limited based on country, library type, acquisitions, and licensing policies (Ani, et’al., 2016).).

Capacity development is a purposeful acquisition of proficiencies, erudition, comprehension, principles, and behavioral dispositions essential for individual, institutional, or national progress (United Nations Development Programme, UNDP 2011). Fundamentally, capacity signifies the competence of an individual, establishment, or society to proficiently, successfully, and continuously execute tasks. This highlights that in order for capacity development to be efficacious, there must be an examination and alteration of the societal system as a whole. Panda, Swain, and Jena (2010) defined capacity development as a coordinated approach of engagements in the enhancement of skills and refinement of procedures to enable organizations (and individuals) to reach maximum productivity. Capacity development, therefore, is a comprehensive concept encompassing skilled individuals, effective governance, innovation, sustainable organizations, sufficient financial resources, physical infrastructure, efficient workflow, and positive incentives.

The library is an evolving entity and university libraries worldwide accommodate diverse fields of study, the university's library obtains materials for every field of study, thereby expanding both physically and electronically in accordance with the advancement of knowledge and technology. Libraries and their staff, who uphold their institution's mission by providing up-to-date information resources in a timely manner, must actively monitor changes in the field of education and information, while also enhancing their own capabilities to adapt to these technological advancements and improve service delivery. Omotayo (2015) further underscores this by asserting that the development of human resources is crucial. The importance of capacity building has become imperative in every organization as a means to enhance success in an increasingly knowledge-based global economy. Anunobi (2013) and Sinclair (2009) reached the conclusion that empirical research has demonstrated that the utilization of information and communication technology (ICT) has posed challenges for library staff. These challenges pertain to making decisions regarding the acquisition of collections that will meet the needs of users, as well as finding ways to remain relevant in the current digital era. It is important for library personnel to ensure that library services are no longer substituted by other sources of information, such as the Internet, as users seek up-to-date and value-added information with minimal effort. Anunobi (2013) further emphasized that the integration of ICT in education has presented a new challenge for university libraries in maintaining their position as the primary providers of information in an ever-evolving ICT environment. This situation is not unique to a specific region but rather a global phenomenon, as highlighted by the Association of Research Libraries (ARL, 2012) statistical report of 2010-2011 berated the observed decrease in reference queries and inter-library loans between research libraries in America from 2009-2011. McDonough (2007) and Flood (2016) cited in Akintola (2021) expressed their remorse over the decline in students' utilization of traditional library services at the University of Illinois and adults' utilization of British public libraries, respectively. This suggests that students no longer rely on the library to fulfill their information needs, as concluded by McDonough himself, who stated "we are losing clientele".

The utilization of ICT by library personnel for the delivery of library services has brought about significant transformations, yet it also presents challenges. Abban (2018) and Anunobi (2013) summarized the challenges encountered in the utilization of ICTs in university libraries in Nigeria, including inadequate funding, unreliable power supply, insufficient skilled staff to manage and maintain ICT resources, inadequate support from the Nigerian government for ICT-related matters, and poor ICT skills among library personnel, among other issues. The effectiveness, relevance, and added value of library personnel's service delivery can be ensured by addressing these anomalies. In order to meet user expectations and satisfaction, while striving for relevance in the competitive information world, it is imperative for library personnel to thoroughly evaluate their library policies and services. This evaluation will enable them to provide the latest information services. Additionally, it is crucial for library personnel to recognize their vital role as custodians and disseminators of information and knowledge. They must also acknowledge and embrace the changing information format and mode of transmission, which are rapidly replacing traditional methods of information preservation, processing, and utilization. According to CARL (2010), the role of library personnel is continuously evolving due to the influence of technology on information products and services. Users now have access to extensive information without the assistance of library personnel.

and some individuals exhibit a higher level of proficiency in utilizing information and communication technologies (ICTs) when compared to library personnel, who are responsible for processing information. Consequently, there is a necessity for library personnel, particularly those in university libraries, to reevaluate the types of services they offer and determine the most effective manner in which to utilize the current ICTs for providing these services. This would entail the need for enhancing the skills and capabilities of library personnel in Nigeria, specifically those at the Federal University of Technology Minna.

# Statement of the Problem

University libraries serve as the central hub for academic endeavors, as they house the information that is essential for the academic community. As a result, users frequently visit the library to access the necessary information. With the progression of technology, there have been numerous innovations introduced in the realm of university education. Consequently, the utilization of information technology in libraries has transformed the manner in which library services are delivered. Traditional library services are now being substituted or enhanced by ICT-related services to align with the present global trends in service provision within libraries. Library staff members must familiarize themselves with the existing information and communication technology (ICT) facilities and services. This can be achieved by developing their ICT skills in order to effectively utilize the ever-changing ICTs for service delivery. Additionally, the continuous advancements in service delivery necessitate the constant improvement of skills for effective service provision. The traditional role of library personnel as the primary caretakers of information has diminished due to subpar information formatting. As a result, service delivery methods, such as electronic document delivery, information provision on library websites, and Internet services, are continuously being redefined.

However, it has been noticed that there is a persistent decline in the number of library users in the current era of ICT-driven information dissemination. Users seem to be dissatisfied with the service provided by library personnel. This dissatisfaction may stem from the inadequate availability of modern ICT facilities for service delivery, as well as the insufficient ICT skills and capacity possessed by library staff members to effectively deliver services. the requirements of users in the Digital age are essential. Numerous challenges, such as insufficient training, absence of training policy, limited funding, and inadequate infrastructural facilities, seem to be hindering the fulfillment of these needs.

It is expected that addressing these issues adequately will significantly improve the delivery of library services. Therefore, it is imperative to investigate whether the library personnel at Federal University of Technology Minna possess the necessary ICT skills and capacities to effectively provide services. Additionally, it is crucial to determine if these library personnel employ ICTs in their service delivery. Consequently, this study aims to examine the impact of capacity building, ICT skills, and usage on service delivery by library personnel at Federal University of Technology Minna.

# Objectives of the study

The primary objective of this study was to assess the degree to which capacity building is achieved and ICT skills acqusition by library personnel in Federal University of Technology Minna determine library service delivery. The specific objectives were to:

1. determine the types of services delivered by library personnel in Federal University of Technology Minna;
2. find out the capacity building programmes available for and participated in by library personnel in Federal University of Technology Minna;
3. find out the means ICT skills are acquired by library personnel in Federal University of Technology Minna

# Conceptual Model

According to Jarvelin and Wilson (2003), a conceptual model provides a working approach, a structure that comprises general, primary concepts and their relationships. The Technology Acceptance Model (TAM) 2, the Human Capital Theory, and the Capability Approach are used in this study. The suggested model connects the interactions between the study's independent and dependent variables. The independent variables are capacity building and the acquisition of ICT skills, whereas the dependent variable is library service delivery by library workers at the Federal University of Technology Minna. The conceptual model suggests various links and interactions between factors and delivery of service by library personnel in Federal University of Technology Minna. It suggests that means of ICT skills acqusition and capacity building in a viable environment are the key factors that determine library personnel’s delivery of service in Federal University of Technology Minna.

Conceptual design

**CAPACITY BUILDING**

* Workshops/Seminars
* Links with other libraries
* Staff Retraining
* Staff exchange
* Self-Instruction
* Online development courses
* Mentoring
* Conference Attendance

**LIBRARY SERVICE DELIVERY**

* Circulation of new arrivals list
* Current awareness services
* SDI services
* Electronic document delivery
* Multimedia service
* Online reference services
* Web/OPAC
* Indexing and abstracting
* CD/DVD based service
* Internet services
* Information provision on Library website
* User education
* Referral services
* Consortia collaboration
* Digitisation of local resources
* Reprographic services
* Translation services
* Inter library loan
* Loans services

**ICT SKILLS ACQUISITION**

* Self-instruction
* Formal training by the producers/vendors
* Knowledge acquired at workshops/ seminars
* The assistance of friends and colleagues
* The staff of the Library providing the database services
* The instruction manuals provided by the producers

Fig. 1: Conceptual model

Source: Self constructed by the researcher (2023)

# METHODOLOGY

The research design adopted for this study was the ex-post-facto type of descriptive research. All the library personnel (95) comprise of 26 professional Librarian and 69 Para-professionals in Federal University of Technology Minna participated in the study. Total enumeration technique was used in the study. Thus, all the ninety five (95) library personnel in Federal University of Technology Minna constituted the sample of this study. Questionnaire was the research instrument used to gather information for the study. The face validity of the instruments was checked by distributing the questionnaire to colleagues and a lecturer who specializes in research technique at FUT Minna's Department of Library and Information science. Cronbach Alpha Coefficient r = from 0.724 to 0.97 for all variables. This result demonstrates that the instrument can extract the necessary data for the study. The researcher individually administered the questionnaire for the study to the university participants. The data was coded and analyzed with the Statistical Package for Social Sciences (SPSS). The demographic information of respondents was analyzed using descriptive statistics such as frequency counts and percentages and standard deviation.

# Data Analysis

The results derived from the analyses of data obtained from the respondents and the discussion of the findings. The findings were presented, interpreted and discussed based on the research questions.

**Questionnaire administration and response rate**

The population of the study consisted of all the ninety five (95) library personnel in the university, comprising 26 librarians and 69 para-professionals in the university library. Out of 95 copies of the questionnaire administered, 70 copies were returned and valid for analysis and presented in table 1.

Table 1: Distribution and returned questionnaire

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Total | No of copies of questionnaire administered | | | No of copies of questionnaire administered | | |  |
|  | Librarians | Para-professionals | Total | Librarians | Para-professionals | Total | Responses rate (%) |
| 26 | 69 | 95 | 22 | 48 | 70 | 73.7 |

# Demographic information of respondents

Demographic characteristics such as job status, age range, marital status, and years of experience of the respondents were analysed using descriptive statistics of frequency counts and percentages and the result is presented in Table 2.

Table 2: Demographic information of respondents

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic Characteristics** | **Categories** | **Frequencies** | **Percentages** |
| Job status | Professional  Para-professional  **Total** | 22  48  **70** | 31.4  68.6  **100** |
| Gender | Female  Male  Total | 19  51  70 | 27.1  72.9  100 |
| Age range | 33 – 38  39 – 44  45 – 50  50 years and above  **Total** | 5  11  25  29  **70** | 7.1  15.7  35.7  41.4  **100** |
| Marital status | Single  Married  Divorced  Widowed  **Total** | 27  30  7  6  **70** | 38.6  42.9  10.0  8.6  **100** |
| Length of service in a  university library | 1 – 5 years  6 – 10 years  11 – 15 years  16 – 20 years  21 – above  **Total** | 1  7  17  22  23  **70** | 1.4  10/0  24.3  31.4  32.9  **100** |

The data acquired as presented in Table 2 demonstrates that the para-professionals had the highest number of respondents, comprising 48 individuals (68.6%), while the librarian cadre accounted for 22 respondents (31.4%). This signifies that despite there being a larger population of para-professionals compared to librarians, all cadres were adequately represented. Additionally, the data discloses that the age bracket of 50 years and above had the highest number of respondents, totaling 29 individuals (41.4%). This was followed by the age bracket of 40-50, which had a population of 25 individuals (35.7%), and lastly, the age range of 39-44 had only 11 respondents (15.7%). This suggests that a majority of the respondents were still in their inactive years. The results pertaining to gender indicate that the majority of respondents were male, totaling 51 individuals (72.9%). This outcome implies that even though there were more male respondents than their female counterparts, because of the large gender disparity, there is a relatively unbalanced gender distribution. Furthermore, the marital status result indicated that 62 (88.6%) of the respondents were married, while 7 (0.2%) were single.

In terms of duration of service in a university library, the bulk of the 23 (32.9%) library workers had more than 21 years of experience. Furthermore, 1 (1.4%) had between 1-5 years of employment, while 22 (31.4%) had between 161-20 years of work experience. This indicates that the majority of the library professionals in the research had extensive expertise.

**Answers to research questions**

# Research question 1: What are the types of library services delivered by library personnel in Federal University of Technology Minna?

Results of responses relating to the types of services delivered in Federal University of Technology Minna are presented in Table 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S/No.** | **Types of services** | **VHD** | | **HD** | | **Undecided** | | **RD** | | **ND** | | **Mean** |
| F | % | F | % | F | % | F | % | F | % |
|  | Internet services | 45 | 64.3 | 16 | 22.9 | 2 | 2.9 | 4 | 5.7 | 3 | 4.3 | 4.37 |
|  | Information provision on Library website | 33 | 47.7 | 26 | 37.1 | 6 | 8.6 | 0 | 0.0 | 5 | 7.1 | 4.11 |
|  | User education | 31 | 44.3 | 26 | 37.1 | 6 | 8.6 | 4 | 5.7 | 3 | 4.3 | 4.11 |
|  | Assisting users to locate information on materials not held locally | 32 | 45.7 | 21 | 30.0 | 12 | 17.1 | 0 | 0.0 | 5 | 7.1 | 4.07 |
|  | Providing bibliographies of library holdings to user | 28 | 40 | 27 | 38.9 | 8 | 11.4 | 4 | 5.7 | 3 | 4.3 | 4.04 |
|  | Providing a platform for research and communication through serials’ services | 30 | 42.9 | 26 | 37.1 | 5 | 7.1 | 4 | 5.7 | 5 | 7.1 | 4.03 |
|  | Circulation of new arrivals list | 31 | 44.3 | 18 | 25.7 | 13 | 18.6 | 6 | 8.6 | 2 | 2.9 | 4.00 |
|  | Current awareness services | 33 | 47.1 | 16 | 22.9 | 11 | 15.7 | 6 | 8.6 | 4 | 5.7 | 3.97 |
|  | SDI services | 30 | 42.9 | 21 | 30 | 9 | 12.9 | 7 | 10 | 3 | 4.3 | 3.97 |
|  | Electronic document delivery | 21 | 30 | 29 | 41.4 | 14 | 20 | 5 | 7.1 | 1 | 1.4 | 3.91 |
|  | Multimedia service | 27 | 38 | 20 | 28.6 | 11 | 15.7 | 9 | 12.9 | 3 | 4.3 | 3.84 |
|  | Online reference services | 22 | 31.4 | 23 | 32.9 | 15 | 21.4 | 7 | 10 | 3 | 4.3 | 3.77 |
|  | Web/OPAC | 14 | 20 | 23 | 32.9 | 21 | 30 | 9 | 12 | 3 | 4.3 | 3.51 |
|  | Indexing and abstracting | 11 | 15.7 | 28 | 40.0 | 16 | 22.9 | 9 | 12.9 | 6 | 8.6 | 3.41 |
|  | CD/DVD based service | 15 | 21.4 | 18 | 25.7 | 16 | 22.9 | 17 | 24.3 | 4 | 5.7 | 3.33 |
|  | Referral services | 7 | 10 | 27 | 38.6 | 20 | 28.6 | 13 | 18.6 | 3 | 4.3 | 3.31 |
|  | Consortia collaboration | 8 | 11.4 | 27 | 38.6 | 11 | 15.7 | 18 | 25.7 | 6 | 8.6 | 3.19 |
|  | Digitisation of local resources | 10 | 14.3 | 18 | 25.7 | 21 | 30.0 | 14 | 20.0 | 7 | 10.0 | 3.14 |
|  | Reprographic services | 7 | 10 | 13 | 18.6 | 31 | 44.3 | 14 | 20 | 5 | 7.1 | 3.04 |
|  | Translation services | 7 | 10 | 12 | 17.1 | 26 | 37.1 | 22 | 31.4 | 3 | 4.3 | 2.97 |
|  | Inter library loan | 5 | 7.1 | 10 | 14.3 | 30 | 42.9 | 17 | 24.3 | 8 | 11.4 | 2.81 |
|  | Loans services | 8 | 11.4 | 15 | 21.4 | 12 | 17.1 | 19 | 27.1 | 16 | 22.9 | 2.71 |

Key: VHD= Very Highly Delivered, HD= Highly Delivered, UD= Undecided, RD = Rarely Delivered, ND= Not Delivered

Table 3 types of services delivered in the library

The result as shown in Table 3 revealed that all the twenty two services suggested were delivered by the respondents. The seven very highly rated library services delivered by library personnel in the university were internet services ( X =4.37), information provision on library website ( X =4.11), user education ( X =4.11),assisting users to locate information on materials not held locally( X =4.07), providing bibliographies of library holdings to users ( X =4.04), providing a platform for research and communication through serials’ services ( X = 4.03)and circulation of new arrivals list ( X =4.00). On the other hand, the seven least lowly rated library services delivered by the library personnel were loans ( X =2.71), inter library loans ( X =2.81), translation services ( X =2.97), reprographic services( X =3.04), digitisation of local resources( X =3.14) and consortia collaboration ( X =3.19). digitisation of local resources ( X =3.14), and referral services ( X =3.31). This implies that the library personnel delivered both digital and traditional library services and they were accessible to users with different levels of ICT skills.

# Research question 2: What are the capacity building programmes available for and participated in by library personnel in Federal University of Technology Minna?

Results of responses relating to capacity building programmes are presented in Tables 4a

Tables 4a capacity building programmes available for respondents

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2a | Which capacity building programmes are available in your library? | VHA | | HA | | Undecided | | RA | | NA | | mean |
| F | % | F | % | F | % | F | % | F | % |
|  | Teleconferencing | 43 | 61.4 | 23 | 32.9 | 3 | 4.3 | 1 | 1.4 | 0 | 0 | 4.54 |
|  | Sabbatical appointment | 33 | 47.1 | 27 | 38.6 | 9 | 12.9 | 1 | 1.4 | 0 | 0 | 4.31 |
|  | Mentoring | 32 | 45.7 | 30 | 42.9 | 6 | 8.6 | 2 | 2.9 | 0 | 0 | 4.31 |
|  | Staff exchange | 26 | 37.1 | 35 | 50 | 9 | 12.9 | 0 | 0 | 0 | 0 | 4.24 |
|  | Links with other libraries | 25 | 35.7 | 37 | 52.9 | 7 | 10 | 1 | 1.4 | 0 | 0 | 4.23 |
|  | Conference attendance | 27 | 38.6 | 31 | 44.3 | 8 | 11.4 | 4 | 5.7 | 0 | 0 | 4.16 |
|  | Staff retraining | 23 | 34.8 | 38 | 57.6 | 4 | 6.1 | 1 | 1.5 | 0 | 0 | 4.26 |
|  | On-line development courses | 19 | 29.2 | 42 | 64.6 | 2 | 3.1 | 2 | 3.1 | 0 | 0 | 4.2 |
|  | In-house retreat | 23 | 32.9 | 31 | 44.3 | 11 | 15.7 | 5 | 7.1 | 0 | 0 | 4.03 |
|  | Self -instruction manuals | 22 | 31.4 | 27 | 38.6 | 16 | 22.9 | 5 | 7.1 | 0 | 0 | 3.94 |
|  | Regular certificated education programmes (for example, degrees) | 21 | 30 | 29 | 41.4 | 14 | 20 | 5 | 7.1 | 1 | 1.4 | 3.91 |
|  | Workshop/Seminars | 20 | 28.6 | 21 | 30 | 20 | 28.6 | 9 | 12.9 | 0 | 0 | 3.74 |

An observation of Table 4a reveals the capacity building programmes available for library personnel in Federal University of Technology Minna. The table shows that the eight prevalent programmes available are teleconferencing ( X =4.54),sabbatical appointments( X =4.31), mentoring( X =4.31), staff exchange( X =4.24), links with other libraries( X =4.23), conference attendance (X =4.26), staff training (X =4.16) online development (X =4.2) and in-house retreat ( X =4.03). The least rated available programmes are,workshop/seminars ( X =3.74), regular certificated education programmes ( X =3.91) and self -instruction manuals ( X =3.94). This result indicates a generally low availability of capacity building programmes for library personnel in Federal University of Technology Minna.

Tables 4b Capacity Building programmes attended

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2b | Which Capacity Building programmes have you participated in your library? | SA | | A | | Undecided | | D | | SD | | mean |
| F | % | F | % | F | % | F | % | F | % |
|  | Workshop/Seminars | 36 | 51.4 | 30 | 42.9 | 4 | 5.7 | 0 | 0 | 0 | 0 | 4.46 |
|  | Self-instruction Manuals | 26 | 37.7 | 42 | 60.9 | 0 | 0 | 1 | 1.4 | 0 | 0 | 4.35 |
|  | Regular certificated education programme (for example, degrees) | 32 | 45.7 | 31 | 44.3 | 6 | 8.6 | 1 | 1.4 | 0 | 0 | 4.34 |
|  | Staff retraining | 29 | 41.4 | 31 | 44.3 | 7 | 10 | 3 | 4.3 | 0 | 0 | 4.23 |
|  | On-line development courses | 25 | 35.7 | 34 | 48.6 | 8 | 11.4 | 1 | 1.4 | 2 | 2.9 | 4.13 |
|  | In-house retreat | 16 | 24.2 | 33 | 50 | 11 | 16.7 | 3 | 4,5 | 3 | 4.5 | 3.85 |
|  | Teleconferencing | 13 | 21 | 28 | 45.2 | 11 | 17.7 | 9 | 14.5 | 1 | 1.6 | 3.69 |
|  | Mentoring | 9 | 13.8 | 32 | 49.2 | 16 | 24.6 | 8 | 12.3 | 0 | 0 | 3.65 |
|  | Links with other libraries | 11 | 18 | 26 | 42.6 | 14 | 23 | 10 | 16.4 | 0 | 0 | 3.62 |
|  | Staff exchange | 7 | 12.1 | 25 | 43.1 | 18 | 31 | 7 | 12.1 | 1 | 1.7 | 3.52 |
|  | Conference attendance | 7 | 11.7 | 27 | 45 | 14 | 23.3 | 10 | 16.7 | 2 | 3.3 | 3.45 |
|  | Sabbatical appointment | 12 | 17.1 | 6 | 8.6 | 50 | 71.4 | 1 | 1.4 | 1 | 1.4 | 3.39 |

Table 4b shows the capacity building programmes participated in by library personnel in Federal University of Technology Minna. The table reveals that the five prevalent programmes participated in were workshop/seminars ( X =4.46), self-instruction( X =4.35),regular certificated education programme ( X =4.34), staff retraining ( X =4.23)and on-line development courses( X =4.13).Conversely, the programmes least attended by the respondents were sabbatical appointment ( X =3.39),conference attendance ( X =3.45), staff exchange ( X =3.52),links with other libraries ( X =3.62). This implies that many of the library personnel did not take up sabbatical appointments to enable them imbibe values, attitudes and cultures, they were not opportune to attend conferences where they could be informed about the best and current practices in the profession.

# Research question 3: Find out the means ICT skills are acquired by library personnel in Federal University of Technology Minna

Table 5 Acquisition of ICT skills by library personnel in Federal University of Technology Minna

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S/No | Statement | SA | | A | | Undecided | | D | | SD | | Mean |
| F | % | F | % | F | % | F | % | F | % |
|  | Self-instruction | 31 | 44.3 | 31 | 44.3 | 6 | 8.6 | 1 | 1.4 | 1 | 1.4 | 4.29 |
|  | Formal training by the producers/vendors | 32 | 45.7 | 33 | 47.1 | 4 | 5.7 | 0 | 0 | 1 | 1.4 | 4.36 |
|  | Knowledge acquired at workshops/ seminars | 31 | 44.3 | 33 | 47.1 | 6 | 8.6 | 0 | 0 | 0 | 0 | 4.36 |
|  | The assistance of friends and colleagues | 22 | 31.4 | 38 | 54.3 | 10 | 14.3 | 0 | 0 | 0 | 0 | 4.17 |
|  | The staff of the Library providing the database services | 27 | 38.6 | 31 | 44.3 | 6 | 8.6 | 4 | 5.7 | 2 | 2.9 | 4.1 |
|  | The instruction manuals provided by the producers | 23 | 32.9 | 31 | 44.3 | 11 | 15.7 | 2 | 2.9 | 3 | 4.3 | 3.99 |

Key: SA= Strongly agree, A= Agree, D= Disagree, SD= Strongly Disagree

Table 5 presents the responses on the mode of acquisition of the ICT skills possessed by the library personnel in Federal University of Technology Minna. Results revealed that the ICT skills were majorly acquired through self-instruction ( X =4.29);formal training by the producers/vendors( X =4.36) and workshops/seminars ( X =4.36).This implies that the cost implicating training opportunities were only partially accessible to the library personnel, therefore, they resorted to the use of cheaper ways of acquiring ICT skills.

**Discussion of the findings**

The study investigated the influence of capacity building and means of Information and Communication Technology skills acquisition on service delivery of library personnel in Federal University of Technology Minna. This section therefore, discusses the findings of the study in relation with results from previous studies.

# Types of library services delivered by the library personnel

The most highly rated library services delivered by library personnel in Federal University of Technology Minna were Internet services, information provision on library website, user education, assisting users to locate information on materials not held locally, providing bibliographies of library holdings to users, providing a platform for research and communication through serials’ services and circulation of new arrivals list. On the other hand, the lowly rated library services delivered were loans, inter library loan, translation, reprographic services, digitisation, consortia collaboration and referral services. The delivery of Internet services indicates that the library personnel wish to keep up with the fast changing technological advancement and innovation in service delivery. The inference from this is that since Internet services enhance fast service delivery, dissemination of information on library website would be faster and easily accessible to the ICT prone users whose needs the library personnel want to satisfy. User education is therefore, eminent to enable users know how best to retrieve current information from the millions of information available on the Internet, while users can also be assisted to locate information on materials not held locally. Furthermore, provision of bibliographies of library holdings would direct users to the location of library resources quickly while serials services would enhance research activities of the users as they would have opportunity to use current and specific materials related to their discipline and circulation of new arrivals list would update users about new library stock for use.

There are many empirical studies in support of this finding, such as; Adeniji, Babalola and Adeniji (2012), Tait et’al., (2016), Oyovwe-Tinuoye, Omeluzor and Patrick, (2021) Oyedokun, Oyewumi and Laaro (2018), Osiesi, Odobe, Sanni, Adams, Oke, Omokhabi, and Okorie (2022) and Akintola, Adetomiwa and Onifade (2022). For instance, Adeniji, Babalola and Adeniji (2012) in their investigation of library staff development in universities in Nigeria, concluded that globally, library/information service delivery is currently shifting from traditional models to electronic and web-based format.

The finding is however, at variance with Sokari, Gama, Haliru, Olayemi, and Yemi-Peters (2017) in a survey of service delivery of library personnel in North-Central, Nigeria. He averred that the Internet, current awareness and loans services were the three most highly delivered library services.

# Types of capacity building programmes available for and participated in by library personnel in Federal University of Technology Minna

The investigation into the capacity building initiatives offered in the libraries under scrutiny demonstrated that the most prevalent programs were teleconferencing, sabbatical appointments, mentoring, and staff exchange. This indicates that these programs provided opportunities for enhancing capacity. This discovery contradicts the results of Njeze and James (2013), who examined methods of conservation in Nigerian universities and found that the most prevalent programs were seminars, conferences, in-house retreats, regular certified programs, and online courses. The study also found that the least available programs were workshops/seminars, regular certified programs, and self-instruction. This finding aligns with Cobblah's (2015) report, which revealed that the majority of library staff in two Ghanaian universities had never participated in regular certified education programs and workshops/seminars/conferences.

The findings of the available capacity building programs differ from some of the findings of the programs in which the library personnel participated. Therefore, the programs that were most readily available experienced low levels of participation, while the programs that were least available had higher levels of participation. This indicates that the availability of programs may not be the sole determinant of participation, as other factors come into play. One example of this is the availability of ICT facilities, which may not necessarily result in high usage due to external conditions such as the non-functionality of the facility.

**The means of acquisition of ICT skills**

The acquisition of ICT skills by library personnel at Federal University of Technology Minna was examined in this study. It was found that the three main methods of acquiring ICT skills were self-instruction, formal training provided by producers/vendors, and workshops/seminars. Additionally, assistance from friends was also identified as a means of acquiring these skills. This finding is consistent with the research conducted by Oyedokun et’al (2018), who evaluated the utilization of ICT by library personnel in South east Nigeria. Their study revealed that respondents acquired ICT skills through formal and informal education, workshops, in-house training, assistance from colleagues, and seminars. According to Emiri (2015), in an examination of ICT abilities among library professionals at two Nigerian institutions, respondents stated that their ICT skills were mostly obtained through assistance from friends, ICT development programs, and formal schooling. However, Antidius (2018) found that respondents acquired ICT skills through learning through practice, retreats organized by library administration, and workshops/seminars in a study of ICT use by library professionals at the University of Dar es Salaam in Tanzania.

The readiness to learn ICT skills from readily available and cheap sources such as self-education and formal training provided by producers/vendors, workshops/seminars and assistance from friends, is in line with the “capability set” of the Capability Approach theory (pages 70-75). It also aligns with the Human Capital Theory (the qualitative aspect- pages 75-76) in that, ICT skills are seen as human capital which can enhance service delivery and the library personnel are investing/acquiring it for value added service delivery.

# Summary of the findings

The following are the major findings of the study:

1. The most highly rated services delivered by the library personnel in Federal University of Technology Minna were Internet services, information provision on library website, user education, assisting users to locate information not held locally, providing bibliographies of library holdings to users, providing a platform for research and serials services and circulation of new arrivals list while the three least delivered services were loans, inter library loan and translation services.

2. Major capacity building programmes participated in by the library personnel in the Federal University of Technology Minna were workshops/seminars, self- instruction, regular certificated programmes, staff retraining and online development courses, while the least participated in were sabbatical appointments, conference attendance and staff exchange.

3 ICT skills were mostly acquired through the assistance of friends/colleagues, through self-instruction, formal training by the producers/vendors and workshop/seminars. The library personnel possessed a high level of computing and communication skills but moderate skills in networking, programming and digitisation.

# Conclusion

The study indicates that capacity building and ways of ICT skill acquisition are done separately and collectively affect service delivery of library professionals in Federal University of Technology Minna university libraries. It is predicted that providing additional chances for library professionals to engage in capacity building programs such as conferences and sabbatical appointments will improve their ICT abilities. Enhancement of services congruent with optimal service delivery in the digital era. LIS professional associations might contribute to this by taking a more active role in influencing policies that improve library service delivery.

# Recommendations

1. Based on the study's findings, the following suggestions are made: Library and university administration should prioritize capacity building for library personnel by constantly assessing their capacity needs and encouraging participation in various capacity building programs such as online development courses, staff exchange, workshop/seminar teleconferencing, and links with other libraries. Thus, library professionals may acquire and improve their abilities in networking, programming, and digitisation, as well as other skills associated with the constant changes in Information and Communication Technology and the function of the library as an information disseminator.
2. Library personnel should endeavor to build their own capacities in the event of inadequate sponsorship from the university/ library management so as to enhance service delivery.
3. There should be increased attendance of conferences whereby library personnel can learn the current and best practices of the profession.
4. It is necessary that library management makes available and accessible, appropriate training/ICT policies for sustainable capacity building and effective service delivery.

# The Implication of the study

The inferences derived from the investigation suggest that the provision of loans, interlibrary loan services, and translation services at the Federal University of Technology Minna is lacking. Similarly, the blogging service, which offers prompt responses to user inquiries on an interactive platform and serves as a means of marketing library services, is also deficient. Consequently, it is imperative for both library personnel and university management to work collaboratively in order to establish consortia, revive interlibrary loans, and establish the necessary infrastructure for blogging services. These measures are necessary to ensure an improved delivery of services and to meet the needs of users.

Additionally, it was observed that library personnel did not frequently engage in capacity building programs, such as staff exchange, teleconferencing, establishing connections with other libraries, and attending conferences. These findings indicate to the university library management the importance of allocating resources for the participation of library personnel in capacity building programs. By doing so, library personnel will be equipped with up-to-date knowledge and skills, enabling them to provide current and exemplary services in library and information science.

# Contributions of the study to knowledge

The study has contributed to knowledge in the following areas:

1. According to the study, the three most frequently delivered services by library personnel at Federal University of Technology Minna were Internet services, web information provision, and user education, while the three least frequently delivered services were loans, interlibrary loan, and translation services.
2. The study indicates that library professionals at the Federal University of Technology Minna have improved their capability, ICT abilities, and usage of technology.
3. The study indicates that library professionals at Federal University of Technology Minna have a high degree of ICT capabilities.
4. Specifically, the study has greatly enriched the body of knowledge in the areas of capacity building, Information and Communication Technology (ICT) skills and use for service delivery by library personnel in university libraries in Federal University of Technology Minna and globally.

# Suggestions for further studies

The following have been suggested for further studies:

1. Capacity building and acquisition of ICT skills as determinants of services delivery by library personnel in judiciary libraries in Niger state.
2. Users’ perception of service delivery in university libraries Federal University of Technology Minna could also be investigated.

**Reference**

Abban, S. (2018). Training and development of library staff: a case of two university libraries in Ghana. *Library Philosophy and Practice*, 0\_1.

Adeniji, M. A., Babalola, G. A. and Adeniji, M. A. 2012. Workers’ training programmes in two libraries in Nigeria. *Library and Philosophy and Practice*. Retrieved Dec. 20, 2022, from <https://digitalcommons.unl.edu/libphilprac/769>.

Akintola, B. O. (2021). *Capacity Building, ICT Skills, Use and Service Delivery of Library Personnel in Universities in Southwestern Nigeria* (Doctoral dissertation). A Thesis Submitted to the Department of Library, Archival and Information Studies, Faculty of Education, In partial fulfillment of the requirements for the award of the Degree of doctor of philosophy of the University of Ibadan

Akintola, B. O., Adetomiwa, B., & Onifade, F. N. (2022). Staff Training and Career Development among Library Staff in Federal Universities in Southwest, Nigeria. *International Information & Library Review*, *54*(4), 315-324.

Ani, V. A., Ani, E. O., Ugwu, C. O., Nwachukwu, A. I., Obianuko, J. C., Ndaji, G. I., & Maduchie, E. E. (2016). Strategies for enhancing the utilization of Information and Communication Technology (ICT)-based library resources in research. *Library Philosophy and practice*, 1.

Anunobi, C. V. 2013. Human capacity building in Nigerian university libraries: an imperative for academic libraries' contribution towards national development. *African Journal of Library, Archives and Information Science 23.1*: 33-44.

Association of College and Research Libraries (ACRL) 2012. Top ten trends in academic libraries. Retrieved Nov. 21, 2023, from [www.m.crin.acrl.org/content/73/311.full](http://www.m.crin.acrl.org/content/73/311.full).

Atenas, J., & Havemann, L. (2013). Quality assurance in the open: an evaluation of OER repositories. *INNOQUAL-International Journal for Innovation and Quality in Learning*, *1*(2), 22-34.

Atenas, J., Havemann, L., & Priego, E. (2015). The 21st Century’s Raw Material: Using Open Data as Open Educational Resources. Open Education Working Group. Open Knowledge Foundation.

Borges, F. F., Teixeira, J. A., & Acedo, S. O. (2020). Uso de repositórios de recursos educacionais abertos nas práticas pedagógicas: uma revisão sistemática. *Revista Latinoamericana de Tecnología Educativa-RELATEC*, *19*(2), 115-133.

Canadian Association of Research Libraries (CARL) 2010. Core competencies for 21st Century CARL library personnel. Retrieved Oct. 9, 2014, from [www.carl-abrc.ca](http://www.carl-abrc.ca).

Emiri, O. T. (2017). Digital literacy skills among librarians in university libraries in the 21st century in Edo and Delta states, Nigeria. *International Journal of Library and Information Services (IJLIS)*, *6*(1), 37-52.

Fidelis, A. (2018). Usage of information and communication technology to support innovative library services in universities: a case of the University of Dar es Salaam Wilbert Chagula Library. *University of Dar es Salaam Library Journal*, *13*(2), 3-17.

GABRIEL, J. T. (2021). *Influence of Public Relations Practice on Information Service Delivery and Librarians’ Image in Federal University Libraries in North-Central, Nigeria* (Doctoral dissertation).

Iqbal, M. and Khan, A. 2017. Examining the ICT skills of university librarians in a developing country: a study from the University of the Punjab, Lahore, Pakistan. Library Philosophy and Practice. Retrieved Oct. 15, 2020, from https://digitalcommons.unl. edu/ libphilprac/ 1639.

Jarvelin, K. and Wilson, T. D. 2003. On conceptual models for information seeking and retrieval research. Information Research 9.1. paper 163. Retrieved Jan. 8, 2023, from <http://InformationR.net/ir/9-1/paper163.html>.

Librarians Registration Council of Nigeria (LRCN) and Federal Ministry of Education, 2015. Minimum standards and guidelines for academic libraries in Nigeria (Draft). Retrieved Nov. 15, 2023 from [www.lrcn.org.ng](http://www.lrcn.org.ng).

Maina, M. F., Santos-Hermosa, G., Mancini, F., & Guàrdia Ortiz, L. (2020). Open educational practices (OEP) in the design of digital competence assessment. *Distance Education*, *41*(2), 261-278.

Omotayo, F. O. 2015. Knowledge Management as an important tool in organisationalmanagement: a review of literature. Library Philosophy and Practice. Retrieved Nov. 24, 2023, from <http://digitalcommons.unl.edu/libphilprac/1238>.

Osiesi, M. P., Odobe, V. T., Sanni, K. T., Adams, A. B., Oke, C. C., Omokhabi, U. S., & Okorie, N. C. (2022). An assessment of the impact of professional development and training on job performance of library staff in Federal University Oye Ekiti libraries, Nigeria. *Library Management*, *43*(3/4), 228-239.

Oyedokun, T. T., Oyewumi, F. A., & Laaro, D. M. (2018). Assessment of ICT competencies of library staff in selected universities in Kwara State, Nigeria. *Library Philosophy and Practice*, I.

Oyedokun, T. T., Oyewumi, F. A., & Laaro, D. M. (2018). Assessment of ICT competencies of library staff in selected universities in Kwara State, Nigeria. *Library Philosophy and Practice*, I.

Oyovwe-Tinuoye, G. O., Omeluzor, S. U., & Patrick, I. O. (2021). Influence of ICT skills on job performance of librarians in university libraries of South-South, Nigeria. *Information Development*, *37*(3), 345-358.

Panda, B. P., Swain, K. and Jena, K. L. 2010. Capacity building and restructuring of libraries and information centres: a spotlight. In ICSSR national seminar on capacity building for library professionals in digital environment. 20-21st September. (Unpublished conference paper): 1-6.

Ramírez-Montoya, M. S., Andrade-Vargas, L., Rivera-Rogel, D., & Portuguez-Castro, M. (2021). Trends for the future of education programs for professional development. *Sustainability*, *13*(13), 7244.

Hermosa, G., & Atenas, J. (2022, July). Building capacities in open knowledge: recommendations for library and information science professionals and schools. In *Frontiers in education* (Vol. 7, p. 866049). Frontiers.

Sokari, V., Gama, U. G., Haliru, Z. A., Olayemi, K. J., & Yemi-Peters, O. E. (2017). Application of information and communication technology facilities in technical services operations at Bayero University library, Nigeria. *Information Impact: Journal of Information and Knowledge Management*, *8*(1), 52-58.

Tait, E., Martzoukou, K. and Reid, P. 2016. Libraries for the future: the role of IT utilities in the transformation of academic librariesPalgrave Communications 2. 16070. Retrieved July 27, 2023, from <https://www.nature.com/articles/palcomms201670>

United Nations Development Programme. 2011. Supporting capacity building: the UNDP approach. UNDP. Retrieved May 23, 2023, from http:www.undporg/capacity/ourapproach.shtml.

University of Potomac. 2020. The Library: a growing organism. Retrieved March 21, 2023 from <https://potomac.edu/the-library-a-growing-organism>.