

**CAPACITY BUILDING, ICT SKILLS, USE AND SERVICE DELIVERY
OF LIBRARY PERSONNEL IN UNIVERSITIES IN SOUTHWESTERN
NIGERIA**

BY

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CERTIFICATION

This thesis titled **CAPACITY BUILDING, ICT SKILLS, USE AND SERVICE DELIVERY OF LIBRARY PERSONNEL IN UNIVERSITIES IN SOUTHWESTERN NIGERIA**, was prepared and submitted by AKINTOLA, BOSEDE OLUTOYIN in partial fulfillment of the requirements for the award of the degree of Doctor of Philosophy (Library, Archival and Information Studies) is hereby accepted.

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DEDICATION

This thesis is dedicated to the Lord Jesus Christ in whom is life eternal; He was, is and evermore shall be. To Him be all the glory for His grace and mercies which enabled me to complete this work.

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ABSTRACT

Service Delivery of Library Personnel (SDoLP) determines the provision of value-added library services, the accomplishment of university goals and users' satisfaction. However, extant literature reveals that the SDoLP in Nigerian university libraries is poor, which has been attributed, partly, to low participation in Capacity Building Programmes (CBP), inadequate ICT skills and use among the library personnel. Previous studies focused largely on acquisition of ICT facilities, with less emphasis on Capacity Building (CB), ICT skills and use. This study, therefore, was designed to investigate the influence of CB, ICT skills and use on SDoLP in southwestern Nigerian universities.

Human Capital and Capability Approach theories and Technology Acceptance Model 2 provided the framework, while the mixed method (survey design of correlational type and qualitative method) was adopted. All the librarians (311) and para-professionals (165) in the 46 universities (federal, state and private) in southwestern Nigeria were enumerated. The instruments used were CB ($r=0.90$), ICT Skills ($r=0.96$), Use of ICT ($r=0.96$) and SDoLP ($r=0.96$) scales. In-depth interview sessions were held with the university librarians. Quantitative data were analysed using descriptive statistics, Pearson's product moment correlation and Multiple regression at 0.05 level of significance, while qualitative data were content analysed.

The respondents' age was 39.40 ± 1.60 years while the majority were females (54.2%). The respondents' length of service spanned 1-5years (30%), 6-10years (39.9%), 11-15years (16.2%), 16-20years (8%), 21-25years (2.7%) and 26-30years (3.2%). The ICT skills were acquired via assistance from friends (80.0%), self-instruction (79.9%) and workshops/seminars (77.3%). The three mostly delivered services were internet services (96.7%), information provision on library website (96%) and user education (85.3%). The distribution of ICT facilities deployed for service delivery was computers (93.0%), photocopiers (90.8%), databases (82.4%) and printers (80.2%). Self-instruction (76.1%), workshop/seminars (74.6%) and staff retraining (57.6%) were CBPs that the library personnel mostly participated in. ICT was used mostly for stress reduction (97.3%), global content delivery (96.8%), networking and collaboration with colleagues (95.4%) and to enhance social media use (94.6%). The level of ICT skills was high (49.30) as against a threshold of 36.00. CB ($r=0.27$), ICT skills ($r=0.39$) and ICT use ($r=0.58$) had significant positive relationships with service delivery. The CB, ICT skills and ICT use jointly contributed to SDoLP ($F_{(3,496)} = 116.42$, adj. $R^2=0.42$), accounting for 42.0% of its variance. The CB ($\beta=0.24$), ICT skills ($\beta=0.42$) and ICT use ($\beta=0.14$) relatively contributed to SDoLP. The common challenges of SDoLP were inadequate funding, low internet bandwidth and irregular power supply.

Capacity building, ICT skills and use influenced service delivery of library personnel in universities in southwestern Nigeria. University libraries should take cognisance of these factors for effective service delivery of library personnel.

Keywords: Library service delivery, Library personnel in Nigeria, Nigerian university libraries, ICT skill acquisition

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

University libraries are established simultaneously with the parent institution to support teaching, erudition and research activities of its community by providing current and timely information which are accessible and easy to retrieve. The library achieves this goal by collecting, storing, organising, preserving and disseminating information to its parent organisation and the community. This is why the library is referred to as a growing organism (University of Potomac, 2020), for it must continually gather current information for its users who are primarily students, staff and external users.

The library is basically divided into different departments which may have some variations according to university and environment. Umaru Musa Yaradua University (2019) gave a brief description of the conventional departments in the library as: acquisitions where selection of materials is done, it also encompasses ordering, stamping and accessioning; cataloguing department or technical services, is a place where library materials are catalogued and classified and labels are put on them for proper identification and later transferred to the shelves for consultation. The serials department houses current information such as journals, magazines, newspapers that allow users to attune with current event in the society. The readers' services department usually comprises of circulation unit which is the heartbeat of the library where users have direct access to library holdings. Its functions involve charging and discharging of library materials to the users when demands are made at the circulation desk and also the reference unit.

The library personnel comprise of librarians, paraprofessionals and support staff. The Librarians' Registration Council of Nigeria (LRCN, 2015) stated that in Nigeria, a trained professional is one who possesses at least a first degree in Library and Information Science (LIS), he/she may also have a degree in a different course of study with a

postgraduate degree (Master in Library Science (MLS) or its equivalent and such are referred to as “librarian”. The paraprofessional staff are holders of a minimum of a Diploma or certificate in LIS who have been trained in library procedures in order to provide technical support to professionals. These set of people are also referred to as library officers. Support staff are staff that possess qualifications in the desired area, for instance, secretary and driver. LRCN (2015) further stated that the ratio of library personnel in academic institutions, that is, librarians to paraprofessionals and supporting library staff, depends on the library operations, services and total workload.

Iqbal and Khan (2017) noted that the conventional library services include the Online Public Access Catalogue (OPAC), User Services, Reference Service, Current Awareness Service, Document Delivery, Inter-library loan, Audio-Visual Services and Customer Relations. The new services however, include access to the Internet and Internet based tools and services including electronic information sources and digital library of local and institutional documents. The services are, 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 library website. Others include-, Internet services, assisting users to locate information materials not held locally, providing bibliographies of library holdings to users, providing a platform for research and communication through serials services, digitisation, interlibrary loan, loans services, multimedia service, CD/DVD based service, consortia collaboration, online reference services, indexing and abstracting, user education, referral service, reprographic services and translation services.

Current awareness services (CAS) are services offered to notify library patrons that the library has added to its stock of resources and facilities. In the digital dispensation, this is often done via alert services through e-mails and social media. Selective dissemination of information (SDI) which is similar to CAS, can be described as a service offered by library personnel to intimate users of new resources on specified topics. The transfer of information (video tape, sound recording, documents, images) electronically, often through e-mails and world wide web is referred to as electronic document delivery (EDD). Online Public Access Catalogue (OPAC) is an electronic database of bibliographic records of resources in a library/library system. It is accessed

via computers often placed at the circulation desk in the library. Most OPAC like the traditional card catalogue, are often accessed via author, title, subject and keyword entries. This service enables users to locate library materials easily.

Library personnel often engage in user education. This can be described as teaching patrons the best way to maximise library facilities. This could, however, be formal or informal, for example, online tutorials or simply educating users on how to locate a book on the shelf. Web services in libraries are services which can be offered online. These include, online database, e-mail service, web based interactive tutorials and online referencing service. Referral service is a type of reference transaction in which users are directed to another person or agency outside the library to meet their information needs. Resource sharing is pertinent amongst libraries because quite often, libraries may not have the capacity to satisfy every request/wish of the various users always. Interlibrary loan is a type of resource sharing which depends on the maintenance of union catalogs. Loans service on the other hand, is one of the most popular library services in which users can take away library materials for a specific duration. Various regulations guide the loans service, such as, number of materials which can be borrowed by different categories of users, limitations regarding the type of library material to be borrowed, charges for mutilated materials and overdue charges.

Employment of ICT in information centres and libraries has enhanced immediate document delivery, although electronically. This has encouraged the digitisation of library materials. This is the process of converting prints (images, maps, script and sound) into electronic documents which can be viewed via a computer screen. One of the innovative library services is the Multimedia service. Multimedia combines digital media, for example, text, graphics, audio and video and this is presented in computer application. Most multimedia are interactive and are highly appreciated by users. Consortia collaboration is another library service which appears to be well embraced in developed countries but is still in the foundation stage in Nigeria. In consortia collaboration, a group of libraries come together by formal agreement in order to share resources. Often, membership may be restricted to country, type of library, acquisitions and licensing policies.

Antidius (2018) maintained that ICT invention and advancement has greatly transformed library administration and service provision. Constant advancement and ICT use has made libraries undergo different phases of transformation, from the traditional to hybrid library, then automated library, digital archives stages, library 2.0, library 3.0 and mobile phone services. Constant advancement in computing technology, communication technology, and mass storage technology form the basis of persistent variations in how information is acquired, retrieved, organised, preserved and disseminated to patrons. Khan (2016) concluded that ICT has greatly influenced information services and can be seen via “variations in the format, content, ways of producing and disseminating information products. Oyedipe and Popoola (2018) stated that to ensure delivery of proactive library services, there must first be an evaluation of current capabilities and a plan to consistently build capacity. They further emphasised, that for the library to create a future for itself, it must be courageous and ready to depart thoroughly from service models as long as it does not totally erase its legacy or core mission.

The 21st Century connotes digitisation and transformation of information format, electronic service delivery as well as constant development in information technology. This has engendered new library services and created new roles for academic library personnel. Library services are giving birth to new trends such as different people in various places being able to retrieve same information at the same time, users can access/retrieve increased number of information from various places and there’s increased opportunity for self-service rather than going through library personnel. The progress was engendered by advancement in technology in different ramifications, for example; changes in networking, file storage and more graphic user interfaces. The changes were enhanced through creating standards and protocols (such as Z39.50 in the developed countries) which allow networking and resource sharing. Ajie (2019) corroborated this by maintaining, that the 21st Century has witnessed the development of virtual libraries and is changing and encompassing the conventional meaning as regards specific place/institution or where the library is situated. Libraries are now ‘unified, without borders’, this means that geographical boundaries have now been overtaken by electronic libraries. The assertion is supported by Aliyu and Shuaib (2016) who concluded that

Comment [TA1]:

globally, library/information service delivery is currently drifting from traditional models to electronic and internet-based format.

Verma and Verma (2014) reiterated that the hybrid library has the responsibility of offering services quickly and easily and to achieve this, the library will have to develop and provide e-library services. The e-library services include, online/offline access to digital information resources; database searching; public access services; electronic reference; public relations services; library promotion and marketing. Inclusive are, e-publishing; information literacy programmes; online circulation activities, such as electronic reserves; user services, and queries; online access to library catalogues, databases and the Internet. It implies that if library personnel must offer these services, they have to build their capacities continuously to enable them use the changing technologies through which the services can be offered.

Librarians and paraprofessionals apply (ICT) in executing their duties. ICT has however, changed global learning environment as well as format of education. It has expanded access to education. Distance education, continuing education, e-learning centres, e-notes, e-examinations, have affected greatly the concept of education and inadvertently the library. Virtual libraries, e-libraries, Online Public Access Catalogue (OPAC), e-database and different electronic software have taken over manual libraries. To be relevant and effective today, library personnel must be able to access and manipulate all these technologies for effective library service delivery which implies that the new techniques and manipulations of these ICTs as well as the changing needs of users must be mastered. However, this cannot be achieved if library personnel do not build their capacities within the changing global information environment.

Libraries and the information environment are currently experiencing enormous transformation. ICTs have transformed conventional ways of library procedures and services, making available new ways for passing on knowledge, erudition and study in universities, polytechnics and higher institutions. In the past, libraries and library personnel primarily executed their traditional/conventional roles through the library services offered to users and included the latter directing user to information as well as organising the information, shelving, cataloguing and classification of library materials. This was nonetheless fraught with the constraints of geographical location and time.

However, the employment of information and communication technology for creation/dissemination of information remains a major development of the Information Age and this has had a great influence on library services (Kalbande and Chavan, 2016).

Technological advancement has invariably paved way for a harvest and continuous flow of information. This situation has popularised librarianship as a profession but also brought along the challenge of competition with other information providers. Francis (2013) noted that globally, the value of information has continually increased, thus information handling has become a thriving business which is engulfed with publishers, programmers, electronic information disseminators, and those who produce and trade in information formats such as flash drive, CD ROM. ICT facilities in libraries has enhanced storage, retrieval, dissemination and organisation of information. This is done by creating websites and databases. The present age has witnessed electronic and print publication of information, the electronic publication however, has enhanced retrieval of information by users as at when demanded through Internet facilities. This has inevitably changed the mode and format of information. Isberg (2012) stated that since change is inevitable, it is necessary for library personnel to provide value-added services to enhance environments that engender advancement for library users globally.

Technological advancement has enabled myriads of information and necessitated the need for innovative and diverse methods by which information can be acquired, managed and disseminated. This has brought a great change in librarianship profession; the need for creativity, new innovations, demands of technological skills and change in existing policies and structures to enable effective service delivery. There is the assumption that the appreciation of this new role and its challenges by library personnel is low and this has afforded other information service providers to have an edge over library personnel, therefore, library personnel need to evaluate themselves in comparison with their new roles and current information world.

Manjunath (2013) posited that the fundamental role of the library personnel as the most important source of information is gradually being relinquished due to the impact of ICT. ICT has enhanced the generation of myriads of information, removed geographical boundaries and enabled direct and timeless access to information. In corroboration, Lucas, Michaud-Oystryk and Speare (2020) noted that in the past decade, the theory and

practice of library service delivery have experienced a continuous and great change due to the employment of ICT for service provision. The study concluded that library personnel in higher institutions no longer function as “custodians of knowledge” but “guides directing patrons to sources of information and teaching information literacy”. Chukwu et.al. (2018) in corroboration, noted that the title, ‘library personnel’, meaning managers of libraries has changed to ‘cybrarian’, managers of cyber space.

Ajie (2019),Singh and Pinki (2009)and Musoke (2007) observed that library personnel in academic institutions in the information age have various key roles to play. This includes the aptitude to display skills in making available innovative, current and competitive services and facilities for the satisfaction of the numerous information needs of scholars, faculty, non-teaching staff/external users. Haber (2013) affirmed this by reiterating that in this digital era, library personnel have an evolving role of meeting the changing needs of patrons. The study further stated that the establishment of the Reader Library Program and Digital Reading by Sony Technologies in America, is primarily to advance library programmes and education in this era.

Ogunsola and Okusaga (2008) noted that the transformations in libraries and functions of library personnel can be traced to the United States of America and other nations whose lingua-franca is English, and since e- networks are not limited by physical borders, these changes have spread rapidly into other countries. Conventional libraries with the library personnel are however, still in operation, nevertheless, the e-libraries have taken over the roles of the former, thus the former cannot effectively perform their functions as library personnel since users do not visit the libraries as before because they have access to libraries without borders. This unfortunately makes many to wonder if library personnel are still needed in these educational institutions.

Library personnel are responsible for making available value-added and current information to library patrons. Their traditional job of custodian of knowledge and books has been overtaken by ICT which makes information accessible to almost all library patrons on their phones or computers and this, without geographical boundaries. Thus, library personnel have to be proficient in the use of ICT, fit into new roles which the evolution of ICT has created as well as create new roles as may be determined by their geographical location or environment. The Association of College Research Libraries

(ACRL, 2006) submitted that in this ICT dispensation, the value of a library is no longer attributed to the large library stock and facilities but rather to the intelligence and the different types of skills that the staff have in order to maximise ICT and provide competitive library services. Emphasising this, ACRL (2006) further stated that, for decades, library personnel have controlled domains of knowledge without much competition because library collections, professional practices and services delivery were considerably static. It concluded by stating that in this digital era however, library personnel must embrace and vigorously participate in the competition for relevance, repute, and resources.

In this age of information explosion and with continuous development of new ICTs, it is apparent that library personnel have to develop themselves continuously to be able to remain relevant and effective taking into consideration that the only permanent thing in life is said to be change. McCarthy (2005) in relation to this, maintained that change is imminent in every aspect of life and noted that in this ICT dispensation, the library environment is continually undergoing changes because of ICT application in libraries. Furthermore, he reiterated that educational institution libraries need to lay emphasis on the following: familiarity with and handling of different formats of information other than print, such as, instructional materials, computers, databases and networking, digitisation of records.

Capacity building is a deliberate attainment of skills, knowledge, understanding, values as well as behavioural orientations needed for individual, institutional or national advancement (United Nations Development Programme, UNDP 2011). In essence, capacity denotes the aptitude of a person, establishment or society to carry out task proficiently, successfully and continuously. This shows that for capacity building to be effective, there must be a review of and change in the social system as a whole. Panda, Swain and Jena (2010) defined capacity building as a harmonised method of involvements in the enhancement of skills and improvement of procedures to enable organisations (and individuals) to be maximally productive. Capacity building therefore, is a comprehensive term which includes; skilled individuals, effective administration, innovation, sustainable organisations, adequate funds, physical facilities, effective work flow and good motivations.

Capacity building addresses national development and so has to be both human and institutional/organisational. The building of library personnel' capacities by their acquisition of skills and change in attitude is individual, while a corresponding change in library policy so as to provide enabling environment for the acquired capacities emanate into improved services is institutional/organisational. For capacity building to be successful in libraries, library personnel and even library structure and policies will have to change. These changes should be approached as a continuous process rather than a one-time experience because change is presently permanent in the world of Information Technology (IT). Capacity building can be successful if library personnel understand its importance and purposefully set out to pursue it in a good way.

Capacity building is primarily aimed at achieving individual development, career progress and effective service delivery, that is, achievement of organisational goals and organisational development. Hanachor and Nedom (2014) submitted that the development of a country is determined by the development of the citizen via education. A country that progresses educationally would influence the progress of her libraries and the information services provided. So also, is the development of libraries intertwined with that of the its personnel who provide the library services. Thus, for development to be smoothly and effectively cyclical in universities and the nation as a whole, library personnel must ensure their capacities are developed to enhance performance, effectiveness and relevance.

Capacity building utilises the citizen, technology, organisations, establishments as well as other capital of a nation to assist in resolving the challenges of policy and advancement, while bearing in mind also, the ability and challenges of that nation. This in essence insinuates that, library personnel who develop their capacities, can effectively disseminate information to researchers and policy makers for national development. Abdul and Edino (2014) outline that there are various levels of capacity building; individual level which gives birth to institutional and ultimately, the societal level. Capacity building is an all-inclusive concept which determines the individual and societal development. This means that capacity building of library personnel is first individual, followed by enhancement of the library in the delivery of improved services and societal development as the library is patronised.

Capacity building is mainly aimed at enhancing the aptitude to appraise as well as determine policy associated issues and the implementation of such in consideration of the potentials and limits of the environment and the needs of the people. Panda et al., (2010) assert that the capacity of a library encompasses the library staff: attitudes, culture and the library environment and state further, that the success of capacity building to a large extent depends considerably on the willingness to adopt a successful innovation within an existing set up and a practical and methodical discarding of old practices and services. To this extent therefore, if any university library in southwestern Nigeria is to be efficient and relevant in this era of information superhighway, it is apparent that services rendered to its users must be effective, qualitative and delivered in accordance with the recent hi-tech in use in the global environment.

The availability of these ICTs (such as computers, scanners, printers, weblogs, e-mails) enhance information retrieval and self-service, is not dependent on physical location nor period of the day, thus changing methods by which library services are delivered in our world today with a significant improvement. However, with such improvement comes the need for capacity building for library personnel especially in the developing world. Unfortunately, in developing countries, the governments place too much importance on ICT infrastructure while human resource development is not adequately addressed (Owoeye, 2013). Consequently, if the capacities of library personnel must be fully developed, they have to acquire new skills and behaviour that meet changing needs of users, thereby improving institutional principles, policies and procedures to ensure continuous attainment of university aims. This requires putting in place an enabling environment where capacities can be built and fully utilised.

The capacities of staff are the means by which any organisation delivers its services to patrons. Service delivery of any organisation therefore, is limited to the capacities of its staff who function as goal getters and ambassadors of that organisation. Klemash, Neil and Smith (2019) stated that the efficacious execution of the goals of an organisation (service delivery), depends on the staff, while the most central resource of an organisation is its people. It is therefore, very important that capacity building be given utmost consideration both by staff as well as the organisation and especially in tertiary

institutions in Nigeria where generations are being developed through formal as well as informal education.

Capacity building is mandatory when there is a lack of capacity, thus for capacity building to be successful, there must be an evaluation of the capacity presently possessed. It is assumed that library personnel in universities in southwestern Nigeria do not possess current ICT skills, neither do they have adequately enhanced ICT environments to deliver effective services in the current ICT Age. It would be highly beneficial for these library personnel to assess their own capacities or competencies in relation with the functions they need to perform to meet the need of users who themselves are highly competent in handling information formats in this technological age. Oguche (2017) corroborated this by maintaining that for competitiveness and enhancement of service delivery, workforce (library personnel) must integrate the use of ICTs in their daily work activities. This, however, cannot be realised without developing their skills in ICT. This implies that library personnel will have to refocus and build their capacities to meet the job requirements in the ICT era so as to provide effective services and remain. Tait, Martzoukou and Reid (2016), Thanuskodi (2015) and Nok (2006) purported that university libraries must continually build the capacity of library personnel or employ skilled staff if they will maximise the use of ICT facilities in the changing ICT environment. Raju (2014) maintained that without ICTs, effective modern library management and services delivery would be a phantasm.

The library is a growing organism and university libraries globally accommodate different disciplines: the library acquires materials for each course of study in the university, thus growing physically and electronically commensurate with the creation of new knowledge and technology. Libraries and library personnel, who support the mission of their institution by the provision of current information materials as at when due must therefore, not only note the changes in the education and information world at all times, but also ensure their capacities are built to enable commensurate changes in their application of these technology and delivery of services. Omotayo (2015) emphasised this by concluding that development of human resources (capacity building) has become crucial in every organisation to enhance success in an increasingly knowledge- based globalised economy.

Clatin, Faudet and Qury (2012) submitted that utilisation of ICT by library personnel gradually repositioned libraries to deliver services without using a physical location (electronic libraries) and that it is saddening however, that the library setting in Nigeria has not made adequate provision for the development of library personnel to acquire needed skills/knowledge that will lead to effective and efficient library service delivery in this digital age. Peet (2018) corroborated this by maintaining that, there is inadequate assistance to support organisations (individuals inclusive) in their capacity building efforts and that library personnel who intend to develop themselves are also constrained by finance. Capacity building is the essential emollient of development and a nation or organisation cannot develop above its level of information. They concluded that many library personnel and information professionals in Nigerian universities have not yet acquired the necessary ICT skills to enable them function effectively in this modern hi-tech era. This situation can be alluded to insufficient funds, lack of understanding of the need for capacity building among some library personnel, ICT infrastructure problems, frequent power outages and low bandwidth among others.

Capacity building needs careful planning. If the capacity building plans of libraries must succeed, then an ICT policy must be put in place to ensure success. Adebayo, Ahmed and Adeniran (2018) in support reiterated that a policy sets out aims and objectives, identifies user groups and services and indicates priorities among them. This implies that if policy making is to be effective, there must be accurate planning. The study however, noted that the successful service delivery of a library is determined by its policy but studies on university libraries in Nigeria decry the lack of ICT policy in many university libraries. Accurate planning and good policies would enable a library identify and prioritise its activities so as to constantly deliver services in line with technological advancement, changes in customer expectations and behaviour and the mission of the university. Capacity building is an important constituent of the library environment and must align with the organisation's strategy and value because value added service delivery is determined by the library staff and resources. This implies therefore, that without an ICT policy, the library may not enjoy the advantages of ICT and capacity building maximally.

McGuinness, Pouliakas and Redmond (2019) maintained that continuous innovations in technology make skills formerly acquired to become superseded. This explains the importance of continuous capacity building as a strategy for effective delivery of services. The study corroborates McCarthy (2005) who summarised the new skills and attributes needed by library personnel as communication, training, technology, planning, organising, innovativeness, enterprise, team work, and self-management. It is necessary to stress however, that a constant update of skills is mandatory if the competent library personnel will effectively and continuously use new technologies and deliver value-added services in this information age. In addition, library personnel must possess forecasting and administrative skills which will assist in achieving the present and future goals of the library.

Ajeemsha and Madhusudhan (2012) and Singh and Pinki (2009) summarised the skills as well as capacities required by library personnel for the electronic environment into three, namely; generic, managerial (personal) and professional skills. In a broad perspective, the three skills and attributes are described as follows, Generic: interpersonal/communication; general computing; team work and having a positive attitude to self-development. Personal: passionate; flexible; innovative and Professional: being able to work as an expert in the field of discipline; for example, value-added service delivery; certified library personnel; cataloguing, classification, metadata. Singh and Pinki (2009) further reiterated that managerial skills include ability to think locally and globally; forecasting and organisational skills. Professional skills were also presented as ICT skills, information literacy skills, technical professional skills, knowledge management and traditional skills.

ICT skills are the practical ability to use electronic equipment to access, manage and disseminate information. They include: computing skills, communication skills, programming skills, digitisation and networking skills. These skills and attributes when possessed by library personnel will help them effectively play their role as information and access providers in this digital era. Library personnel in this digital age need ICT skills which have to be continually updated to enable improved library service delivery. Ademodi and Adepoju (2009) in corroboration reiterated that when referring to library

personnel in educational institutions, ICT skills refers to the application of technology to ensure fast and cheap service delivery.

Panda et al. (2010) maintained that value-added service delivery can be achieved in the library by the library staff and materials, implying therefore, that library personnel and their working environment have to be developed. This means that without capable human/skilled staff to handle ICTs, the advantages of ICT may not be enjoyed. It is apparent that these new services demand new competencies most of which are ICT related. Emiri (2015) asserted the following as skills needed in effective use of ICT: database computer skills, creation and management of database, file management, Internet operations and knowledge and use of electronic resources.

Majid and Abazova (2008) and Owolabi (2013) submitted that, the development of ICT skills may be influenced by the following: discipline, academic status and rank, age, access to electronic resources and training or capacity building. However, many library personnel in developing countries like Nigeria may still not be confident of their capacities to perform effectively in this information age because they lack the needed skills and may not satisfy users. It is apparent, that if library personnel in universities in Nigeria must work effectively and satisfy users, thereby remaining relevant to the users and showcasing the library's relevance, they may have to acquire new skills to build their capacity to work excellently and competently and satisfy changing need of their clientele as well as environment. Thus, the acquisition of these new skills for library service delivery would enable libraries in universities in Nigeria to benefit maximally from the advantages of ICTs in libraries.

The availability of ICTs in libraries has many advantages, which include immediate access to information, self -service, removal of physical boundary, thus changing methods of library services delivery in our world today, with a significant improvement. In enumerating the ways ICT has affected the library, Roberts (2018) stated that computing technology, communication and mass storage technology are key aspects of constant innovation which change methods of acquisition, organisation, packaging and sharing of information by library staff. According to Ahmad (2011), ICT has given birth to the grouping of library services into two classes, ICT enhanced conventional library services and new services.

Lately, collection development and library services have experienced tremendous transformation. This change is described by Enakhire and Ocholla (2017) and Mulla and Chandrashekara (2006) as libraries having changed their physical procedures and service delivery to electronic. ACRL (2012) in support of this affirmed that (ICT) has tremendously changed service delivery in libraries and this change is continuous. ICT is profoundly utilised for packaging, organising and sharing information. This has enhanced the provision of value-added services and eliminated many monotonous and tedious library work. ICT enabled information services in libraries include, multimedia service, Online Public Access Catalogue (OPAC) and current awareness service (CAS) while new services include, Internet services and digitisation of local resources for easy access.

The delivery of ICT enabled/new services by library personnel is dependent on the use, skills and frequency of ICT use by library personnel. Frequency of use may depend on the type of service to be delivered. For example, computers may be used daily because they enhance most ICT related tasks, e-mails and weblogs may also be used to send information to users daily while digital cameras may be used less often, perhaps weekly because such services are less requested for by users. Other factors affecting frequency of ICT use by library personnel include, frequent power outage, low Internet bandwidth, non-functional ICT and lack of skill of library personnel. The frequency of ICT use however, often improves the skills of library personnel and invariably, skilled library personnel will have confidence to use ICTs more to deliver improved library services. However, if library personnel does not build his capacities, delivery of satisfactory services to clientele may elude him as collaborated by Oyedipe and Popoola (2018).

ICT development is continuous and affects almost every facet of life. It has also affected greatly, every discipline in education and consequently, the mode of information acquisition, storage and distribution. There is constant change in types of ICTs used in libraries, for example, mainframe computers and microfiche are no more in use. The ICTs utilised in the 21st Century in university libraries in Nigeria include, computers, printers, scanners, multimedia projectors, digital cameras, e-mail and wikis among others. These ICTs are used by library personnel to carry out various tasks in the library for provision of value-added services.

The tasks performed by library personnel have also been greatly affected by ICT. It is continually changing because of innovations in ICT and constant need to meet up with modern library service delivery as well as user expectations. The tasks in the Digital age include, word processing, retrieving information on the web, sending e-mails, file management, use of spread sheet. Owoeye (2013) in enumerating the gains of ICT for library users, explained that ICT application in the library has enabled concurrent usage of same information at the same time, furthermore, users can manipulate information without the assistance of personnel who may sometimes not adequately meet their needs. He concluded by saying that libraries that do not meet users' needs in this ICT age will record decrease in patronage. This implies that library personnel may lose their relevance to users if they do not build their capacities, attitudes, skills and ICT competencies. In order not to lose relevance, library personnel must understand that the improvement in library services delivery brought about by ICT use has given birth to a vacuum which must be filled. This vacuum is the need for a corresponding improvement in the capacities and ICT skills of those library personnel who must handle the new ICTs for library service delivery. This poses a challenge to library personnel to build their capacities.

Comment [TA2]:

Anunobi (2013) and Sinclair (2009) concluded that empirical studies have shown that ICT use has placed challenges on library personnel. This includes decision making with regard to the collections to acquire so as to meet users' needs, and how to make themselves relevant in this present digital era and ensure that library users no longer substitute library services for other information sources (the Internet) in a bid to get current and value-added information with less stress. Anunobi (2013) further reiterated that the application of ICT in education has brought a challenge to university libraries today in maintaining their position as the main provider of information in an environment of evolving ICT. This situation is global and not new as the Association of Research Libraries (ARL, 2012) in her statistical report of 2010-2011 berated the decrease in reference queries and inter-library loans between research libraries in America between 2009-2011. McDonough (2007) and Flood (2016) lamented the decrease in students' usage of traditional library services at the University of Illinois and adults' use of British public libraries respectively. This implies that students are no longer depending on the

library to meet their information needs as McDonough himself concluded by saying “we are losing clientele”.

ICT use by library personnel for library services delivery has tremendously transformed library services but has its challenges. Abban (2018) and Anunobi (2013) summarised challenges faced in utilisation of ICTs in university libraries in Nigeria as, lack of funds, erratic power supply, inadequate skilled staff to manipulate and maintain ICT resources, inadequate support of the Nigerian government to ICT matters and poor ICT skills of library personnel amongst others. This implies that the service delivery of library personnel will be effective, relevant and have an added value if these anomalies are corrected.

ICTs in libraries have inadvertently improved service delivery in libraries. New technologies enable library personnel to offer value-added service to users who can now choose /what/when/ how they want information. These services are provided in various forms and formats (Kude (2016),Kajewski(2006).Yeo – Song (2009) maintained that the value of a library can be assessed by its services and that library services though entwined, can be divided into three: facility based- computers, reading space, generator, Internet etc.; collection based - books, journals, database and expertise based – skills and capacities of staff in delivering services.

It appears however, that the library personnel in universities in Nigeria have not built their capacities to embrace new technologies, provide innovative and creative services for the satisfaction of the university environment and its changing requests in this ICT dispensation. This may be traced to the fact there is continuous decrease in library patronage - ICT has erased geographical boundaries of information and users now have direct access to information, however, erstwhile library users also patronise other information providers who are ICT compliant. This implies that users are not satisfied with services delivered by library personnel. Challenges of library personnel in capacity building include, lack of funds, inadequate training facilities and superficial understanding of the situation.

Library personnel therefore, must have a deep review of their library policies and services so that they can provide latest information services to meet user expectation and satisfaction while striving for relevance in the competitive information world. This

relevance can only be achieved if there is a re-awakening in library personnel of their crucial role as custodians and disseminators of information and knowledge. They must also recognise and accept the change in information format and mode of transmission which are fast overtaking traditional methods of information preservation, processing and utilisation. CARL (2010) noted that the role of library personnel is changing continuously due to the influence of technology on information products and services, users now have access to vast information without the help of library personnel and some are more proficient in the use of ICTs than library personnel, the information processors. As a result, there is need for library personnel (especially in university libraries) to reconsider what services to provide and how best to provide these services using the current ICTs. This would require capacity building among library personnel in Nigeria and more specifically, in the universities in southwestern Nigeria.

1.2 Statement of the problem

University libraries are the hub of academic activities because they house information needed by the academic community and thus users come into the library to search for information. Due to technological advancement, innovations have been brought into university education and invariably, the application of information technology in libraries has changed library services delivery. Traditional library services are being replaced/enhanced by ICT related services so as to meet with the current global trends of service delivery in libraries. Library personnel need to get acquainted with the current ICT facilities and services by developing the ICT skills to manipulate the constantly changing ICTs for effective service delivery. Furthermore, continuous innovations in service delivery have made it necessary to continuously build skills for effective service delivery. The position of library personnel as sole custodian of information has been eroded due to prwhile information format and service delivery are being continuously redefined to include among others, electronic document delivery, information provision on library website and Internet services.

It has however, been observed that in the current ICT driven information dispensation, there is continuous decrease in number of library users. Users appear not satisfied with service delivery by library personnel. This may be due to the fact that there is inadequacy modern ICT facility for service deliver and the library personnel do not

possess adequate ICT skills and capacity to deliver services needed by users in the Digital age. A lot of issues seem to be challenging this such as, inadequate training, lack of training policy, lack of fund, and inadequate infrastructural facilities.

It is anticipated that if these problems are adequately addressed, it will likely enhance library service delivery. It is necessary therefore, to investigate whether library personnel in Universities in southwestern Nigeria possess the necessary ICT skills and capacities for effective service delivery. Furthermore, it is pertinent to find out, if these library personnel employ the use of ICTs in service delivery. To this extent, the study therefore, sought to examine the influence of capacity building, ICT skills and use on service delivery by library personnel in universities in southwestern Nigeria.

1.3 Objectives of the study

The main objective of this study was to determine the extent to which capacity building, ICT skills and use by library personnel in universities in southwestern Nigeria determinelibrary service delivery. The specific objectives were to:

- i. determine the types of services delivered by library personnel in universities in southwestern Nigeria;
- ii. find out the capacity building programmes available for and participated in by library personnel in universities in southwestern Nigeria;
- iii. ascertain the types, frequency and purpose of use of ICT facilities by library personnel for service delivery in universities in southwestern Nigeria;
- iv. find out the ICT skills possessed by library personnel in universities in southwestern Nigeria;
- v. determine the relationship between capacity building of library personnel and library service delivery in universities in southwestern Nigeria;
- vi. identify the relationship between capacity building and ICT use by library personnel in universities in southwestern Nigeria;
- vii. establish the relationship between ICT skills of library personnel and library service delivery in universities in southwestern Nigeria;

- viii. examine the relationship between ICT use by library personnel and library service delivery in universities in southwestern Nigeria;
- ix. ascertain the composite and relative influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria.
- x. identify the challenges faced by library personnel on service delivery in universities in southwestern Nigeria.

1.4 Research questions

The study sought answers to the following research questions:

1. What are the types of library services delivered by library personnel in universities in southwestern Nigeria?
2. What are the capacity building programmes available for and participated in by library personnel in universities in southwestern Nigeria?
3. What are the types, frequency and purpose of ICT facilities used for service delivery by library personnel in universities in southwestern Nigeria?
4. What are the ICT skills possessed by library personnel in university libraries in southwestern Nigeria?
5. What is the relative influence of capacity building, ICT skills and use by library personnel on service delivery in universities in southwestern Nigeria?
6. What are the challenges faced by library personnel on service delivery in universities in southwestern Nigeria?

1.5 Hypotheses

The following hypotheses were tested at 0.05 level of significance:

- H₀₁. There is no significant relationship between capacity building and library services delivery by library personnel in university libraries in southwestern Nigeria;
- H₀₂. There is no significant relationship between ICT skills possessed by library personnel in and library services delivery in university libraries in southwestern Nigeria;

H₀₃. There is no significant relationship between ICT use and library service delivery of library personnel in universities in southwestern Nigeria;

H₀₄. There is no significant composite influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria.

1.6 Scope of the study

This study investigated the influence of capacity building and Information and Communication Technology skills and use on services delivery by library personnel in universities in southwestern Nigeria. The study covers librarians and paraprofessionals(library officers) in all the 46 universities in southwestern Nigeria. The geographical scope of the study is southwestern Nigeria and it comprises of six (6) states, namely, Ekiti, Lagos, Ogun, Ondo, Osun and Oyo states.

The influence of capacity building of the library personnel in these universities in relationship with their delivery of service as regards the new roles in librarianship was investigated. The capacity building programmes available and participated in by library personnel in the universities were examined and the ICT skills of library personnel on computing, networking, programming, communication and digitisation were investigated. Furthermore, the study surveyed the types of ICT facilities used for service delivery, the frequency and the purpose of use. ICT facilities surveyed include amongst others, computers, the Internet, printers, scanners. The types of services delivered by the library personnel were also surveyed. They are 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 library website. Others are, Internet services, assisting users to locate information materials not held locally, providing bibliographies of library holdings to users, providing a platform for research and communication through serials services, digitisation, interlibrary loan, loans services, multimedia service, CD/DVD based service, consortia collaboration, online reference services, indexing and abstracting, user education, referral service, reprographic services and translation services. The study did not evaluate the

value of library services delivered, therefore, there was no assessment of the satisfaction of the patrons.

1.7 Significance of the study

It is hoped that the knowledge from this work would assist library management in the formation of policies which would guide in developing an enabling environment for staff development and effective library service delivery.

Specifically, this study will enlighten library personnel in universities in southwestern Nigeria, the state of their professional capacities and how they can build their capacities to enhance efficient service delivery in this Digital Age. Thus, they will avail themselves of opportunities to build their capacity for effective service delivery.

The study would contribute greatly to 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 southwestern Nigeria and globally.

The study will enhance the provision of library services which will help users carry out better researches and bring out qualitative results for the development of the society.

1.8 Operational definition of terms

This section defines some key terms used in this study. The definitions presented in this section describe the use in the context of this study.

Capacity building: This is the process of increasing and strengthening the skills, abilities attitudes, processes and resources needed for service delivery by library personnel in universities in southwestern Nigeria. For instance, in-house training, conference attendance, staff exchange, workshop/seminars, mentoring and sabbatical appointment.

Information and Communication Technology Skills: These are technical abilities possessed by library personnel which include computing skills; such as word processing; networking skills- ability to browse the Internet; programming skills such as ability to use web 3.0 for library services, communication skills and digitisation skills.

Information and Communication Technology use: This refers to the employment of different electronic facilities by library personnel in universities in southwestern Nigeria for their library routine, delivery of library services to users and building of their individual capacities.

Library personnel: These are librarians and paraprofessionals (that is, library officers) working in university libraries in southwestern Nigeria.

Library services: These are tangible and intangible products which library makes available to users. They include facilities offered by the library to users in pursuit of its mission of supporting teaching, learning and research activities of the university such as current awareness services, selective dissemination of information, Internet services, electronic document delivery, information provision on library website, user education and assisting users to locate information on materials not held locally.

Library service delivery: These are the ways by which library personnel in university libraries in southwestern Nigeria provide service solution to their users' needs. For example, provision of current awareness services, selective dissemination of information, electronic document delivery, provision of Online Public Access Catalogue (OPAC), user education.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is devoted to the review of related literature that has been carried out on aspects of capacity building, ICT skills/use of information and communication technology and library service delivery. Review of related literature is necessary in research to enable the researcher understand clearly, the criticisms and notions of present knowledge in the specific field of study as well as the gaps in similar studies. The review will appraise the centrality of the focus of the related literature with a view to positioning this study as a related but distinct study under the following sub-headings:

- 2.2 University library objectives of service delivery by library personnel in universities
- 2.3 Capacity building for library personnel in universities
- 2.4 ICT skills of library personnel in universities
- 2.5 ICT use by library personnel in universities
- 2.6 Capacity building and service delivery by library personnel in universities
- 2.7 ICT skills and service delivery by library personnel in universities
- 2.8 ICT use and service delivery by library personnel in universities
- 2.9 Challenges of service delivery in university libraries in southwestern Nigeria
- 2.10 Theoretical framework
- 2.11 Conceptual model
- 2.12 Appraisal of the literature reviewed

2.2 University library objectives and service delivery by library personnel in universities

University libraries are established to enhance the achievement of university goals and objectives, which are primarily, teaching, learning, research and extension services for individual and national development. California Polytechnic University, Pomona

(2017) stated that the library's objectives is to offer each user value-added, current and unbiased access to library resources in support of the University's mission as well as provide a rich independent learning environment which enhances information exploration and assimilation of knowledge.

To accomplish this, the library obtains, processes, organises and disseminates information (service delivery) in different formats to the university community and external users. Akpan-Atata, Akwang, Akai and Eyene (2015) in their investigation of the application social media in institutional libraries in Nigeria for effective service delivery, submitted that if the library will adequately support the university curriculum, library resources and services should be adequate, qualitative, diverse and current. Furthermore, Ekeruche and Ogbimi (2018) in an investigation of the awareness and use of electronic information resources by students in university libraries in Delta State, Nigeria, posited that academic (university) libraries are believed to be the major information source and thus, provision and delivery of adequate and appropriate library materials as well as services is mandatory to ensure academic, social and practical development of users.

Library service delivery has however, undergone a metamorphosis from the conventional phase of prints and physical services to a system thriving on globalisation, networks and the Internet, this is due to the advancement in technology and its application in almost every sphere of the society, including university libraries. The traditional objectives and service delivery of the university library are therefore, being threatened and the library has gradually reviewed its objectives and service delivery to meet with the current trend in information provision.

University library objectives include; the capacity building of library personnel in order to acquire new skills, retraining, and develop innovative and creative capacities for current and competitive service delivery; provision of access to all various library resources, and also through electronic resources within the library itself or via the Internet. Inclusive also is user education that is, training the users on best methods of searching the library electronic indices and using the other library resources. Other university library objectives include; constant maintenance of the library resources and electronic equipment to enhance service delivery; maintaining interpersonal relationship with lecturers, students and management so as to get support for library collections and

services as well as making available up-to-date resources and services to meet users' need in this Digital Age (Dhofar University, 2013).

Library objectives are carried out via the different methods of service delivery by library personnel, namely, provision of a main university library and also branch or special libraries which meet the specific needs of departments or faculty; current awareness services; electronic document delivery; Online Public Access Catalogue and provision of library literacy programmes, for example, teaching "use of library" courses. Other methods of service delivery by which library objectives are carried out include, web services, referrals; inter-library loans; loans services; indexing and abstracting and cataloguing and classification of library materials for easy access and retrieval by users.

Human resource also referred to as personnel, are regarded as the key asset of any institution/university because they handle all the other capital/services in the institution and therefore, the success or failure of such institution is highly dependent on them. In corroboration, Emezie and Nwaohiri (2015) noted that organisational achievement or failure is determined by the human capacity and concluded that the current advancement of ICTs has made it mandatory for 21st century library personnel to build their capacities if they must deliver effective library services.

In essence, university library objectives in service delivery can only be realised if the library personnel are not only adequately skilled in the use of Information Communication Technology which enhance service delivery in this Digital Age, they must be able to deliver well- packaged information services. The world is now a global world and the use of ICT for effective service delivery is imperative. Many library users are versatile in ICT utilisation because it is employed in almost every activity in the society such as banking, education (distance learning) and games. It is expected that the gains of ICT would also be enjoyed in the library via service delivery. In conclusion, Amaechi, Enweani and Eke (2018) reviewed ICT global impact on educational advancement in universities in third world nations, they submitted that for information to be available and accessible to all, the library must be adequately equipped as well as deliver well-packaged information services.

The term service delivery relates to the principles, standards, procedures and methods by which the library offers its facilities to library users. Library services in

Nigeria can be traced to the establishment of the premier university in Africa in 1948; the University of Ibadan, in which case the library was an integral part as it supported its parent body in providing materials for teaching, learning and research. Delivery of library service in universities can be said to be the pillar behind educational development. Kostagiolas and Asonitis (2011) in an evaluation of the handling of copyright by information providers maintained that libraries harness information and knowledge by enhancing access and retrieval to them through professional processing, storage and dissemination and thereby increase the value of human intellectual outputs. The collection, evaluation, organisation, cataloguing and classification of information and knowledge by libraries has globally enhanced access to information which otherwise would have been disorganised.

Ukachi (2010) categorised library services into three, namely, collection development, technical services and library service delivery. Collection development refers to the acquisition of library materials; books, e-books, databases etc. Technical services is a term used to describe the processing of acquired materials to enable easy organisation, access and retrieval. This includes, labelling of library materials, binding. Library service delivery refers to the processes and procedures of disseminating information to users, such as current awareness services, selective dissemination of information, electronic document delivery, OPAC and reference services.

Library services have however, experienced tremendous changes for decades. Formerly, before the advent of computers, library services were traditional in nature, however, at the permeation of the computer into different aspects of life; libraries inclusive, the needs of library users, services generally as well as the library profession have become transformed in a bid to meet the expectations of the ICT information driven world. Anunobi and Nwabueze (2010) in their survey of the migration of the traditional library to the digital library environment and the prospects of information professionals in Nigeria maintained that librarianship has passed through three metamorphic stages, which are, the traditional, computerised/automated and the digital stages. Each stage has affected information service delivery and though the first two stages complement each other, the third is completely different in its operations.

In the traditional stage, collection development involves the acquisition of printed materials sourced by using bibliographic sourcing tools like catalogues, publishers' vendors' lists, donations and deposits amongst others. The computerised/automated stage involves simple ordering and receiving systems, while the digital stage does not have a defined structure yet but is "digital or electronic by nature". Vendors can be contacted online, emphasis is no longer on physical collection, electronic resources are acquired via licensing, subscription, networking, e-books and e-journals are acquired. In technical library services, there is the use of print cataloguing/classification and indexing tools in the traditional stage, while in the computerised/ automated stage, the earlier mentioned tools are used in addition to computer facilities and library software. The digital stage for technical services include "use of ICT hard and software; networks, server hardware, network operating systems, web server, relational databases, web applications, online publishing, electronic pointing and hyper- linking, web portals and repositories and sometimes minimal use of traditional technical tools for extracting metadata".

In an analysis of public library services in Nigeria, Anunobi and Nwabueze (2010) observed that its traditional stage is in "print; circulation, reference, CAS, selective dissemination of information, bibliographic search, print library instruction, management information in form of print and statistical report. The computerised/automated stage encompasses computerised/automated circulation and reference services, bibliographic search, library use instruction with offline media facilities and library software enabled management information". The digital stage is characterised by online access and reservation, charging and discharging, collaborative services and interactive social networking services, using wikis, blogs, facebook, flixter, twitters, myspace, youtube, e-reference services and e- instructions".

The fundamental issue however, is that traditional services of libraries are being overtaken by technological advancement. Digital libraries, e-libraries, virtual libraries and distance learning have changed the mode and format of library service delivery, by eliminating geographical boundaries for a fast network to anywhere around the world in the fastest possible time. This has changed the functions of the profession and librarianship is now assuming new roles of operation faced with challenges of new competencies that library personnel must possess.

Singh and Das (2014) evaluated the expectations of the Indian Institutes of Technology (IIT) library users in India and noted that the wants and needs of library end users have transformed. This transformation comes in the form of preference for information provision on library website and electronic document delivery. This has resulted into fewer requests for prints, higher usage of electronic services, preference for accessing information from remote locations and expectations that library personnel will be highly skilled in delivering electronic library services. The implication is that library staff must redefine their concept of library building and services to align with that of their communities. Moreover, in consideration of the nature of the content library personnel work with and its frequent change in structure, the profession continuously must find new ways to acquire, organise and deliver information. In pursuance of this, many libraries have automated their libraries, either partially or fully to enhance better, faster and current library services delivery.

Breeding (2018) in a study of this affirmed that libraries that want to deliver efficient and value-added services in this digital era, are no longer interested in technologies that only support traditional services and basic management of the library, but they want technologies that enhance delivery of new services which are interactive, multi-functional and can engage users and library personnel. In essence, these technologies must enable libraries deliver competitive services which can sustain their relevance in the electronic age and the changing profession. Academic libraries no longer take pride in their collections but are now aiming at improved service delivery and providing access to resources needed by users via library consortium and collaboration with other institutions. Thus, they acquire technology that enhance networking and enhance competitive service delivery.

Various library services have evolved because of impact of ICT on librarianship. Elisha (2006) surveyed the employment of ICT in Nigerian libraries and its prospects and challenges and concluded that new services offered by library personnel via the application of ICT include, video conferencing and distance learning, access to online resources on the Internet such as e-journals, e-books and e-magazines, e-publishing; using CD-ROM for literature searches, access to local or network databases on LAN (local area network) or WAN (wide area network).

Young and Rossman (2015) surveyed social media utilisation and changing service delivery models of the Montana State University Library, America and submitted that university libraries have improved their service delivery by acquiring latest technologies and making available self-service to users through the creation of online communities. Thus, users can easily access information at their own convenient time, place and as deemed fit. Baro, Idiodi and Godfrey (2013) assessed the utilisation of web 2.0 by library personnel in university libraries in Nigeria and noted that library personnel were making use of blogs, RSS feeds, instant messaging (IM), wikis, podcasts, vodcasts and web conferencing to create online communities so as to popularise and make accessible, the twenty-four hour virtual service. Ani, Atseye and Esin (2005) in their investigation of the problems of globalisation in the Nigerian library environment, Anunobi and Nwabueze (2010) and Aliyu and Shuaib (2016) who surveyed the employment of appropriate ICT by library personnel in tertiary institutions in Nigeria all confirmed that ICT employment in library services provision has resulted in a global librarianship. Etebu (2010) concluded from a survey of ICT availability in university libraries in Niger Delta, that availability of Internet facilities will be beneficial for poorly funded universities as they can retrieve much information free through the Internet.

The role of library personnel in the acquisition, organisation, dissemination and preservation of information in universities has enhanced the passing on of knowledge for generations. ACRL (2012) maintains that library personnel have always played a key role in education, which is traditionally the building and maintenance of library collections. The constant resounding effect of ICT on every aspect of human life has a continuous impact on humanity in many ramifications. It has affected education via distance learning for example. These have had a great decisive effect on expectations of human race, in the sense that the advantages of ICT, that is, globalisation, has successfully erased geographical boundaries and enhanced personalised and fast services amongst others. These advantages are expected to be enjoyed via the delivery of services by various institutions and organisations. To this extent, the mode of service delivery has been greatly affected and this consequentially, has redefined the roles of professionals in service delivery. ACRL (2012) in her submission maintained that the library personnel is no longer a person who answers queries from users inside the library, but a person who

provides services regardless of place, time or format.

ICT has created new roles for librarians and these roles are constantly evolving with the development of new technologies. Fontichiaro and Hamilton (2014) stated that lately, librarianship has been faced with a serious professional dilemma which is imbedded in vagueness of its new roles and unsure about the state of the future in this time of tumultuous change erupting from ICT use in information services. They concluded that the library personnel, who would deliver effective library services in this digital era, must be able to use instructional technology appropriately. Mbakwe (2010) in evaluating the new roles of university libraries globally asserted that because of the advent of cyber library, library personnel are now referred to as cybrarians.

The changing role of library personnel is not a new development. Inskip (2017) and Mbakwe (2010) further evaluated the changing functions of university libraries and report that for the past two decades, there has been a paradigm shift in the theory and practice of librarianship. This, is as a result of the application of ICT in information provision which has changed of library personnel' role from information banks (those who store information) to information guides (directing users to sources of information) and teachers of information literacy skills. This change in role has however, not changed the main goal of the library. CARL (2010) in her evaluation of core competencies for Canadian research library personnel submitted that, the environment in which library personnel deliver their services has changed dramatically, but the library's main goal remains information provision to users. Oyedokun, Oyewunmi, Akanbi and Laaro (2018) surveyed the maximisation of ICT by library staff in universities in Kwara State, Nigeria and revealed that ICT has to a large extent, impacted the roles of library personnel as well as created new ones. This indicates that if library personnel will deliver effective library services in this digital age, there is need for them to develop their capacities in the new roles that ICT has created in librarianship.

ICT has created some crucial roles for library personnel in the digital era. Mchombu and Beukes-Amiss (2015) evaluated the prospects of leaving the role of information keepersto take on that of knowledge keepers as well as critical new roles for library personnel in Africa, developing countries and the global world. They posited that in this digital era, library personnel must re-evaluate their roles so as to influence

greatly, the management of Information and Communication Technology. They stated further, that the new functions of library staff in this digital dispensation are knowledge creation and documentation of information resources. Library personnel are endowed with a major role in this technological age. Makori and Mauti (2016) in a survey of the evaluation of knowledge professionals and the digital economy globally, noted that this digital age is very important in human history and that library personnel are key-players in it and this makes it mandatory for them to acquire knowledge. Oguche (2017) in an evaluation of the core skills and competencies for library personnel submitted that library personnel role has shifted due to ICT application (particularly the Internet) by libraries, thus so much emphasis is no longer laid on the acquisition of library stock, but rather on the ability to make accessible compact information from different sources to users. Furthermore, printing is being vigorously replaced by electronic media while archives can now be accessed from different locations because information is now being repackaged for enhanced accessibility and usage.

It is apparent that capacity building for library personnel is a global necessity. Ajie (2019) and Raju (2014) reviewed the professional competencies required by library personnel globally to enhance employability in this digital era. The study submitted that innovations in ICT constitute the key drivers of change, the resultant effect of which is ever increasing growth of information and knowledge economy. This according to Tait, Martzoukou and Reid (2016) in an assessment of the impact of the application of IT in the transformation of educational institution libraries, has given birth to a global anticipation of enhanced service delivery and opportunities for self-services, and consequently, the tasks of paraprofessionals and librarians intermeddle while users can also perform some of these tasks themselves, for example, electronic publishing. This in essence, has modified/ created new roles in librarianship.

The roles of library personnel are hinged on the development of ICT. This means that, developments in ICT invariably redefine the roles of library personnel because they handle information formats which change with developments in ICTs. In accordance with this, Ademodi and Adepoju (2009), Raju (2014) and Kude (2016) in a survey of ICT employment for information services by smart library personnel concluded that ICT innovation and the resultant information explosion enormously redefined library

personnel roles. The inter-dependence of developments in ICTs and roles of library personnel is strongly emphasised by Oyedokun et.al (2018). They alluded the birth of the information age to the following: new technologies, global awakening to the value of information and use/creation of various information careers, thereby concluding that ICT has brought a transformation to libraries and businesses globally.

Library personnel in universities need to take personal as well as collective responsibility in ensuring that their role as information literacy teachers is effectively played in future. Raju (2017) evaluated the proposal for reviewing the roles of librarians in South Africa, and concluded that the library is at the moment battling with how to combine and integrate new technologies into service delivery and that the collective ability of library personnel to do this will determine the future of librarianship. Ippoliti (2017) assessed new functions of the liaison librarian in educational institution libraries and concluded that globally, libraries are shifting quickly by creating innovative roles as well as discovering new methods to play conventional roles.

Fewer users physically visit libraries because of technological innovations. Miller-Bakewell (2016) in an evaluation of the changing patterns of library use by adults in England, Panda et.al, (2010) and CILIP (2009) noted libraries and information specialists need to build their capacity to enable them reposition themselves to fit into a “network environment”, ensure constant development and be able to add value to their organisation as well as environment. The roles of library personnel have changed from the traditional roles to more innovative roles which will involve the use of ICTs. ALA (2013) in her report of the state of America’s libraries in 2012, submitted that the new roles of academic library personnel in this age of digitisation are mainly publishing journals, monographs and conference proceedings amongst others thereby providing digitisation services and digital repositories and secondly, data curation. It is apparent, that if library personnel must deliver current and effective services in this era, they must acquire new skills and capacities and know the value of information.

The future of library personnel who cannot flow with the current trend in librarianship may be bleak. Morris and Mathews (2010) in their 21st Century skills of Utah library personnel emphasised the need for 21st Century library personnel to move along with the global 21st Century services delivery and skills movement which require

different skills, practices and re-thinking if one must be successful. They stated further, that the future of the Utah library personnel will depend on their being able to make their users meet up with the global society and market place. The emerging roles of library personnel in the digital era also have economic value if well played. Kude (2016) in an investigation of computer skills amongst librarians in Nigeria emphasised that quick/cost-effective service provision in universities depends on library personnel and their skillfulness and maximisation of ICT.

The availability of ICTs does not guarantee maximal use or effectiveness of library personnel in playing the new roles created by ICT. Young and Rossman (2015) noted that in the 21st Century, management of information keeps undergoing innovations, such as the methods of acquisition, reorganisation, preservation and dissemination, thus, library personnel must understand these new functions and align with them. This implies that this digital era comprises of evolving new technologies, every library personnel must understand that changes in ICTs is inevitable, must be willing to adapt and accept that these changes have redefined the information profession as a whole. Library personnel continue to deliver different types of services to satisfy users and deliver modern services. Gama (2013) evaluated service provision in twelve university libraries in Northwestern Nigeria. He reiterated that three major services delivered by the library personnel were the Internet, current awareness services and loans services. He discovered also that the three least delivered library services were compilation of union list, circulation of new arrivals list and inter library loans.

2.3 Capacity building for library personnel in universities

Enojo, Ojonemi and Williams(2016) reiterated that the idea of capacity building has become prevalent in the discourse of advancement/ progress globally. In Africa, it is currently a crucial task. It is undeniably a challenge of the digital era in the face of constant technological advancement, transformation in mode of business transaction, thus engendering the search for skilled personnel to meet the for effective service provision. Furthermore, administrators and Non-Governmental Organisations (NGOs) allude that policies are effectual when capacities are enabled. Roberts (2018) assessed the training needs of employees in distance learning institutes and noted that, globally, capacity building is constantly and continuously being addressed in universities.

Abdul and Edino (2014) reiterated, that there are two types of capacities: human capacity which are the persons who will do the work a nation needs to accomplish so it can realise its vision for development, and institutional capacity, which is the organisational structure and procedures that enable attainment of goals for development. When there is sufficient capacity, confidence is achieved which enables library personnel to make the right choices, create sustainable policies, deliver effective services and enhance the development of the university community and society in general. Capacity is the aptitude to manage problems and be innovative in order to impact the society positively. Abdullahi and Haruna (2008) from their survey of ICT application and information provision by universities in Adamawa state, defined library capacity as comprising the people in the library, its culture, attitude, environment and commitment to training to develop people skills.

Capacity building is imperative for all library personnel if they must deliver effective library services in this technological era with constantly evolving technologies. Raju (2017) evaluated the administration of academic libraries in South Africa in an era of global information investment, they submitted that capacity building is an update of old skills and learning of new ones by professionals in order to improve service delivery. Raju (2014) identified skills needed by library personnel generally in this digital era as professional information skills and generic skills. Professional information skills include collection management, knowledge management, cataloguing and classification skills and these can be obtained by formal education in LIS or related schools. Generic skills are not LIS oriented and include project management, leadership skills, financial management skills.

Capacity building of library personnel must be constant so that they can always deliver services in consonance with the current trends in library service delivery. Ajie (2019) in an appraisal of the role of ICT in the Information profession and the need for information professionals to play distinctive and effective roles in the digital era, reiterated that there is constant need for retraining of staff for provision of value-added services. Ajie (2019) further concluded that the ICT training received in 2005 will need to be updated for maximal use of new technologies of 2015. Ojowhoh (2016) assessed the influence of staff development on service provision by university libraries in Bayelsa and

Delta States and stated that for library personnel to develop competence in service delivery, there must be constant educational and skill development. This development may also be achieved in – house if developmental strategies are put in place. Singh (2018) evaluated the document delivery and e-resource sharing services of a consortium of agricultural libraries in India and maintained that if libraries must individually satisfy the increasing user requests, they (libraries) must be constantly and adequately funded. Since adequate funding is often a challenge to libraries, he reiterated that digital libraries and collaborative networking can assist libraries in meeting users’ needs and providing value added services. Singh (2018) however, concluded that Indian Libraries have been able to promote knowledge sharing and effective service delivery albeit slowly due to inadequate skills in the use of ICTs among others. Robertson (2018) surveyed the training of contact librarians at Deakin University, Australia and concluded that if the library would adequately assist the institution in achieving its goals as well as maintain her own relevance, it is mandatory that library staff upgrade their skills and capacities for value-added service provision as the world is dominated by constantly changing ICTs. ALA (2019) enumerated the skills/capacities needed by information professionals. These include, being able to manipulate integrated library systems, computing and networking skills and communication skills. It is necessary to stress however, the skills set/competencies required by an individual/organisation is dependent on the type of information job to be and the environment.

The advantages of capacity building of library personnel are numerous. Adetoro et. al., (2010) and Ranagattimath (2018) in enumerating the value of capacity building in development, explained how capacity building is achieved. They stated that capacity building is a deliberate action by individuals, establishments and society to improve capabilities so as to attain and sustain development. Furthermore, they accentuated that library personnel and libraries need to build their capacities in this information age and pointed out that the advantages are numerous. For the individual; personal and career advancement, and for the institution, improved service delivery towards achieving its mission.

New technologies and information formats keep evolving, therefore, capacities and skills of library personnel need to be updated commensurately. CARL (2010) in her

evaluation of core competencies for 21st century Canadian library personnel reported that, university libraries are continually confronted to be a key part of the unstable academic setting. This environment is instilled by technological advances and thus there is a need of roles transmission of library personnel to that of meeting technologically inclined users. Elisha (2006) stated that the designs, procedures and uses of ICT are continuously emerging. This without doubt indicates that library personnel must continuously get acquainted with the ICT environment and ensure also that the current practices are available in their libraries and can be manipulated by them as administrators in charge of information.

Mathew (2011) surveyed the impact of library staff development in university of Kerala, Cochin, India. She reported that a library personnel's motivation for capacity building is imbedded in social responsibility, need to progress, professional status, interest in librarianship and libraries and quest for acquisition of ICT skills. Oyedokun et.al. (2018) and Ukachi (2010) in her global evaluation of LIS professionals and skill set for the electronic environment also supported this finding. They emphasised that library personnel must acquire the new skills as well as capacities needed for good job performance in this digital era to compete favorably with other information providers and remain relevant. The skills include: networking, digitisation, computing, programming, communication, management skills and ability to be innovative.

Library personnel need to be conversant with ICTs and be innovative in the usage. Tait, Martzoukou and Reid (2016) maintained that if any LIS professional must fit into the ever changing digital environment, he must be willing to accept and adapt new technologies and be conversant with digital libraries; integrating systems and content and be ready to take risks. These risks include new innovation in library service delivery and personal funding for individual capacity building. Ukachi (2017) invariably supported the former assertion by her declaration that technologies will keep changing because of evolving concepts and that the LIS professional has only two choices: either to be "technophilic" and remain relevant" or refuse to flow with evolving changes and "atrophy with time". Adekunle et.al. (2007) in their study of ICT use by library personnel in selected Nigerian universities stated that library personnel need to be receptive to adoption of ICT and this is feasible only through adequate training. This training, howbeit

very necessary, may not be adequately funded by the institution/organisation. This implies therefore, that library personnel should endeavour to train themselves and not solely depend on sponsorship.

Adetoro et.al. (2010) assessed the development of library and information services in Nigeria and concluded that, the world is now conceptualised as information age where globalisation, digitisation and ICT use has thrust challenges upon libraries, which include, demanding new capacities, utilised initiatives and programmes. The situation of the capacity of library personnel in Nigerian libraries is poor. They concluded by saying that there are two types of capacities, which are; human capacity building and institutional or organisational capacity building. They referred to the human aspect as improving and lifting up the human capital to the desired standard for enhanced productivity by training, education and skill acquisition.

Empirical studies state that some LIS schools do not effectively build the capacities/skills of students and thus the students do not maximise their potentials as library personnel in the ICT era. Okello-Obura and Kigongo-Bukenya (2011) in an evaluation of the tendencies, problems and prospects of library schools in Uganda, maintained that there is inadequate LIS lecturers, poor technological infrastructure and LIS curriculum is not standardised. This situation appears to be prevalent in third world nations, as Amuga and Khayesi (2012) who evaluated the potential and challenges of LIS studies in Kenya, noted that the LIS students do not undergo practical library experience. They maintained also that there is no laboratory dedicated to LIS studies but they have to share with other departments, moreover, there is no LIS software the students can practice with. The Association of College and Research Libraries (2008) United States of America, evaluated bloggers' comment on her website in relation to obsolete skills of library personnel. She posited that the rapidly changing environment of information work makes capacities of library personnel obsolete unless they build new capacities.

Oguche (2017) and Nkamnebe, Okeke, Udem and Nkamnebe (2015) in a survey of the capacities of library staff in Nigeria noted that many library personnel in academic institutions in Nigeria either lack or seem to be slow to adapt ICT skills, while Smith (2019), Thomas and Urban (2018) and Adetoro et. al. (2010) maintained that many LIS schools graduate students without practical skills. This has resulted in a feeble foundation

for librarianship in Nigeria. Ojowhoh (2016) submitted that 93.6% of the library personnel attested that capacity building made them bolder in taking new tasks, 90.3% became technologically compliant, 87.1%; capacity building enhanced delivery of fast library services, increased dedication to duties and satisfaction (82.5%) and enhanced efficiency (80.5%).

International Institute for Education Planning (IEP) and UNESCO (2014) in their compendium, defined institutional capacity as the deliberate expansion of competencies of organisations and establishments to attain their vision. Institutional capacity is the reinforcement of performance/service delivery to meet set goals. It means the maximisation of resources and staff, more effectively, bringing in new procedures putting aside old unprofitable procedures so as to engender change and progress. Abdullahi and Haruna (2008) confirmed this in their investigation of the utilisation of ICTs for provision of information in Adamawa state. They reported that capacity building can only be successful if the environment (library) puts aside conventional procedures to technically and methodically use innovative procedures and services. Naway (2004) in a survey of strategies employed by public universities in East Africa in financing their libraries, reiterated that capacity building can be attained through staff exchanges and publishing through the web. Akpan-Atata et.al. (2015) submitted that though many libraries have ICTs, there is a general lack of technical know-how and that ICT literacy of most staff is low. This has not allowed staff to use ICT resources in their libraries effectively and efficiently and therefore, they need to build their capacities. This implies that library personnel in Nigerian universities have not been able to deliver efficient library services to meet the current trends in librarianship and until they build their capacities, delivery of effective library services will be an illusion.

Enojo, Ojonemi, and Williams (2016) evaluated human capital growth in Lokoja Local Government Council, Kogi State, Nigeria, they reiterated that for establishments to have effective staff development, there must be the formation of a guiding principle, this will engender the birth of an appropriate, all-inclusive, satisfactory and successful training. Raju (2017) evaluated the administration of academic libraries in South Africa in an era of global information investment and concluded that libraries, as keepers of knowledge, are significant players in this era of information explosion. Consequently, the

significance of the library depends on her ability to consistently flow along with changes in the information environment borne out of constant technological advancement. This change according to Ashill, Casagranda and Stevens (2016) has engendered the migration of library service delivery to accentuate electronic services for modern service delivery and satisfaction the technology savvy library users.

The benefits of ICT use and capacity building are numerous. Raju (2017) reported that most participants surveyed claimed that ICT enabled competent and less stressful service delivery, online services to distant areas, accessibility to more users via social media, opportunity to provide services to users through users' chosen platforms at any time. Usoroh, Umoren, and Ibang (2016) evaluated the advantages of capacity building on service delivery of librarians in Uyo, Nigeria. It was revealed that capacity building determined their effective service delivery and that in-house training especially, increased their proficiency. Opeke and Mayowa-Adebara (2020) assessed the impact of staff development on staff dedication in university libraries in South-West, Nigeria. The study reported high development of the library staff because the libraries provided adequate funds for capacity building. This implies that absence of capacity building and professional advancement is a determinant of employee commitment and turnover in higher institutions. They reiterated further that devoted staff are enthusiastic, have a sense of belonging and align with the mission and vision of the establishment. Thus, they expect the establishment to ensure their training and professional advancement.

2.4 ICT skills of library personnel in universities

Library personnel in universities need to constantly build their ICT skills because their duty is to disseminate information to library users from generation to generation. Such ICT skills include word processing (for registration of library users), discovering and retrieving information from the web (assisting faculty in research), sending e-mail with attachment (used for class assignments and selective dissemination of information), searching databases (for selective dissemination of information). Shaikh (2019) submitted at the National Level Conference on electronic LIS services in academic libraries in India that ICT skills is the manipulation of digital technology, ICTs and/or networks to retrieve, organise and disseminate information in a knowledge society. Mathew and Baby (2012)

in their investigation of the ICT skill of academic library personnel in the universities in Kerala, India, defined technology as doorway of interface with information. Furthermore, they reiterated that the library personnel must enhance their ICT skills and concluded that the ability of library personnel to use information to solve problems and develop their skills indicates their imminent accomplishment in life, they emphasised that mere acquaintance with different hardware or software is less profitable. This implies that an individual's ability to be creative with ICT knowledge is paramount to the value it can add to life. Knowledge is power and universities pass on knowledge and information to generations for personal and societal advancement, as well as for the country's advancement. Consequently, library personnel working in universities should be skilled in ICT. Library personnel in this digital era need ICT skills to retrieve, manipulate and disseminate information to their patrons more widely as well as pass on the skills to them if necessary. In corroboration, Khan and Bhatti (2017) in an assessment of the skills requirement of librarians in Pakistani, concluded that it is imperative that library professionals acquire new skills for value-added service delivery and career progression.

It is necessary that library infrastructure is up to date to meet the current trends in librarianship. Latest ICT hardware and software should be acquired to enhance delivery of current services. Ezema, Ugwuanyi and Ugwu (2014) in their investigation of skills requirement of library staff in University of Nigeria, Nsukka discovered that the digital environment is based on web 2.0 technologies for library services delivery (such as, blogging, electronic group, Wikis, RSS and podcasting) and instant messaging. Web 3.0 is the latest technology for library services delivery and third world countries have been adopting it. Williams (2020) compared the use of technology for service provision by library personnel in universities in Belgium and South Africa and noted that the libraries have adopted web 2.0 technology for service delivery. She reiterated however, that the Internet skill is paramount for these library personnel to be effective in this digital era. Asogwa, Ugwu and Idoko (2016) corroborated this in their study of the influence of Internet facilities on printed resources in educational institution libraries in Nigeria. The study submitted that the Internet had impacted the use of the printed resources. This means that if any library personnel would be efficient in this era, he/she must possess high level of skill in Internet utilisation which forms the base on which web 2.0 operates.

ICT skills are acquired in various ways and various levels. Shamshad Ahmed and Atta-Ur- Rehman (2016) assessed the ICT skills of academic librarians in public universities in Khyber Pakhtunkhwa, Pakistan. They noted that the main ways of acquiring the ICT skills was through personal effort (87%), colleagues (81%), attending workshops/seminars (79%), manuals (57 %) and formal education (56 %). Other less predominant were tele/video conferencing (39 %), Library and Information Science institutes (38%), informal education (31%) and ICT vendors (19 %). Khan and Bhatti (2017) submitted that skills acquisition is now mandatory for efficient service delivery in the digital age and that LIS schools should ensure that evolving skills is part of the curriculum in order to meet imminent job requirements. Furthermore, they submitted that library personnel must update their skills to maximally apply ICT and offer value-added services in this ICT dispensation. Bajpai and Madhusudan (2019) investigated the use of ICT for mobile-based library service by librarians and revealed that participants use SNS (50%), streaming media- 36.7%, Podcasts- 30% and RSS feeds -26.7%.

Moonasar and Underwood (2018) assessed the capacity building of librarians in the University of Deakin and found that a majority of the librarians were satisfied with the capacity building activities, they claimed that their ICT skills and library services delivery were greatly improved. However, respondents clamoured that the National Library Association of South Africa (LIASA) should put in more effort to enforce the implementation of staff development guidelines for effective staff development activities in the LIS sector as well as higher education. Acquisition of skills and capacities may however, be effectual or ineffectual.

The acquisition of ICT skills does not mean that the traditional skills of librarianship should be totally discarded. Examples of such skills are, cataloguing and classification skills, creating current awareness and selective dissemination of information. ICT use enhances such skills and makes the job easier, faster and fewer mistakes are made. Ayoku and Okafor (2015) in a survey of the technology skills of library professionals in universities in Nigeria and CARL (2010) in her report of the essential skills required for value added service supported this by the assertion that if library personnel will be relevant in the digital environment, they will have to equip

themselves with traditional knowledge of librarianship as well as management and ICT skills.

In Nigeria, library personnel have not been using ICTs to its full potentials. This is perhaps due to their limitation in ICT skills. Ajie (2019c) confirmed this as he reiterated that there was a great difference between the potential of the ICTs and actual utilisation by the library personnel and concluded that the library personnel were not skilled enough to discover the full potentials of ICTs. Thus, implying they could only use computer for basic ICT applications for instance, word processing, browsing, scanning. They lacked ICT skills which could enable them use the computers for teleconferencing, presentation packages and web designing. ICT skills and use in libraries have given birth to new types of library services, but library personnel need to update their ICT skills regularly to enable delivery of improved and competitive library services in the changing digital environment.

Studies show that the problem of low ICT skills of library personnel seems to be prevalent in developing countries (Ezeani 2011; Safahieh and Asemi, 2010). Safahieh and Asemi (2010) reported the ICT skills level of the library personnel in Iran, most of them had low ICT skills, 46.3%- fair while no one had very good ICT skills. Ademodi and Adepoju (2009) investigated the proficiency of ICT use by library staff in seven higher institutions in Nigeria, they submitted that 87.5% were not computer literate while only 12.5% were. Umeji, Ejedafiru and Oghenetega (2013) examined the information and ICT skills of library personnel in Madonna University, Okija, Nigeria and noted the following; only 18% of the library personnel had high level of ICT skills, 54% had moderate and 18% very low skills. Oyedipe and Popoola (2018) assessed the information literacy skills of library staff in higher institutions in southwestern Nigeria and submitted that the library personnel had high ICT skills, high task performance but use of ICT was moderate.

It is generally assumed that even when library personnel are highly skilled in ICT use, they find it difficult to manage computer hardware. Basic computer hardware engineering skills, like cable crippling would however, be of immense help to library personnel. This would save time and reduce stress of looking for the ever-busy computer engineers. The lack of skill in the management of ICT hardware may be traced to lack of

training in LIS schools. Smith (2019) in a review of service delivery problems encountered by public libraries, submitted that LIS schools do not build students' capacities with required skills to provide competitive library services in the current ICT profession. This implies that skills possessed by the students would be obsolete or latent by the time they get employed and cannot be effectively used for service delivery in this digital era. This is confirmed by Okeji, Tralagba and Obi (2019) in an assessment of the digital proficiencies and capacities of professional library staff in universities in Nigeria. Baro, Obaro and Aduba (2019) in a comparison of the digital skills of library personnel in universities in Africa, they discovered all the library personnel had basic computer skills, such as typing, browsing, but lacked/possessed low skills in maintaining the systems, that is systems engineering. Their ICT challenges included inadequate refresher courses and training workshops.

ICT skills are sine qua non for library personnel in this technological age (Khan, 2016). Library personnel need to develop their skills in various ways. Ayoku and Okafor (2015) discovered that majority of the participants surveyed were only familiar with Google and Yahoo and were not able to appraise or catalogue electronic resources, they were not conversant with database management, web design or its software. Many of the participants also claimed their inadequate ICT skills was due to not being aware/indifference to training, lack of funds, inadequate dedication by library administration and insufficient library facilities required for capacity building. This implies that the low ICT levels of library personnel may be because of lack of training/implementation of ICT training policy. It is apparent also, that there is need for the institutions to give more priority to capacity building of library personnel.

Iqbal and Khan (2017) evaluated the knowledge and application of ICT by library personnel in Punjab University, Pakistan. Respondents were reported to be highly skilled in utilisation of emails, search engines, e-resources and chatting. However, only 19.4% and 20.9% of the respondents were familiar with programming languages, CSS and JAVA respectively. On the other hand, Shamshad Ahmed and Atta-Ur-Rehman (2016) assessed the ICT skills of academic librarians in public universities in Khyber Pakhtunkhwa, Pakistan. They submitted that the respondents were proficient in the

following; e-mails, search engines; web browsing, bibliographic databases and cataloguing and classification but possessed fair skills in social media use.

2.5 ICT use by library personnel in universities

ICTs are tools that enhance documentation, storing, dissemination and retrieval of information electronically (World Bank, 2002). UNESCO (2017) in a review of the roles of ICT in education defined ICT as the employment of IT with interrelated technologies, while Kaware and Sain (2015) assessed the inter-relationship between teaching, learning and ICT utilisation and submitted that ICT enhances organisation and knowledge sharing via electronic medium such as computers, the Internet as well as broadcasting technologies. Aiyebilehin, Ikenwe and Okpetu (2017) investigated the attitude of library personnel towards ICT utilisation for service provision in universities in Edo State. They stated that experts describe ICT as any equipment which enhances the acquisition, organisation, packaging and sharing of knowledge through software applications and computer hard ware. Kemdarne (2013) defined (ICT) as a set of telecommunication and computer technology which transmit, collect, process, interpret and distribute information. UNESCO (2017) investigated the ICT skills required for educational/work purposes and identified new ICTs as innovations like artificial intelligence, wireless networks (for example, cell phones), virtual collections, multimedia projectors.

Every technological breakthrough in every aspect of life will continuously have a resounding effect on information generation. The development of new technology therefore, means generation of new information by library personnel whose duty is to acquire, organise and disseminate information. Onifade (2014) investigated knowledge sharing and organisational culture as determinants of organisational effectiveness in universities in Nigeria and discovered the need for institutionalised professional development. She noted that ICT is profoundly employed in acquiring, storing, processing and sharing knowledge is constantly and significantly transforming service delivery in libraries. This is a welcome development because this is an information age and it is believed that a nation cannot grow above its level of information. One can therefore conclude that this is the reason why many countries promote ICTs and also make policies to sustain it.

Oyovwe-Tinuoye, Krubu and Ijiekhuamhen (2017) in an evaluation of the ICTs used for provision of services in Nigeria maintained that 184 (95%) of the respondents use the Internet for current awareness services, 157(81%)- marketing library services, 126(65%) - collaborating with colleagues and friends, 119 (61%) - image and video sharing, 112 (58%)- blogging, 97(50%) meeting training needs, and 79 (41%) -social tagging and bookmarking. Furthermore, the respondents were well acquainted with Facebook, Whatsapp, Blogs, Wikis and YouTube but had little or no knowledge of RSS Feeds, Bookmarking and Podcast.The study indicates that library personnel in Nigeria and developing countries in general are not adequately skilled in the use of ICT and therefore, do not use ICTs to their maximum potential. This implies that their delivery of services is below current trends of service delivery in developed countries where ICTs are utilised to deliver innovative, competitive, user oriented and effective services in this digital era. It is imperative that library personnel in Nigeria and developing countries build their ICT skills so that they can deliver effective, current, standard and competitive services in this ICT era.

ICTs are a welcome idea in libraries globally and especially in third world countries and many universities are imbibing it. Tiwari and Sahoo (2013) from their investigation of seventeen (17) university libraries in Rajasthan, India, noted that almost all the libraries had automated all the modules in the different sections in the library, namely, cataloguing, acquisitions, serials and circulation sections. The automation of a library, however, does not guarantee maximal use of ICTs by library personnel.Amaechi,Enweani and Eke (2018) reviewed ICT global impact on educational advancement and suggested a model for maximal utilisation of ICTs in universities in third world nations. This model is constant supply of power, purchasing of facilities, enabling environment, maintenance, adequate supervision, developing good library policies, staff training and effective and positive impact upon students (library users).

Sani (2015) evaluated ICT utilisation by library personnel in academic institutions in Kaduna, Nigeria, he noted that library personnel were not skilled in the installation and maintenance of IT. Suggestion was made that for ICTs to be maximally used and library services to be delivered effectively, university libraries should employ/train personnel whose responsibility would be to set up and maintain ICT

facilities. ICT employment by library personnel in universities would enhance networking and encourage inter-library relationships, knowledge sharing and user satisfaction. An assertion by Igbo and Imo (2017) in an evaluation of the advantages and inhibitors of cooperative utilisation of online resources in university libraries in Southern Nigeria revealed that library personnel use IT in consortia collaboration. Patel and Bhatt (2017) assessed Internet utilisation and service delivery of library personnel in three universities in India, they observed that the new librarianship environment encouraged multimedia services, such as; podcasting, wikis, SMS and other technology to deliver services in new and better ways. These new ways are faster, easier and can be personalised to meet individual user's need. The significance of ICT utilisation in libraries in this digital era cannot be undermined as Walsham (2017) assessed the effect of IT on development and concluded that ICT use by library personnel is prominent in developing countries and enhances effective service delivery. Akor, Ogunsakin and Idika-Mba, (2016) maintained this in a survey of the impact of modern technology on service provision by library personnel in universities in Nigeria. They noted that library personnel use the Internet for electronic services/document delivery and this has greatly enhanced research activities of the academic staff. Aiyebilehin, Ikenwe and Okpetu (2017) reiterated that library personnel have a positive attitude to ICT which inevitably contributes to their use of ICT for delivery of improved services.

ICTs are used by library personnel for different tasks in universities. Qutab, Bhatti and Ullah (2014) compared ICT utilisation for service delivery by library personnel in public and private universities in Pakistan. Fifty five universities were surveyed and results showed that the library personnel prominently utilised social media as follows: library RSS feeds to users was extremely high (mean: private 1.387, public: 258), twitter alerts (current awareness services) to users- (was also highly used - mean= private: 967, public: .67). ICTs used by the library personnel were: laser printers -77%; photocopying machines- 70; scanners- 67%; audio players- 37%; digital camera- 37% and dot- matrix printers- 28%. This result shows that library personnel in private universities use ICTs for service delivery more than public universities. Since ICTs enhance library service delivery, it is implied that library service delivery is more effective in private universities than public universities in Pakistan.

The use of ICT for service delivery by library personnel in universities can be traced to different reasons. Aiyebelehin and Omekwu (2019) studied the interdependency of attitude towards social media usage by library staff in tertiary institutions in Southern Nigeria, they found that social media utilisation is minimally dependent on its perceived usefulness but maximally dependent on its ease of use. They noted however, that it was necessary for the respondents to increase their knowledge of social media hardware for maximal use. On the other hand, Igbo and Imo (2017) alluded the improved collaboration between libraries to utilisation of ICT for service delivery which has enhanced resource sharing, such as OPAC. It is necessary to state however, that one of the crucial determinants of the maximal use of ICT is an enabling environment. In corroboration, Dankwah, Aryeetey, Obuezie and Nkonyeni (2019) in an evaluation of librarians' stress in the workplace, maintained that in the three countries surveyed, there was enabling environment for maximal ICT use, such as placing premium on networking, impartiality in choosing staff for training, encouraging creative and value-added services and these have culminated into enhanced service delivery.

2.6 Capacity building and service delivery by library personnel in universities

Staff capacity is a major determinant of service delivery in an organisation especially service-oriented institutions like university libraries. This makes it mandatory for library personnel to assess their capabilities and build it for effective service delivery. In corroboration, Roberts (2018) noted that universities all over the world, are paying more attention to capacity building of staff. Oguche (2017) stated that capacity building for library and information professionals is made up of training and retraining for the enhancement of their technical ability (management of hardware and software) in the digital environment as well as packaging and repackaging of information. Inclusive also, is training on web site development, digitisation, consortia collaboration and management of e-resources.

The information profession in the digital era has been jointly characterised by library scholars as passing through rapid and continuous transformations. Such authors include, Robertson (2018) who noted that there is continuous change of information formats and services caused by developments in ICT and concluded that for effective

delivery of service, change in policy, procedures, objectives and attitudes of personnel were imperative. Ashcroft and Watts (2005) evaluated the electronic environment in Nigeria and noted that in all the national libraries surveyed, policy making library personnel do not make use of the library e-resources, this was in contrast to their counterparts in the university. The implication is that library personnel in universities unlike those in national libraries, would understand user's needs better and make better policies for enhanced library services.

The importance of policy making appears to be undermined in universities in developing countries. Idiegbeyan-ose, Nkiko, Idahosa, and Nwokeoma (2016) studied ICT divide in developing countries and submitted that generally, there was no policy analysis nor effectual implementation in libraries. Anunobi (2013) assessed library staff development as a catalyst for national development and noted that only five out of the tertiary institutions surveyed in Nigeria had ICT policies. Tella and Sidiq (2017) and Anunobi (2013) maintained that constant innovation of technologies suggests that information professionals must align with the changes by building their capacities to manipulate the technologies effectively. They reiterated that library workplace is faced with competition from information providers and changing technologies as well as changing and turbulent environment of the parent organisation. The parent organisation constantly questions the value of the library because of continual expenditure of funds in updating its stock. In contrast however, the library does not yield monetary value. This makes it imperative for library personnel to be innovative so that the library can have a notable impact on its environment. Thus, the library personnel must update himself to perform effectively by acquiring new competencies/capacities/skills. Eja and Ramegowda (2020) evaluated government efforts in ensuring development in third world countries with special reference to Nigeria. They submitted that capacity failure, most often, has been identified as the reason for lack of progress in some nations.

Canadian Association of Research Library (CARL, 2010) in her study on skills requirement of Canadian Research library personnel in the digital era, maintained that capacities comprise of knowledge, skills and attitudes related to effective behaviours and work performance. Knowledge means being informed about or being able to comprehend; skill denotes the prowess to use knowledge effectually while attitude refers to a person's

outlook or feeling about something. Two types of capacities were determined: professional skills as relating to the information environment, and personal skills being generic skills, attitudes and values. These two types of skills are inter-related in the sense that the acceptance of technology is also influenced amongst other things by attitude. CARL (2010) enumerated capacities needed by library and information professionals as conventional library skills, such as, cataloguing, acquisitions, reference and information search skills; innovativeness which comprises of ability to research, organise and present information to patrons for decision making; ability to manipulate information technology; transferable and interpersonal skills that are generally needed for smooth and successful office management, such as, skills in communication, administrative, leadership, teaching, capacity building and teamwork, being able to understand patrons who may not know how best to present their needs. Other skills include being well behaved, principled, reliable, committed to effective service delivery and patron satisfaction, ability to multi-task, willingness to adapt to change and readiness to learn and lastly, familiarity with information related to/ needed by the establishment where one is employed.

ICT has indeed brought various changes to librarianship and this includes the roles library personnel play in the delivery of services. Abban (2018) examined the continuous professional development practices of two universities in Ghana and concluded that transformations in the profession greatly affects various aspects of the profession. There are changes in the format, acquisition, processing and dissemination of information in libraries: there is no physical boundary in library services. This has given birth to a corresponding alteration of the functions of library personnel. The study recommended that library personnel and other professionals must transform themselves and the society by continuously building their capacities commensurate to their evolving functions.

Effective library service delivery in this information age requires that library personnel be conversant with developments in ICT as well as use them effectively. Amoah and Akussah (2017) studied service provision of academic librarians and stated that for effective service delivery, staff should be informed about impending changes in the library environment, this should be followed by adequate staff training to ensure staff commitment and capacity to deliver in the digital era.

To achieve this, capacity building should be constant as well as built commensurate with capacities required in the information age. Omorodion (2018) maintained that since the library and information sector is undergoing rapid technological changes, the library personnel should also build their capacities commensurate with the technological changes and its allied effects, such as, changes in customer expectations and behaviour. The study the impact of libraries on private owned tertiary institutions in Southwest, Nigeria observed that information professionals need to continuously develop new capacities to satisfy users' unstable requests. The study further noted that librarianship/information provision is no longer the mere provision of information and it is necessary for library personnel to be creative and innovative for the satisfaction of users' needs, find solution to infrastructural problems and partisan indifference towards general information. New roles such as change agents, teachers and IT specialists would bring forth new services and greater impact on the society.

It is necessary that library personnel develop their skills in this information age through in-house training. This would enhance service delivery because more library personnel could participate since the training is cost effective. Appleton (2018) and Jost (2016) suggested that libraries must organise in – house training for their staff because they lack the required ICT skills and capacities for service delivery in this information age. This invariably would enable library personnel address issues peculiar to their library environment and deliver value-added services.

The library is a growing organism, so also is librarianship and the changes in the profession are presently anchored by developments in ICT. Abubakar and Attahir (2018) examined the emerging skills and capacities of library personnel in the digital era and found that constant capacity building is the key to provision of value added and effective services. They posited that applications like computerisation and world- wide web are outdated and that library personnel should think of newer emerging issues and how they can be beneficial to the profession. Conversely, Federer (2018) in an evaluation of the capacities and training needs of data librarians declared that the need of a library should determine the type of training library personnel will undergo since the capacities developed will be used to deliver services to meet the library needs. In view of this, library personnel whose libraries do not provide Internet services nor have library

software may not need to learn web design till the Internet has been installed. Library personnel should build their capacities in online cataloguing and classification for this will enhance fast and easy retrieval of library materials by users. Hoover (2018) studied the value-added ICT services provided by twelve universities in Canada whose student population were between 1000 and 5000, he concluded that many of the universities do not have enough skilled staff to manipulate effectively, the upgraded ICT facilities available.

It is essential that library personnel build their capacities to navigate the web and be able to teach users same for this would enhance networking and delivery of value-added library services in this age of globalisation. Idiegbeyan-ose, Nkiko and Ifeakachuku (2017) evaluated competitive service delivery by library staff in tertiary institutions in the digital era, they affirmed that when library personnel can skillfully navigate the web, they will be able to teach their users same thereby enabling library personnel to provide value-added services. The relevance of library personnel in the delivery of information services in this age seems to be at stake. In collaboration, Omeluzor, Agbawe, Onasote and Imam (2017) in an investigation of the state of library infrastructure as determinant of staff turnover in universities in Nigeria, and Nebeolise (2013) in a survey of ICT use in National Open University Libraries in Nigeria, maintained that the poor infrastructure, lack of quality resources and low morale of many library personnel in many university libraries have made information resource centres to dominate the information world. This has resulted into competition with other information providers who are highly skilled in ICT use, as a result, they seem to be more relevant to information seekers. This implies that library personnel need to build their capacities to maintain their roles as primary information providers. James, Shamchuk and Koch (2015) evaluated university libraries in Canada and described the fluctuating educational situation in Canada as one which entails that library personnel learn new skills and build their capacities for service delivery. Igbo and Imo (2017) reiterated that knowledge sharing in the digital age can be effective only if libraries make use of information technology to portray their global presence. In corroboration, Ajie (2019c) stated that IT has changed the world into a global world whose economy is determined by innovativeness in the organisation and sharing of information.

Lack of capacity for service delivery by library personnel in this digital age has many disadvantages. Library personnel may become irrelevant and consequently, lose his job. Aliyu and Shuaib (2016) emphasised the need for library personnel in universities to build their capacities to meet the requirements of the digital age. They reiterated that the services of traditional and non-ICT-literate library personnel are no longer relevant because they no longer satisfy users' request in this digital era. Many users themselves had built their own capacities to surpass those of the traditional library personnel. This situation is experienced by many libraries and explains the gross reduction in the number of library users in higher institutions of learning where research is conducted on regular basis and where there should be a search for information to support generated data. Decline in the number of library users can only be rectified and increased if there is a conscious effort by library personnel to address the situation by looking inwards to analyse the causatives and their incapacities as well as find a lasting solution to the challenges that change and technology will persistently bring by continuously building their capacities and being creative and innovative. Abba and Babayi (2019) examined the use of websites by library staff in Ibrahim Babangida Library, Yola, Nigeria and found that use was grossly limited by power failure. Thus, efficient service delivery of the library staff in this digital age would be hampered by power shortage.

Implementation of good policies would create foundation for capacity building, for example, training and retraining. Good policies would also improve the principles and procedures of libraries and thus enhance library service delivery. Umeji et.al (2013) corroborated this by saying that for developing countries to survive in the information age, they have to pay attention to training and also modify their policies in various areas accordingly. The study derided the lack of policy for infrastructure development and staff training in many libraries. Abba and Babayi (2019) and Umeji et.al, (2013) concluded that weakness in library and information institutional capacity have indicators such as, poor work environment, inadequate working facilities, strict government policies and frequent power failure.

Khan, Idrees and Khan (2013) noted that capacity building enhances skill development and multi-tasking. Thus, there is the benefit of personal development for staff as well as enhanced attainment of library mission and vision. In corroboration,

the Department for Culture, Media and Sports-UK.gov. (2016b) stated that worldwide, libraries are increasingly using ICTs for enhancement of service provision to satisfy users' needs in the competitive library environment. Ojowhoh (2016) noted that effective service provision is achieved when staff are well trained but that funds are a great impediment to training programs in many establishments. In conclusion, Aderibigbe and Chiemenem (2019) in a study of the preparedness of library staff for the provision of 21st Century global services, however, stated that value-added and modern service provision is determined by the cultural attitudes of staff, such as negative attitude towards capacity building and need to forsake outdated conventional procedures to give way to current global library practice.

2.7 ICT skills and service delivery by library personnel in universities

The digital era has experienced tremendous technological advancement so also the need for ICT skills in all spheres of life is unquestionable. The digital age has transformed the world and even libraries. Ajie (2019) in an investigation of networking skills of library staff in the University of Nsukka, maintained that there is move from print literacy to computer literacy and that ICT enabled services such as web 2.0 services have made it imperative that library personnel be highly skilled in Internet use so as to manipulate the computer/Internet/networks to enable communication with users via e-mails, social groups among others for effective library service delivery in this age. This skill is described as network literacy. The digital library personnel in this technological age must know how to manage online information and determine critically, the credibility of the sources. The acquisition of network literacy skills is indeed imperative for library personnel to enable them compete favorably with other information providers who are often highly proficient in ICT manipulation.

Acquisition of ICT skills by library personnel should be commensurate to the tasks they perform in achieving the library goals in service delivery. This however, is not the case in some Nigerian universities. Ayoku and Okafor (2015) concluded that many library personnel are skilled in word processing and e-mail utilisation but are only aware of Google and Yahoo browsers. This implies that such library personnel were not able to deliver effective library services. Igun (2010) studied the working experience of library

personnel in tertiary institutions in Nigeria, and found their working experience not commensurate to their acquisition of network technologies and skills. This suggests that the working experience of library personnel does not determine his ICT skills in the delivery of library services except he acquires and improves his ICT skills. She concluded that library personnel who have below fifteen years working experience try to acquire ICT skills in many ways than the older library personnel. On the other hand, Oyedokun et.al (2018) submitted that 56.9% of the library staff surveyed claimed that their inadequate ICT skills is based on their inexperience.

The effort of library personnel in building their capacity is sometimes hampered by some factors. Oyedokun et.al (2018) evaluated the ICT skills acquisition and use among library personnel in Ahmadu Bello University, Zaria and Kaduna State Polytechnic, Kaduna, Nigeria and found that the ICT skills acquisition training was often hampered by erratic power supply and high cost of training, work overload, absence of encouragement, lack of experience, insufficient training and inadequate training in LIS schools. Nevertheless, this training improved service delivery. Impediments to ICT skills may sometimes have far reaching consequences. Sani and Musa (2019) from their investigation of the impact of Information ICT skills on service delivery by library staff in higher institutions in Lokoja, Kogi State, Nigeria, concluded that funds, inadequate training, negative attitude of staff and unconducive environment were the major constraints to ICT skills acquisition. Library personnel who lack ICT skills need to build their capacities and overcome all impediments so that they can efficiently deliver services to users. Moreover, it is when they have built their capacities that they can have the boldness to teach others and therefore, fulfill the mission and vision of their parent organisation. Sani and Musa (2019) concluded emphatically, that in this digital era, efficient service delivery in academic libraries is dependent solely on library personnel building their ICT skills.

An assessment of existing ICT skills will allow library personnel to know the skills they possess, their ability, capability and this will encourage them to develop their skill for maximal use and effective service delivery. In this digital age, library personnel should possess different ICT skills needed for service delivery, this is because high ICT skills have become a prerequisite for effective service delivery.Chanetsa and Ngulube

(2017) examined the skills of subject librarians in Africa and concluded that many affirmed that they needed to build their ICT skills to improve their service delivery. This assertion agrees with Uwakwe, Shidi and Abari (2016) who assessed LIS students' utilisation of e- resources at Benue State University, Nigeria. They concluded that most of the libraries lack personnel with proper technical skills and knowledge. This implies that the students have not been satisfied with service delivery of the library personnel and these personnel need to develop their skills to add value to their service delivery. Aromakymary, Ramasesh and Swamy (2017) evaluated skills of librarians in Visvesvaraya Technological University in Karnataka, India. It was revealed that 86.8% of the library personnel are assigned ICT based duties while only 13.2% did not have duties that were ICT related. This implies that majority of the Library personnel possess and use ICT skills, and it can be inferred that the duties are interrelated and that the minority of the library personnel who did not perform ICT related duties lacked ICT skills.

Nkamnebe et. al. (2015) submitted that the average percentage score of the ICT skills of library staff was 58.3%. This inadvertently, may impair library service delivery. The implication of this is that since one cannot deliver services above his capacity, then the library personnel cannot deliver above 58.3% effective services and this is not good enough. Anyira (2011) analysed the need of library patrons in the digital era, he concluded that utilisation of ICT skills for library service delivery gives library personnel an identity with online users. His impact on their information world creates an impression of him. The users believe he is highly skilled in ICT use and can compete favorably with other information providers in the digital era. Thus, the library personnel becomes relevant to online users who will develop confidence in him and eventually, effective services will be delivered to the users.

Farooq, Ullah, Iqbal and Hussain (2016) evaluated the skills of librarians in Pakistan tertiary institutions and submitted that their skills level was low. This report is in contrast to that of Oyedokun et. al. (2018), they evaluated ICT utilisation by library personnel in Southeast Nigeria, where it was revealed, that the respondents had high ICT skills which they acquired through formal and informal education, workshops, in-house training, assistance from colleagues and seminars among others. It was concluded, that the skills possessed were sufficient to deliver effective library services.

ICT skills possession by library personnel may also be determined by accessibility as well as functionality of ICT facilities in the workplace. Shidi and Ape (2011) noted in their study of ICT infrastructure and utilisation by library personnel in universities in Benue State, Nigeria, that the Federal University, Benue state had more functional ICTs than the State University, while the private university had the least. Unfortunately, the ICT skills of the library personnel also followed the same order. This implies that private university ranked least in effective services delivery because they lacked an enabling environment and one cannot perform above his capacity.

Shidi and Nwachukwu (2015) discovered in their investigation of the digitisation skills acquired by library personnel in universities in Benue State, Nigeria, that about 85% of the library personnel had computing skills but only about 57% had digitisation skills (scan, upload images and use power point). The library personnel however, lacked networking and programming skills to manipulate cutting-edge information and communication technologies and thus may lack the ability for provision of value -added services to patrons. They concluded that the library staff had low programming skills.

Networking skills are indeed a prerequisite for library personnel in this ICT dispensation. It will enhance fast and diverse service delivery. Robert and Edem (2016) corroborated this in their investigation of the effect of ICT on cataloguing and classification of library materials in Akwa-Ibom State, Nigeria. They found out that 82% of library staff use ICT for cataloguing, although the frequency of use was low (51%). The low usage was however, attributed to incessant power outage and maintenance of software. This implies that if there is adequate power supply as well as maintenance of ICT infrastructure, library personnel will build and use their ICT skills effectively and eventually, library service delivery will be very effective in Nigeria.

Rayini (2017) in an evaluation of library and information services to the visually impaired in the digital era, reiterated that the specific needs of these set of users can only be met if library resources are delivered to them in a suitably accessible format. Phukubje and Ngoepe (2017) in a study of suitability and availability of library services to challenged scholars at the University of Limpopo in South Africa submitted that in third world countries, service delivery to the challenged are not often seen as priority, so they are not often included in library budget. Zaid (2017) studied service delivery to the

disabled in Nigerian universities and submitted that, there are very few library services offered to the visually impaired and the service delivery is often founded from their assumed needs.

2.8 ICT use and service delivery by library personnel in universities

The digital era makes it mandatory for university library personnel in Nigeria to be highly skilled in ICT use. This will make them remain relevant, deliver effective and current library services, prevail in the competitive ICT world and be able to build growing confidence of their capacities in users no matter the technological change in the library environment. This assertion can be adduced to the fact that there is continuous advancement in technology and library operations, such as acquisition, organisation and dissemination of information.

To a large extent, information handlers and library personnel themselves have been greatly influenced by this change. They must learn to apply the various current ICT for packaging and re-packaging their information and services in the current and acceptable format for easy access and retrieval by users in the competitive information world. In corroboration, Bano, Meraj and Rehna (2019) from an investigation of the unique attributes of librarians in the digital era, submitted that ICT use has changed the roles of librarians from information providers to capacity builders. Furthermore, they reiterated that it is necessary that librarians be highly skilled in ICT use and market library services to ensure patronage in the face of stiff competition from other information providers. Without this, they may be seen by their patrons as inefficient, obsolete and ineffective which will invariably make the patrons to approach other information providers for information or access the information needed via a format that cannot be manipulated by the unskilled hands of the library personnel, such as via the Internet.

Globally, technology has transformed higher education including their libraries. Shamshad Ahmed and Atta-Ur- Rehman (2016) stated that ICT has influenced all the aspects of service provision in tertiary institution libraries, such as database upgrading procedures, library structure and consortium. ICT enhances maximally, sharing of electronic information to patrons. Makori and Mauti (2016) submitted that the use of information technologies and computing to both support and deliver instruction has become prevalent and continue to change globally, the course of education in colleges

and universities, They reiterated that though librarianship now has many competitors via technology, library personnel need to excel in the ability to balance technology with humanism with a special focus on student (user) centred service.

Tiwari and Sahoo (2013) concluded that library personnel use ICTs to achieve set library goals, manage information systems and extend library boundaries via Internet, databases and electronic facilities. They stated that ICT was mostly utilised for acquisition of library materials in majority of the libraries surveyed, while it was least used for circulation. Ntui, Robert and Usang (2017) investigated the low availability of funds for ICT and the prospects of its use for provision of library services in universities in Cross River State Nigeria. Their report indicated that 88.5% of the respondents agreed that there was regular funding by university administration, however, there was decry of inadequacy of the funds released by 94.2%. This inadequacy hindered the purchase of up-to-date library software and the capacity of the library to provide effective services. Ntui, Robert and Usang (2017) further reiterated that the most important benefits of ICT use as claimed by the respondents was immense reduction in duplication of efforts (100%), more resources were made available (98.1%), ICT was used for resource sharing (98.1%) and it ensured fast access to up-to-date data (98.1%). Abdusalami and Dika (2019) observed that most libraries in Africa have not been impacted enough by ICT to enable them improve effectively on their service delivery. They submitted also, that library personnel are responsible for training patrons but since they do not have the skills themselves, they cannot train others. Idiegbeyan-ose, Nkiko, Idahosa, and Nwokeoma (2016) concluded that inadequacy of ICTs in libraries often indicate low ICT skills of library personnel and that many developing countries are in this situation.

ICT use by library personnel enhances service delivery in various ways. Bhoi (2017) investigated the utilisation of ICT in libraries and reiterated that library personnel use ICTs mostly for acquisitions, arrangement/categorisation of library resources and for surfing the Net. Nebeolise (2013) concluded that in National Open University Libraries in Nigeria, library personnel use ICTs mostly for cataloguing and circulation, followed by indexing, bibliographic checking and spine labeling amongst others. This report implies that there is no diversity in the use of the Internet and this may not allow innovative and current services delivery to clientele that need online services.

Swaminathan and Karthikeyan (2017) studied the level of awareness of computer and collaborative tools among library personnel in engineering and arts and science institutions. It was discovered that most library personnel preferred and used the Open Source Software (OSS) while 75.9% believed there was need for technical support for customisation of the software to enhance maximal use. This implies that the capacity of library personnel must be built in the maintenance/manipulation of ICTs so as not to be totally dependent on staff outside the university, this is to avoid being held at ransom through delay and ensure maximal use of the ICTs.

Services delivery by library personnel in special libraries seem to be more diversified and effective. This may be adduced to the fact that they render distinctive services to users and therefore should satisfy specific requests of their clientele. Owoeye (2013) surveyed staff development in special libraries in Oyo state and enumerated the services rendered by library personnel with the use of ICTs as: Internet/ database searches and retrieval; selective dissemination of information (SDI); electronic delivery of documents, maintaining library catalog on the web; inter- library loan. Others include reference services via circulation desk, phone calls or electronically, book lending; indexing and abstracting services; publishing and alerting services; records management and archival functions.

Obotu, Chukwuka and Gambo (2019) evaluated how library personnel in two agricultural institutions in Nigeria maximised the application of ICT job performance. They found that the libraries were partially automated, there was no online cataloguing and e-acquisition, administrative processes were manually carried out, the ICT facilities were not maximally used, while 98 (53.27%) of the library staff used the ICT facilities for records keeping, 56(30.43%) for playing games and 30 (16.30%) for research purpose. This implies that the library staff were grossly incapacitated to provide up-to-date services to meet the requirements for effective service in the digital era. Abban (2018) maintained that 95% of the library personnel in universities in Ghana opined that capacity building enhanced their service provision, skills were updated, and those who were trained provided improved services than those who were not. Efosa, Sheji and Efosa-Isibo (2015) assessed utilisation of ICT in Babs Fafunwa Library, Adeyemi College of Education, Ondo, Nigeria, they stated that (20.7%) of the respondents

indicated that ICT has maximally increased their job performance, 14(48.3%) indicated that it is reasonable, 9(31%) indicated that it is minimal. 13(44.8%) participated in formal ICT training and 16(55.2%) had informal ICT training.

Antidius (2018) from a survey of ICT use by library personnel in the University of Dar es Salaam, Tanzania, concluded that ICT use has enhanced innovativeness of the library personnel in service delivery. The innovative ICT services include changing from traditional to electronic services, making available electronic facilities/databases, creating an e-platform for users' suggestions, access to QuickResponse code, creation of platform to ask a librarian, chat with a librarian, facebook, virtual reference, online trainings for users and creating institutional repositories. These have enabled faster, up-to-date and effective library service delivery. Furthermore, the innovative services have made execution of task easier for the staff. It was suggested that library should extend her services by building capacities of staff within and outside the country, as well as organise refresher courses on automation and e-resources. Hoover (2018) however, reiterated that seven out of the twelve libraries studied in Canada did not provide ICT services at their help desk. Roberts (2018) maintained that library personnel use ICT for various services delivery. A commendable service delivered was teaching students and lecturers not only to search databases and source information on the Internet by themselves. The implication of this is that library personnel would become more relevant and this could enhance patronage by library users.

Abdullahi and Haruna (2008) affirmed that value added service delivery is determined by library facilities and personnel. This means that effective delivery of services in libraries in this ICT era is not only dependent on the installation of latest ICTs but also on the abilities of staff to handle them and be innovative. Furthermore, they maintained that use of ICTs in libraries has enabled delivery of new services such as maintaining library catalog on the web and electronic dissemination of information. A case in point is that the library now plays the role of guide and facilitator by providing access to remote servers like publisher web site or data base supplier services. Prominence of open content is now enhanced as well as a predominance of e-books. These have appreciably reduced university cost materials for users.

It is important that library personnel deliver effective services to all categories of users in their community. Babalola and Haliso (2011) in their evaluation of library services by academic libraries to the visually impaired reported that ICTs in libraries are used for the following: organisation of information, management information system, resource sharing and document delivery. ICT use has enabled library personnel to deliver services to large number of people in different places. Ani et.al (2005) investigated the globalisation of library services in Nigeria and reiterated that the advent of ICT has made library to move from ownership to access and service delivery to larger number of users. It is not mandatory for patrons to come into the library to use library materials any more. Such development is good because users will have access to more materials, that is, materials which are owned by their own libraries as well as those owned by other libraries but which can be remotely accessed via remote servers. Services delivery in libraries has taken a new turn. Library personnel who will deliver effective library services must be versatile in computer operations. Madu et.al (2017) examined the institutional readiness and delivery of online facilities in university libraries in Nigeria and noted that technology has engendered new methods of service delivery as well as innovative services.

Online cataloguing has enhanced cataloguing and classification procedures in university libraries in Nigeria. Adeleke and Olorunsola (2010) investigated online cataloguing in Nigerian libraries, they reported that library personnel in Nigeria make use of online cataloguing which allows for fast processing of books and library materials which can be made available to users on time. Ntaka (2017) investigated the application of blog for service delivery by library personnel of Agricultural University, Athens and the University of Piraeus, Greece and concluded that use of library blogs (social media) for direct communication with users is one of the most appreciated library services in this digital era. This is indeed a great development in library services because it is one of the fastest means of document delivery and selective dissemination of information.

2.9 Challenges of service delivery in university libraries

ICT application in libraries has changed concept of libraries and librarianship. The mode of procurement, organising, preservation and knowledge sharing has changed. It has also changed roles of library personnel as well as added new roles. This has inevitably

changed the mode of services delivery. Oguiche, Lamidi and Gabasa (2017), Anunobi (2013) and Ukachi (2010) maintained that the traditional library services have gradually been substituted with electronic. There is a change from print services and physical interaction between user and staff to online interactive services, which include, online borrowing, online referencing, online bulletin board, library blogs, emails. These new services which are faster, more current, remove geographical boundaries, can be used simultaneously and can be accessed 24/7, however, has its own challenges.

Umeji et.al. (2013) in their investigation of information and ICT skills of library personnel in Madonna University, Okija, Nigeria, noted that ICT application in libraries has brought tremendous change in librarianship. When new technologies are invented, library personnel must build their capacities to apply the technology as well as assume new roles. Though library fund may not be sufficient, library personnel will have to use personal funds or grants to develop themselves. They concluded by emphasising that libraries and information professionals who do not develop themselves to align with the changes in ICT will soon become obsolete. Oyedokun et.al (2018) posited that one major challenge to capacity building and application of information and technology communication by library personnel in Nigeria is that LIS schools often turn out incompetent library personnel and information scientists who are not adequately equipped with practical skills and sometimes theoretical knowledge for effective service delivery in this digital age. This implies that they cannot deliver effective library services unless they build their capacities.

Poor library facilities continue to be a bane to capacity building initiatives and ICT knowledge of library personnel in their delivery of library services. The Federal Ministry of Education, Nigeria (2009) corroborated this by reporting that approximately 15-30% of the buildings, facilities and resources in university libraries in Nigeria are either non-functional, obsolete or dilapidated. This can be adduced to low budgetary allocation coupled with the poor economic situation of the country. In corroboration, Amaechi, Enweani and Eke (2018) noted that challenges of capacity building include, lack of training policy in universities, lack of funds, technophobia, inadequate support from management, attitude of library personnel to change amongst others. Okiy (2005) also emphasised that low budgets, inadequate ICT facilities, power

outage and inadequate training were the bane of capacity building in Nigeria. Babalola and Haliso (2011) observed that in Nigeria, library service delivery to the handicapped (especially the visually impaired) is very poor and Non –Governmental Organisations (NGOs) provide better services to them than government (university) libraries. Consequently, library personnel in Nigeria do not provide effective services to the visually impaired and the handicapped thus excluding them often from the regular library and information services.

Ugwu (2010) assessed the utilisation of knowledge management software in Nigerian educational institutional libraries, she noted that a key problem was that library personnel cannot work smoothly with the software. This is because the library software is often imported from other countries and are not suitable for the local library environment. Furthermore, she noted that changing ICTs and changing user needs create a difficult task for library personnel to continuously devise new and better means of service delivery commensurate to the changes.

Workineh and Yehuwalashet (2017) examined the inhibitors of library and information service delivery in Ethiopian higher institutions. They submitted that the key challenge was inadequate capacity building. Edom and Edom (2013) from their study of the challenges of capacity development programmes for library personnel in Imo State, Nigeria, reported that the greatest challenge of library personnel to capacity building is lack of finance, followed by inability to use facilities, disapproval by boss, location of training programmes by organisers and high cost of training. Other challenges include excessive work load, insufficient time, non- awareness and non- recognition of certificate obtained. Inadequate information on training program, unavailability of training program on area of interest, lack of trainers locally and lack of interest by library personnel were also cited as challenges.

Otsonu, Asom, Zuwaira and Olije (2016) examined the capacity building of library staff in Benue State and stated that the challenges of capacity building included lack of funds and indiscriminate selection of staff and suggested that an appropriate policy be put in place. The success of capacity building can be traced to formation of appropriate policy, nevertheless, this success would only be an illusion if the policy is not implemented. In corroboration, Ezejiofor (2018) studied the challenges of library staff

development at Nnamidi Azikwe University Library, Akwa, Nigeria and submitted that lack of fund, no written policy and irregularity of training programmes were the prevalent challenges. Ahiazu and Echem (2018) in a survey of staff development of library personnel in Nigeria, noted that many library personnel are not willing to sponsor themselves for training programmes because they believe it is the duty of their employer (the university or federal government) to train them and advised that library personnel should endeavour to train themselves for this will improve their capacity.

Haliso (2011) in his study of ICT use by library personnel in South-western universities in Nigeria, concluded that the key inhibitor of capacity building and ICT use for service delivery was that library software do not have standardisation. The software acquired are often not suitable for the library, sometimes develop problems, while running costs are also very high. Haliso (2011) noted also that 76% of the respondents agreed that library personnel' reluctance to use ICTs was a major setback to capacity building in Nigeria. Cobblah (2015) evaluated capacity building and its effect on service delivery in university libraries in Ghana and concluded that most preponderant challenges of service delivery of library personnel was lack of financial support and low level of motivation. This finding is at variance with Emezie and Nwaohiri (2015) who studied service provision of digital library personnel and Ahenkorah-Marfo and Akussah (2017) in a survey of e-referencing services by library personnel. They concluded, that lack of ICT skills of library personnel, irregular electricity supply and low bandwidth were key inhibitors of service delivery in this digital era.

Ukachi (2017) evaluated six tertiary institutions' libraries in Nigeria and reiterated that major challenges of information and communication technology were, frequent power failure, indifference by library management and ICT incompetence amongst library personnel. Eze (2010) surveyed the Federal Government of Nigeria policy on vision 20:20 and maintained that the national ICT policy has some deficiencies. The main challenge was formation of the policy by just one government parastatal, the Federal Ministry of Science and Technology. Thus, the policy did not have much depth and may be sub-standard. Another inadequacy of this policy, is that information professionals like library personnel were however not involved. This means that stakeholders were not involved and thus important issues have not been adequately addressed.

Ademodi and Adepoju (2009) from their survey of selected libraries in Oyo State, Nigeria, posited that library personnel have low ICT skills and most of them use ICTs more for administrative purpose and browsing than for library service provision. This may be adduced to the fact that often, automation of many libraries are partial and therefore the software modules may not be fully activated. Thus, library personnel will not be able to use them for service delivery. Okiy (2005) submitted that application of ICT in Africa has many constraints which include, insufficient ICT facilities, policy makers are not acquainted with ICT facilities, low ICT skills and government bureaucracy.

The importance of ICT policy seems to be undermined in developing countries. Babalola and Haliso (2011) pointed out that only sixteen (about 1/3rd) of tertiary institutional libraries evaluated had ICT training policy. They defined ICT policy as an approved document containing goals and procedures for the attainment of such goals to enhance the procurement, maintenance and utilisation of ICT by libraries. In their submission, ICT is capital-intensive and needs strategic plan and well-defined objectives without which the availability of ICTs would not achieve its purpose. This implies that no matter the ICTs installed and the capacities of library personnel, if there is no policy to sustain ICTs, for example, maintenance policy, then these ICTs cannot be sustained. The findings of Haliso (2011) are probably the foundation of the challenges to ICT use in Nigeria. In corroboration, Idiegbeyan-ose, Nkiko, Idahosa and Nwokeoma (2016) in an investigation of the problems of the application of ICT facilities in developing countries maintained that many libraries did not have appropriate policies and only few implemented the policies, thus the facilities were not effectively utilised.

Utilisation of ICT for library services provision has some challenges. Murgor (2015) further confirmed this in an evaluation of the constraint to ICT application in African universities and posited that library personnel in Africa are yet to overcome the challenges of active participation in the emerging digital development in library practices. Ahmed, Sheikh and Akram (2018) in their evaluation of information management in universitylibraries of Punjab, Pakistan also commented on ICT challenges of library personnel. They reiterated that universities globally have been having challenges in meeting up with the goals of their parent institution in the aspect of information

production and dissemination and concluded that capacity building, provision of ICT infrastructure and ICT skills enhancement of library personnel would resolve the issue. Barfi (2015) in a survey of the advantages and disadvantages of automation in higher educational institution libraries in West Africa, noted that in spite of enormous and collaborative capacities of ICT, particularly the Internet, many African libraries still do not have dependable Internet connectivity, while to catch up with colleagues may take years. Thus, it seems that libraries and library personnel in Nigeria still need to build their capacities in ICT utilisation.

Abban (2018) submitted that government and private owned university libraries are lacking funds for the development of their libraries and staff and therefore, infrastructure for good internet connectivity in library may not be feasible. Egoeze, Misra, Akman and Colomo- Palacios (2014) evaluated the use of ICT facilities in Nigerian universities and noted that in Nigeria, the impediments to library services especially via the Internet and ICT adoption are infrastructural, mainly power and equipment failure. Others include, inadequate funding, lack of trained personnel and bad policies by management amongst others. In support, Ayoku and Okafor (2015) noted that a large number of library personnel in higher institutions in Nigeria were not competent in the use of ICT and their continuous use has not improved their competence, thus implying that library personnel have not fully maximised ICT utilisation for service provision. Eze (2012) also identified inadequate funding, absence of transfer of learning, lack of analysis of training programme, lack of training policy. In corroboration, Raju (2017) noted that there was inadequate funding for capacity building of staff in libraries and concluded that another major challenge was the high frequency of technological change. Thus, emanating into frequent changes in technology and frequent capacity building of personnel and in the long run, increased expenditure.

2.10 Theoretical framework

A theory is a coordination of paradigms and their inter-relationships that collectively presents a consistent, methodical, and clear description of a particular phenomenon which is bound by rules and limits (Bacharach 1989). Theories give insight to a normal or social behavior, occurrence, or phenomenon. There are quite a few theories

postulated on the reasons for acceptance and use of new products by people. These theories enumerate different factors that affect adoption and use of ICT such as attitudes, social and control factors (for example, Davis, 1989; Rogers, 1983). The theories are intention-based and state that the use or adoption of an Information Technology (IT) is dependent on the beliefs and attitudes of the user towards the IT. A few theories are related to this research which dwells on the capacity building and the adoption and use of Information technology in relation to service delivery by library personnel. In order to develop a conceptual framework upon which capacity building, ICT skills and use could determine service delivery of library personnel in universities in southwestern Nigeria, this study will examine the following theories; the Technology Acceptance Model (TAM) 2, (Davis 1989; Davis, Bagozzi and Warshaw (1989), the Capability Approach Theory (Sen, 1999), the Human Capital Theory (Shultz, 1961).

2.10.1 Technology Acceptance Model (TAM) 2

Davis (1986) developed the Technology Acceptance Model (TAM) which has however undergone various amendments by scholars. The first TAM model is now referred to as TAM 1. The model TAM 1 is an adaptation of Ajzen and Fishbein's (1980) Theory of Reasoned Action (TRA) and it is used to elucidate as well as predict why users accept to use information system. TAM explains and surveys the reason for the acceptance and use of Information Systems by people and is one of the most popular models employed by researchers for studies on IT use and adoption. TAM dwells primarily, on the intentions to use and behaviour during use of IT and postulates that the use of new technology by an individual is determined by his perceived usefulness (PU) and perceived ease of use (PEOU) of that technology. "Perceived ease of use" is the degree to which a person believes that using a particular system would be free from effort while "perceived usefulness" is the degree to which a person believes that using a particular system would enhance his or her job performance. Davis (1986) hypothesised that the use or rejection of a system is highly dependent on the attitude of the user towards that system. Furthermore, the attitude of a user is subject to perceived usefulness and perceived ease of use, while perceived ease of use directly influences perceived usefulness.

TAM reveals that the behavioural intention of an individual determines his use of Information Technology (IT) and that this behavioural intention is dependent on the attitude of the person to use the IT and whether he believes in its usefulness. The implication of this is that the attitude of library personnel towards an ICT determines his use of it and that the usefulness of this ICT as perceived by library personnel will influence use. This means that if library personnel is not favorably disposed to the use of an ICT, he/she may not make use of it unless the library personnel perceives that the ICT will help in the delivery of improved services. This is also in line with TAM which proposes that external factors which affect intention and actual use ultimately affect perceived usefulness and perceived ease-of-use of a system. Thus, if an individual (library personnel) perceives that the technology will enable him deliver improved and competitive services (PU), he will avail himself the opportunity of using it. The library personnel's perception that use of e-mails creates awareness of new acquisitions faster than when the materials are displayed in the library for users who may not have time to visit the library, will make library personnel use the Internet to send e-mails (PU). Davis (1989) notes that perceived usefulness is also influenced by perceived ease of use because when the technology is easy to use the more useful it can be thus, the adoption of this technology will also be determined by the ease of use of that technology (PEOU). Perceived ease of use will encourage frequent use of technology resulting in improved skills and in effect improved library services delivery.

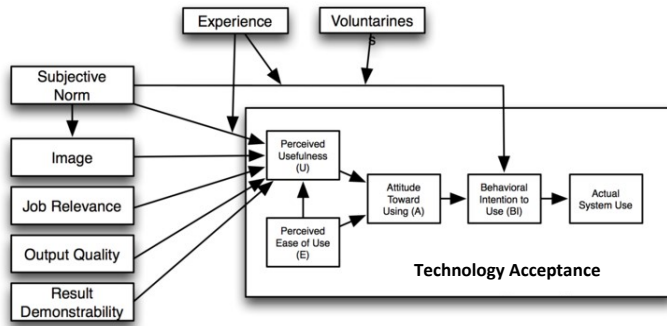


Figure 2.1: Technology Acceptance Model 2(TAM 2) Davis

TAM model has been criticised by some researchers (Venkatesh, Thong and Xu (2012) and Agbonlahor (2005). Agbonlahor (2005) noted that the Technology Acceptance Model does not present a universal picture of the factors that affect the acceptance and adoption of new technologies by a group of persons. TAM having undergone various amendments has three major extensions of TAM. TAM 2 explains perceived usefulness and perceived ease of use in relation to social influence (subjective norms, voluntariness and image) and cognitive instrumental processes (job relevance, output quality, effectiveness and perceived ease of use). TAM 3 is most suitable for e-commerce and business activities.

2.10.2 Capability Approach Theory

Sen (1999) in his Capability Approach Theory affirmed that every individual has the substantive freedom to live the life he values most. Sen (1999) maintained that the willingness to live the life of value is the primary aim and principal means of development, which includes personal, organisational and social development. The capability approach is a theoretical framework that entails two core normative claims. The first claim is that the freedom to achieve well-being is of primary moral importance, and secondly, that freedom to achieve well-being is to be understood in terms of people's capabilities, that is, their real opportunities to do and be what they have reason to value. This implies that every library personnel has the right to live right, that is, be up and doing in his career which is one of his main concerns since he makes a living from it. This should spur him to develop himself and achieve well-being, that is be- up- to the task and capable of delivering effective library services in the current ICT dispensation and be morally justified to earn his wages. The preceding action of the library personnel however is dependent on if he values or appreciates the capabilities he can yet develop and has placed a value-added price on himself. The capability approach has been developed in a variety of more specific normative theories, such as (partial) theories of social justice or accounts of development ethics. It has also led to a new and highly interdisciplinary literature in the social sciences resulting in new statistics and social indicators, and to a new policy paradigm which is mainly used in development studies, the so-called 'human development approach'.

Capability approach enumerates functionings and capabilities. Functionings are the "beings and doings" of a person, whereas a person's capability is "the various

combinations of functionings that a person can achieve. Capability is thus a set of vectors of functionings, reflecting the person's freedom to lead one type of life or another (Sen, 1980)". Robeyns (2005) explained that the functionings refer to realised achievements and fulfilled expectations while capabilities refer to effective possibilities of realising achievements and fulfilling expectations. He stated further, that the two concepts are interrelated and at the same time involve distinctive connotations. Thus, a functioning is an achievement or present condition, whereas a capability (capacity) is the ability to achieve. Functionings in the library are the present library services offered by library personnel in universities in Nigeria, while capabilities relate to their potentials or capacities which can be built (if they choose to) to enable them function effectively in the ever-changing library environment constantly manipulated by emerging technologies. Functionings in the library may also refer to the present ICT skills of library personnel by which they deliver library services while capabilities refer to the freedom to continually get current ICT skills on higher levels for improved library services delivery.

Capability set refers to the freedom of a person to attain various types of "functionings, that is capabilities". Sen (1999) noted that it is only the achieved states that are in themselves valuable, not the opportunities, which are just a means to the end of attaining important states. This implies that the opportunities for capacity building (referred to as resources, in fig 2.1) of library personnel are in themselves not fruitful unless library personnel choose to use (referred to as personal utilisation function) these opportunities. Utilisation of these opportunities to build their capacities and develop themselves would eventually turn the opportunities into "functionings". These functionings are delivery of value-added library services which bring progress and development. This state of progress and development is referred to as Utility. Utility according to Bass, Nicholson and Subrahmanian (2013) in their framework for institutional capability approach for ICT development, is happiness or desire fulfillment, while goods and services are means to achieve.

In general, Sen (1999) provided a view of human capacities as being a choice to move from the level of present functionings (delivery of library services) to a higher level of capacities but also stresses that to ensure an enabling environment to build/utilise these capacities, some other changes will have to occur, such as financial resource, institutional settings (library policy), social or cultural practices (library norms and mission statement) and social structure to mention a few.

Sen (1999) proposed five ways to assess capability; the importance of real freedoms in the assessment of a person's advantage; individual differences in the ability to transform resources into valuable activities; the multi-variate nature of activities giving rise to happiness; a balance of materialistic and non - materialistic factors in evaluating human welfare and the concern for the distribution of opportunities within society.

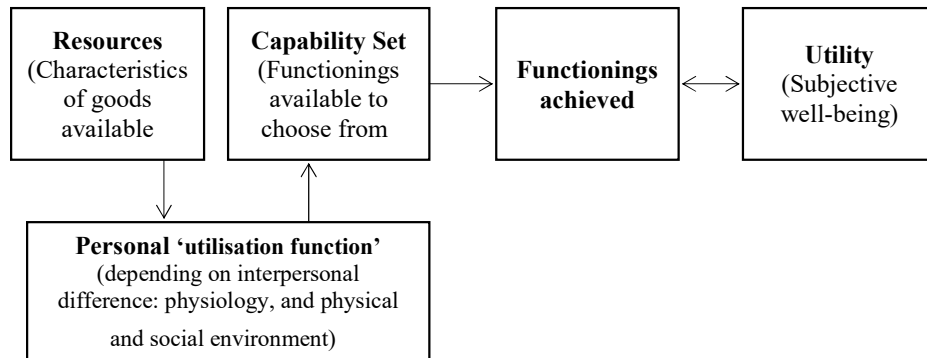


Figure 2.2 Outline of the core relationships in the Capability Approach (Sen 1999)

The Capability Approach theory has passed through the processes of debate, criticism and expansion (Bass, Nicholson and Subrahmanian 2013, Stewart 2001, Alkire 2002 and Nussbaum, 1988). Stewart (2001) noted that the capability approach focuses more on individual than group capabilities. The study stated that the group an individual identifies with can influence his values and choice, for example, library personnel would rather choose to build their capacity commensurate to the requirement needed for library personnel to deliver library services in this digital era and not according to requirements needed twenty years ago. Bass, Nicholson and Subrahmanian (2013) however, have used the capability approach as a framework to evaluate the interactions between institutional analysis and ICT as tool for development.

2.10.3 Human Capital Theory

The Human Capital Theory was developed by Theodore Schultz in 1961. The theory states that any knowledge or characteristics of a worker which enhances job performance is human capital. Human beings are perceived as resources which can increase economic value when productive. Shultz (1961) stated that human resources have quantitative and qualitative aspects. The quantitative aspect refers to the number of people who engage in useful work, while the qualitative refers to the skills, knowledge and other characteristics which enhance productivity of specific human capabilities. The Human Capital theory is a concept of labor economics which considers marketable skills of workers as a type of capital and which workers invest into. This investment eventually increases the variety of choices available to them. Human Capital theory assumes that investment in human capital by workers will eventually lead to greater economic value. The theory is based on the fact that the productive capacity of people is greater than all other forms of wealth put together.

The Human Capital theory has been reviewed by many scholars. Becker (1964) maintained that human capital is the skills of workers and these directly enhance job performance. Gardner (1983) in the Multiple Intelligence theory argued however, that human capital is multi-dimensional and an individual may not possess it all, he asserts that mental abilities are for example different from physical abilities and one may not have both. Schultz (1961), Nelson and Phelps (1966) in their own submission argued that

human capital is the ability to adapt to changing environment. A consideration of Schultz (1961) and Nelson and Phelps (1966) portrayed library personnel as developing their capacities by re-orientation and critically analysing the present ICT dominated work environment of the library. They also establish teamwork and network with other libraries as well as develop their ICT skills for modern service delivery. The Technology Acceptance Model (TAM) 2, the Capability Approach Theory and the Human Capital Theory are adapted and operationalised in this study to identify the relationships among capacity building, ICT skills and use which are the determinants of service delivery of library personnel.

2.11 Conceptual Model

Jarvelin and Wilson (2003) proposed that a conceptual model gives a working strategy, a structure which contains general, principal concepts and their relationships. This study is based on the Technology Acceptance Model (TAM) 2, the Human Capital Theory and the Capability Approach. The model proposed links the interactions between the independent and dependent variables of the study. Capacity building and ICT skills and use are the independent variables while library service delivery of library personnel in universities in southwestern Nigeria is the dependent variable. The conceptual model proposes relationships and interactions between some variables and delivery of service by library personnel in these universities in Nigeria. It suggests that ICT skills and use and capacity building in a viable environment are the key factors that determine library personnel's delivery of service in universities in southwestern Nigeria.

The core mission of library personnel is to support teaching, research and extension activities of their parent organisation by providing current and timely information. In addition to this, they also engage in teaching activities such as user education. Formerly, library tasks and service delivery was manual, ICT has however, influenced information service delivery and many library tasks and services are now electronic. The services delivered by library personnel include provision of Online Public Access Catalogue (OPAC) whereby users can access the bibliographic description and location of library materials online; user education, provision of web services, selective dissemination of information to users, current awareness services and referral services. These services can only be delivered effectively in this digital era if library personnel

build their capacities, thus a direct link/ relationship capacity building and services delivery.

In the course of delivering these library services in this technological dispensation, the use of ICTs for enhancement is inevitable. Types of ICTs used in libraries include computers, printers, scanners and multimedia. The frequency of use varies with individuals; the more library personnel use ICTs, the more his/her competency is enhanced and consequently better library service delivery. However, before ICTs can be used, the skills must be acquired. ICT skills acquired may include, computing skills, networking skills, programming skills, communication skills and digitisation skills. The ICT skills acquired have a direct relationship with library service delivery because the use of skills enhances creativity and innovation for diverse service delivery in this age. The ICT skills used for library service delivery are diverse and depend on the service to be delivered.

ICT skills when acquired need to be used to deliver effective services. Thus, ICT skills and use have a direct relationship: it is only after ICT skills are acquired that it can be used. ICT use has a direct relationship with service delivery because it is the use of these skills that enhances services delivery. However, inhibitors to ICT skills and use in libraries are diverse, amongst which are, inadequate infrastructure, power outage, lack of fund and more importantly, lack of skilled staff.

Capability of Library personnel is crucial to effective library service delivery because it is when staff are capable that effective use of library infrastructure is possible. This implies that there is need to constantly build the capacities of staff commensurate to the continuous changing technologies which they will have to make use of in this dispensation. In effect, ICT skills are one of the essential skills library personnel must possess in this digital age. There are various methods of building capacity, some of which are attending training programmes, continuous education, application of knowledge gained, acquisition of skills and developing personal skills. In summary, the provision of effective library services is dependent on the capacities of library personnel cum their ICT skills and use in an enabling environment. Awareness of deficiencies in one's capacity would lead library personnel to have a change of attitude in their outlook, have a sharpened vision as they prepare to develop themselves and with formal education and/or

training, they are able to build their capabilities to deliver value-added library services in this dispensation of ICT.

When the capacities of library personnel are built to perceive the need to rise and meet the present professional challenges caused by globalisation and technological advancement, it directly has an impact on their use of ICTs by making them see its perceived usefulness on delivery of library services. This will make a library personnel to develop ICT skills to use a technology which will invariably lead to its use for library operation as determined by its perceived ease of use, and consequently with an enabling environment amongst others, will have direct impact (improvement) on the delivery of service by library personnel.

The conceptual model of this study is therefore hinged on the following premises:

- a) The aspect of TAM 2 used in the study is perceived usefulness (PU). This means that library personnel would make use of a technology if it would enhance their service delivery in this technological dispensation.
- b) The aspect of Human Capital Theory which states that skills, knowledge and other characteristics of personnel enhance productivity of specific human capabilities.
- c) The aspect of capability approach theory used proposes that the marketable skills of library personnel (workers) is a type of capital which they would choose to invest into. These means library personnel would choose to build their capacity commensurate to requirement needed for them to deliver library services in this digital era. The model presented in Fig. 2.3, adapted from the TAM 2 model, the Human Capital Theory and the Capability Approach Theory would guide this study. Selected constructs in these theories are used so as to enunciate the independent and joint relationship among capacity building, ICT skills and use on service delivery of library personnel in universities in southwestern Nigeria.

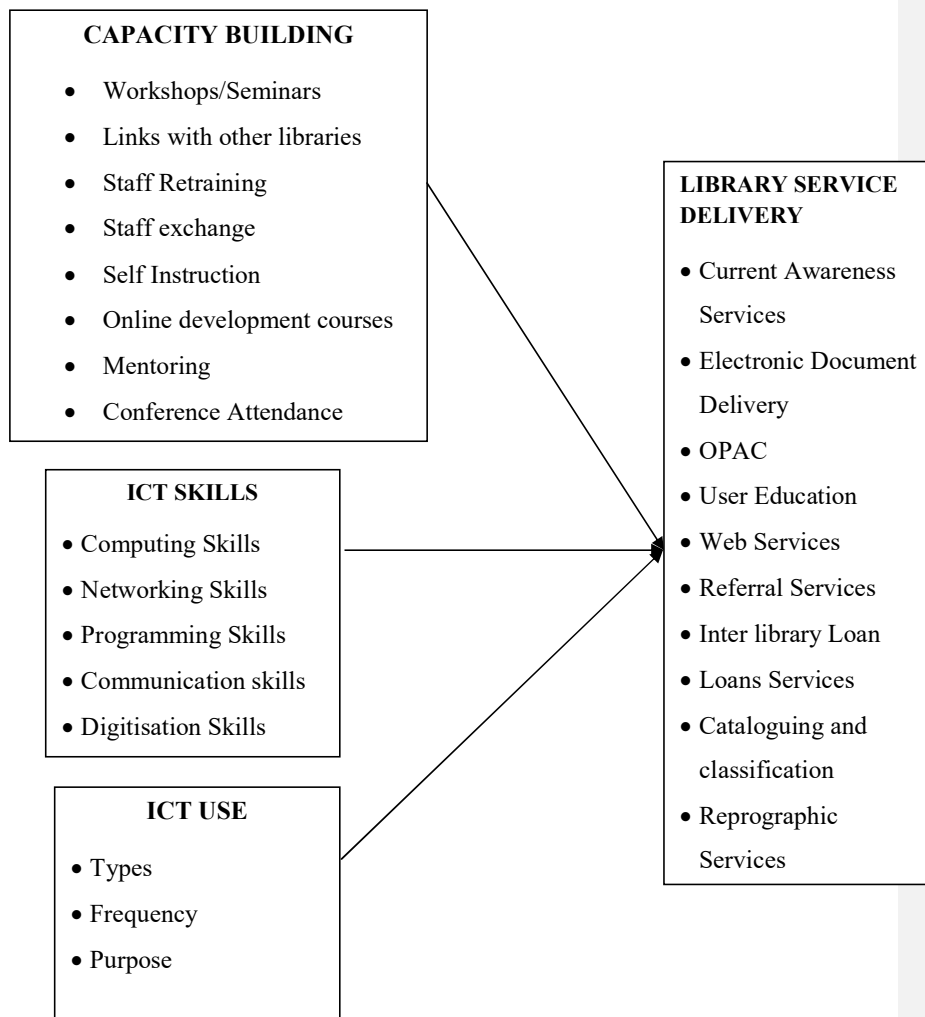


Fig 2.3: Conceptual model

Source: Self constructed by the researcher

2.12 Appraisal of the literature reviewed

The review of literature showed that capacity building and ICT skills and use are core to effective service delivery by library personnel generally and especially in universities in southwestern Nigeria. It is often said that the problem of developing countries is not based on lack of resources but on the incapacities of the human resources that will navigate what is available, provide improved services and better life or satisfaction for the people. ICT has permeated and transformed almost every aspect of life, education inclusive and so also librarianship. Consequently, traditional services of libraries are gradually being overtaken by technological advancement. Studies revealed also, that developing countries and library personnel who are supposed to be custodians of knowledge are not adequately skilled in ICT use.

Globally, empirical studies showed that ICT has redefined librarianship and created new roles for library personnel. Studies further revealed that library personnel in universities in southwestern Nigeria were deficient in capacities, ICT skills and use as technological advancement is continuous while capacities are not built accordingly. Furthermore, emphasis was laid on the fact that the relevance of library personnel in this competitive ICT world depends on their ability to continually build confidence of their capacities in users despite hindrances encountered. Related theoretical models reviewed were the Technology Adoption Model 2 (TAM 2) by Davis (1986), Capability Approach Theory by Sen (1999) and the Human Capital Theory by Schultz (1961).

Literature search showed that library service delivery has been greatly influenced by technological advancement. Indeed, studies showed that the capacities, ICT skills and uses by library personnel influence their service delivery in this Digital age. It was revealed however, that most of these studies did not focus on libraries in universities in southwestern Nigeria. Consequently, a comprehensive evaluation and in-depth understanding of current capability situation may not be feasible. It was therefore, necessary to investigate the capacities of these library personnel. It was also necessary to find out why library personnel in universities in southwestern Nigeria seem not to deliver effective services. Moreover, few empirical surveys have determined the capacities and skills needed by library personnel for service delivery in universities in southwestern Nigeria. It was imperative to investigate this. In addition, studies have not directly related

the influence of capacity building, ICT skills and use on service delivery by library personnel in the universities in southwestern Nigeria. Hence, it was needful to find out the factors that influence capacity building, ICT skills and use of library personnel in their delivery of service as well as identify the inhibitors to library service delivery in universities in southwestern Nigeria. There is also paucity of literature on service delivery by library personnel in universities in southwestern Nigeria. These are the gaps filled by this study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the method and procedure that was adopted for this study under the following sub-headings: research design, population of the study, sampling technique and sampling size, data collection instrument, validity and reliability of the instrument, data collection procedure and method of data analysis.

3.2 Research design

The research design adopted for this study was the *ex-post-facto* type of descriptive research in which researcher has no control over the variable of interest and therefore, cannot manipulate them (Nworgu 2006). This research design was considered adequate for the study because the purpose of the study was to identify and understand the relationship that exists between the independent and dependent variables of the study. The independent variables of this study are: capacity building, Information and Communication Technology skills and use, while the dependent variable is library service delivery. Previous similar study is Quadri, Quadri and Oluwasina (2018), in which the *ex-post facto* descriptive research was used in the survey of the use of ICT for service delivery by library personnel in higher institutions in Nigeria. The study found that employment of ICT is necessary for effective service delivery in the Digital Age.

3.3 Population of the study

All the library personnel (603) in the universities in southwestern Nigeria participated in the study. Presently, there are seven (7) federal, nine (9) state and thirty (30) private owned universities in southwestern Nigeria. The total number of library personnel in federal universities is two hundred and thirteen (213): one hundred and twenty one (121) librarians and ninety two (92) paraprofessionals. State owned universities have a total number of one hundred and forty nine (149) library personnel:

ninety four (94) librarians and fifty five (55) paraprofessionals, while private universities have two hundred and forty one (241) library personnel: one hundred and fifty six (156) librarians and eighty five (85) paraprofessionals. Thus, the total number of library personnel in universities in southwestern Nigeria is six hundred and three (603): three hundred and seventy one (371) librarians and two hundred and thirty two (232) paraprofessionals,(Table 3.1).

Table 3.1: Library personnel in universities in southwestern Nigeria

S/N	University	No. of Librarians	No. of Para-professionals	Total
	Federal			
1.	Federal University of Agriculture, Abeokuta, Ogun	25	13	38
2.	Federal University, Oye, Ekiti	4	8	12
3.	Federal University of Technology, Akure. Ondo	10	14	24
4.	National Open University of Nigeria, South-west	12	3	15
5.	Obafemi Awolowo University, Ile-Ife. Osun	14	8	22
6.	University of Ibadan, Oyo	32	30	62
7.	University of Lagos, Akoka. Lagos.	24	16	40
Total		121	92	213
	State			
8.	Adekunle Ajasin University, Akungba-Akoko. Ondo	5	9	14
9.	Ekiti State University, Ado Ekiti	18	10	28
10.	Ladoke Akintola University of Technology, Ogbomosho, Oyo	17	7	24
11.	Lagos State University, Lagos	17	14	31
12.	Olabisi Onabanjo University. Ago-Iwoye, Ogun.	12	8	20
13.	Ondo State University of Medical Sciences, Ondo	5	2	7
14.	Ondo State University of Technology	2	0	2
15.	Osun State University, Osogbo, Osun	10	5	15
16.	Tai Solarin University of Education, Ijagun, Ogun	8	0	8
Total		94	55	149
	Private			
17.	Achievers University, Owo, Ondo	3	2	5
18.	Adeleke University, Ede, Osun	7	5	12
19.	Afe Babalola University, Ado-Ekiti, Ekiti	12	3	15
20.	Ajayi Crowther University, Oyo	7	5	12
21.	Anchor University, Ayobo, Lagos	3	1	4
22.	Augustine University, Epe, Lagos	3	1	4
23.	Babcock University, Ilishan, Ogun	12	10	22
24.	Bells University of Technology, Ota, Ogun	9	1	10
25.	Bowen University, Iwo, Osun	8	11	19
26.	CALEB University, Ayobo, Lagos	3	4	7
27.	Chrisland University, Abeokuta, Ogun	2	0	2
28.	Christopher University, Mowe, Ogun	1	1	2
29.	Covenant University, Ota, Ogun	16	4	20

Table 3.1: Library personnel in universities in southwestern Nigeria (Cont'd)

S/N	University	No. of Librarians	No. of Para-professionals	Total
30.	Crawford University, Igbesa, Ogun	2	3	5
31.	Crescent University, Abeokuta, Ogun	4	6	10
32.	Dominican University, Ibadan, Oyo	1	1	2
33.	Elizade University, Ilara-Mokin, Ondo	5	1	6
34.	Fountain University, Osogbo, Osun	6	7	13
35.	Hallmark University, Itele-Ijebu, Ogun	2	0	2
36.	Joseph Ayo Babalola University, Ikeji-Arakeji, Osun	12	3	15
37.	Kings University, Odeomu, Osun	2	1	3
38.	Kola Daisi University, Ibadan, Oyo	1	0	1
39.	Lead City University, Ibadan, Oyo	13	0	13
40.	McPherson University, Ajebo, Ogun	2	1	3
41.	Mountain Top University, Makogi Oba, Ogun	3	2	5
42.	Oduduwa University, Ipetumodu, Osun	6	3	9
43.	Pan Atlantic University, Lagos	2	2	4
44.	Redeemer's University, Ede, Osun	6	4	10
45.	Southwestern University, Okun-Owa, Ogun	1	0	1
46.	Wesley University, Ondo, Ondo	2	3	5
Total		156	85	241
Grand Total		371	232	603

Source: NUC (2016)

3.4 Sampling technique and sample size

All the library personnel in the universities in southwestern Nigeria participated in the study except CETEP University which was closed. Total enumeration technique was used in the study. Thus, all the six hundred and three (603) library personnel in the universities in southwestern Nigeria constituted the sample of this study (Table 3.1).

3.5 Data collection instruments

Two research instruments were used to gather information. They were: the questionnaire and in-depth interview. The use of questionnaire ensures that answers are given in relevance to the purpose of the enquiry and it is best administered to a large sample. An in-depth interview supports the questionnaire because information which the interviewee may not want to put in writing may be obtained. The questionnaire used for collecting the data for this study was tagged "Library Personnel Service Delivery Questionnaire (LPSDQ) and was administered to library personnel in universities in southwestern Nigeria. It is standardised and adapted from some scholars, namely Mathew (2011) of the Faculty of Technology, University of Science and Technology in Cochin and Oyedipe (2017) of the Department of Library, Archival and Information Studies, Faculty of Education, University of Ibadan. The questionnaire was designed under five (5) different sections with four scales and harmonised in a single questionnaire.

Section A sought the demographic information on specific university, department, position, gender, marital status, educational qualification, subject background and length of service among others. Section B elicited information on capacity building programmes, using a standardised capacity scale adapted from Mathew (2011) of the Faculty of Technology, University of Science and Technology in Cochin, who sought the impact of ICT use on professional development of library professionals in universities in Kerala. Seventy-three (73) items were presented; the first twelve (12) questions were presented with a four (4) point Likert scale of Strongly Agree (S =4), Agree (A =3), Strongly Disagree (SD =2) and Disagree (D =1). Thereafter, seven (7) items were raised on specific capacity building programmes attended and these were presented on a four Likert scale of Institution Sponsored (IS =4), Scholarship (S =3), Self-Sponsorship (SS =2) and Others (OT =1). Forty nine (49) out of the remaining fifty four (54) questions were

presented on a four (4) Likert scale of Strongly Agree (SA =4), Agree (A =3), Strongly Disagree (SD =2) and Disagree (D =1). The last five (5) questions were raised on methods of training.

Section C elicited information on ICT skills using standardised scale adapted from Mathew (2011) and Oyedipe (2017). The questionnaire contained twenty four (24) items. Eighteen (18) of these determined the ICT skills of library personnel for service delivery in libraries. A four point Likert scale of High (H=4), Moderate (M =3) and Very Low (VL =2) and Low (L =1) were used. Six (6) Items were also raised on the method by which the skills were acquired. A four (4) point Likert scale of Strongly Agree (SA =4), Agree (A =3), Strongly Disagree (SD =2) and Disagree (D =1) was used.

Section D elicited information on ICTs used for service delivery using a standardised scale adapted from Mathew (2011). It contained forty six (46) items, sixteen (19) of which determined the ICTs used for service delivery in libraries. A four point Likert scale of Very Highly Utilised (VHU =4), Highly Utilised (HU =3), Occasionally Utilised (OU =2) and Not Utilised (NU =1) was also used. Nineteen (19) items sought to find out the frequency of ICT use. A four (4) point Likert scale of Daily (3), Weekly (2), Monthly (4) and Never (1) was used. The remaining eight (8) items sought to find out the purpose of ICT use. A four (4) point Likert scale of Strongly Agree (SA =4), Agree (A =3), Strongly Disagree (SD =2) and Disagree (D =1) was used.

Section E contained thirty one (31) items on library services delivered in the library. Eighteen items sought to find out the types of library services delivered. The four point Likert scale of Very Highly Delivered (VHD=4), Highly Delivered (HD=3), Rarely Delivered (=2) and Not Delivered (ND=1) were used. The remaining thirteen items were raised on challenges of library service delivery. A four (4) point Likert scale of Strongly Agree (SA =4), Agree (A =3), Strongly Disagree (SD =2) and Disagree (D =1) was used. The response format ranged from strongly agree =4 to strongly disagree =1.

An in-depth interview schedule was also drawn and administered to the University librarians of the universities to complement the data from the library personnel. The interview schedule comprised questions on all the variables in the study: capacity building, ICT skills and use and library services delivery. The interview schedule contained items on availability of ICT infrastructure in libraries, factors affecting ICT use

in libraries, staff training programmes in libraries, types of library services delivered and challenges faced in service delivery.

3.6 Validity and reliability of instruments

The face validity of the instruments was ascertained by giving the questionnaire to the researcher's supervisor, a lecturer who specialises in research methodology in the Department of Library, Archival and Information Studies, Faculty of Education, University of Ibadan as well as two lecturers in the Centre for Educational Media Resource Studies, University of Ibadan. The instruments were also assessed for content validity as all the items were derived from the literature on the constructs. A pre-test was carried out by administering thirty copies of the questionnaire on library personnel in University of Ilorin, Kwara State, while the interview schedule was used as a guide for the University Librarians' interview. This was to ascertain the reliability of the items of the measuring instrument. These set of library personnel were not included in the sample. The reliability of the instruments was calculated using Cronbach alpha to determine the internal consistency of the measuring items. The Cronbach Alpha Coefficient for: Capacity building programmes $r = 0.90$; Information and Communication Technology (ICT) Skills $r = 0.96$; Use of ICT $r = 0.96$; Library Service delivery $r = 0.96$; All the variables $r = 0.97$. This result shows that the instrument can adequately elicit the required data for the research.

3.7 Data collection procedure

Contact was made with University Librarians and library personnel of the universities surveyed so as to administer in the event of mailing via the conventional postal system and electronic mail. A letter to the respondents, introducing the survey and the researcher, stating the reasons and requesting the help of the library personnel in promptly filling and returning the questionnaire along with the promise of anonymity of the respondents and confidentiality of the results, was the content of questionnaire cover page. The questionnaire for the study was administered to the participants in the universities personally by the researcher with the aid of a trained research assistant and colleagues to avoid discrepancies. The training lasted one day. Interview was

conducted by the researcher for University Librarians, the Interview Guide was used via face-to-face and telephone interviews which were recorded and transcribed.

3.8 Method of data analysis

Data collected was coded and analysed using Statistical Package for Social Sciences (SPSS). Descriptive statistics which include frequency counts, percentages were used to analyse the demographic information of respondents. Research questions one to five (1-5) were analysed using descriptive statistics such as frequency counts, percentage mean and standard deviation. Inferential statistics like Pearson Product Moment Correlation was also used to test the first three null hypotheses of the study at 0.05 level of significance, namely: the relationship between capacity building and library service delivery; the relationship between ICT skills and library service delivery and the relationship between ICT use and library service delivery. Multiple Regression Analysis was used to test the fourth null hypothesis at 0.05 level of significance. This measured the relationship between capacity building, ICT skills and use and service delivery. All statistical significance tests were made at alpha 0.05 and the units of analysis were individual. The data collected from the interview was transcribed and analysed thematically.

3.9 Ethical considerations for the study

I affirm that this dissertation was written by me and all materials consulted in the course of the work have been accurately referenced. In the light of the foregoing, the ethical considerations which guided the study are listed below.

(a) Plagiarism: The originality of the work was ascertained via the use of Turnitin software which recorded a 21% degree of plagiarism, the report of which is included in the Appendices. Furthermore, the University of Ibadan manual of style was duly employed to reference all the resources used in the work.

(b) Confidentiality: Respondents (librarians and paraprofessionals) were duly informed in the instrument used that all information supplied by them would be treated confidentially and used for research purpose only. To this extent, the names of

participants were not requested and their private information was treated as confidential. Furthermore, at the completion of the study, all information received from participants will be burnt to forestall future outflow of sensitive information.

(c) **Informed consent:** Respondents were fully educated on the aims of the study and consented without any form of coercion but with the understanding that their participation was voluntary and could be withdrawn as deemed fit.

(d) **Falsification and Fabrication of data:** Findings derived from the work were judiciously reported while misrepresentations on data collected were avoided.

(e) **Risk concern:** The thrust of this study is on service delivery of library personnel (librarians and paraprofessional) in southwestern Nigerian universities, university librarians were also interviewed. All the participants were contacted and worked with the researcher. Furthermore, delicate information or religious biases were avoided by the researcher. It is envisaged that the study is risk free and the advantages are much more than the risks.

(f) **Beneficence:** The study was appreciated by the participants because they claimed that the issues addressed in the questionnaire and the interview actually addressed their situations. Moreover, it helped them to evaluate themselves and plan for individual and institutional enhancement. It is anticipated that this study will increase the literature base of researchers globally as well as generate enhanced service delivery in university libraries, while the improvement in conducting research will have a resounding effect on societal development.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents 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 and hypotheses using questionnaire and in-depth interview schedule as instruments.

4.2 Questionnaire administration and response rate

4.3 Demographic information of the respondents

4.4 Answers to the research questions

4.5 Testing of hypotheses

4.6 Results of the interview

4.7 Discussion of the findings

4.2 Questionnaire administration and response rate

The sample size for the study consisted of six hundred and three (603) library personnel comprising 371 librarians and 232 para-professionals in universities in southwestern Nigeria. Out of 603 copies of the questionnaire administered, 476 copies were returned and valid for analysis as shown in Tables 4.1a and 4.1b. This represents a response rate of 78.9%. This response rate is much higher than Ilo, Izuagbe, and Iroaganachi (2020) who recorded 77.7% response rate of library personnel, from a study of the use of social media for service delivery in universities. Thus, this response rate can be used for this study.

Table 4.1a: Summary of questionnaire administration and return rate in all the universities

Total	No. of copies of questionnaire administered			No. of copies of questionnaire returned			Response rate (%)
	Librarians	Para-professionals	Total	Librarians	Para-professionals	Total	
	371	232	603	311	165	476	78.9

Table 4.1b Questionnaire administration and return rate in individual university

S/N	University	No. of copies administered			No. of copies returned			Response rate (%)
		Librarians	Library officers	Total	Librarians	Library officers	Total	
1.	FUNAAB	25	13	38	20	13	33	86.8
2.	FUOYE	4	8	12	4	5	9	75.0
3.	FUTA	10	14	24	10	8	18	75.0
4.	NOUN (SOUTH-WEST CAMPUSES)	12	3	15	7	0	7	46.7
5.	OAU	14	8	22	12	6	18	81.8
6.	UI	32	30	62	29	14	43	69.4
7.	UNILAG	24	16	40	19	16	35	87.5
	Sub-Total	121	92	213	101	62	163	76.5
8.	AAU	5	9	14	5	9	14	100.0
9.	EKSU	18	10	28	16	8	24	85.7
10.	LAUTECH	17	7	24	13	6	19	79.2
11.	LASU	17	14	31	13	13	26	83.9
12.	OOU	12	8	20	10	4	14	70.0
13.	OSUTECH	2	0	2	2	0	2	100.0
14.	UNIMED	5	2	7	5	2	7	100.0
15.	UNIOSUN	10	5	15	8	3	11	73.3
16.	TASUED	8	0	8	7	0	7	87.5
	Sub Total	94	55	149	79	45	124	83.2
17.	Achievers	3	2	5	3	2	5	100.0
18.	Adeleke	7	5	12	6	5	11	91.7
19.	Afe Babalola	12	3	15	11	3	14	93.3
20.	Ajayi Crowther	7	5	12	5	4	9	75.0
21.	Anchor	3	1	4	2	1	3	75.0
22.	Augustine	3	1	4	2	0	2	50.0
23.	Babcock	12	10	22	12	10	22	100.0
24.	Bells	9	1	10	7	1	8	80.0
25.	Bowen	8	11	19	5	5	10	52.6
26.	CALEB	3	4	7	3	1	4	57.1
27.	Chrisland	2	0	2	2	0	2	100.0
28.	Christopher	1	1	2	0	1	1	50.0
29.	Covenant	16	4	20	14	5	19	95.0
30.	Crawford	2	3	5	2	3	5	100.0
31.	Crescent	4	6	10	3	4	7	70.0
32.	Dominican	1	1	2	1	1	2	100.0
S/N	University	No. of copies administered			No. of copies returned			Response rate (%)
		Librarians	Library officers	Total	Librarians	Library officers	Total	
33.	Elizade	5	1	6	4	0	4	66.7

Table 4.1b Questionnaire administration and return rate in individual university (cont'd)

34.	Fountain	6	7	13	5	0	5	38.5
35.	Hallmark	2	0	2	2	0	2	100.0
36.	Joseph Ayo Babalola	12	3	15	6	3	9	60.0
37.	Kings	2	1	3	1	1	2	66.7
38.	Kola Daisi	1	-	1	1	-	1	100.0
39.	Lead City	13	0	13	13	0	13	100.0
40.	McPherson	2	1	3	2	0	2	66.7
41.	Mountain Top	3	2	5	3	0	3	60.0
42.	Oduduwa	6	3	9	5	0	5	55.6
43.	Pan Atlantic	2	2	4	2	1	3	75.0
44.	Redeemer's	6	4	10	6	4	10	100.0
45.	South-western	1	0	1	1	0	1	100.0
46.	Wesley	2	3	5	2	3	5	100.0
	Sub-Total	156	85	241	131	58	189	78.4
	Total	371	232	603	311	165	476	78.9

KEY: AAU- Adekunle Ajasin University; EKSU- Ekiti State University; LAUTECH- Ladoke Akintola University of Technology; LASU- Lagos State University; OOU- Ogun State University; OSUTECH- Ondo State University of Technology (now Olusegun Agagu University of Technology); UNIMED- Ondo State University of Medical Sciences; UNIOSUN- Osun State University and TASUED- Tai Solarin University of Education.

KEY: FUNAAB- Federal University of Agriculture, Abeokuta; FUOYE- Federal University, Oye; FUTA- Federal University of Technology, Akure; NOUN (SOUTH-WEST)- National University of Nigeria, (South-west Campuses); OAU- Obafemi Awolowo University, Ife; UI- University of Ibadan and UNILAG- University of Lagos.

4.3 Demographic information of respondents

Demographic characteristics such as job status, position/rank, age range, gender, marital status, educational qualifications and years of experience of the respondents were analysed using descriptive statistics of frequency counts and percentages and the result is presented in Table 4.2.

Table 4.2: Demographic information of respondents

Demographic Characteristics	Categories	Frequencies	Percentages
Job status	Professional	311	65.3
	Para-professional	165	34.7
Position/ Rank	Assistant Librarian	53	11.1
	Librarian II	49	10.3
	Librarian I	66	13.9
	Senior Librarian	43	9.0
	Principal Librarian	26	5.5
	Deputy/University Librarian	41	8.6
	Library Officer	71	14.9
	Higher/Senior Library Officer	69	14.5
	Principal Library Officer	39	8.2
	Chief Library Officer	19	4.0
Age range	21 – 26	35	7.4
	27 – 32	68	14.3
	33 – 38	100	21.0
	39 – 44	125	26.3
	45 – 50	85	17.9
	50 years and above	63	13.2
Gender	Male	218	45.8
	Female	258	54.2
Marital status	Single	79	16.6
	Married	393	82.6
	Divorced	1	0.2
	Widowed	3	0.6
Highest Academic Qualification	ND	42	8.8
	HND	62	13.0
	B.A	7	1.5
	B.Sc	38	8.0
	BLIS	69	14.5
	EDUTECH	3	0.6
	MLS/MLIS	167	35.1
	M. Inf. Sc.	33	6.9
	Ph.D	40	8.4
	Others	15	3.2
Subject background	Arts	44	9.2
	Sciences	59	12.4
	Librarianship	252	52.9
	Social Sciences	64	13.4
	Others	57	12.0
Length of service in a university library	1 – 5 years	143	30.0
	6 – 10 years	190	39.9
	11 – 15 years	77	16.2
	16 – 20 years	38	8.0
	21 – 25 years	13	2.7
	26 – 30 years	15	3.2

The data obtained as presented in Table 4.2 shows that the highest number of respondents were found in the librarian cadre, 311 (65.3%) while 165 constituting (34.7%) were para-professionals. This implied that although there were more librarians than library officers in the population, all cadres were adequately represented. In terms of position/rank, among the librarians, 66(13.9%) which constituted the majority were Librarian I, while the least number, 26(5.5%), were those in the rank of principal librarian. In the paraprofessional cadre, 71(14.9%) of the respondents were library officers while 19(4%) claimed to be in the rank of Chief Library Officer. Also, data revealed that the highest number of respondents were found in the age bracket of 39-44 years with population of 125 (26.3%), followed by 33-38 age bracket with population of 100 (21.0%) and only 35 (7.4%) respondents were found in the age range of 21 – 26 years. This indicates that most of them were still in their active years. Results on gender revealed that majority of the respondents were female 258 (54.2%). This result implies that although there were more female respondents than their male counterparts, there is a relatively balanced gender distribution as the difference in gender was marginal. Further, the result on marital status revealed that 393(82.6%) of the respondents were married while 1(0.2%) was divorced.

On highest educational qualification of the respondents, results showed that 167 (35.1%) which constituted the majority had a master's degree in library science or its equivalent (MLS/MLIS) while the least number of respondents 3(0.6%) had a degree in educational technology. These findings indicate that university libraries in southwestern Nigeria were full of eminently qualified personnel to carry out library and information services delivery expected of them. In terms of length of service in a university library, the result revealed that the majority of the library personnel 190(39.9%) had between 6-10 years of experience. Furthermore, 143 (30%) had between 1-5 years of experience and the least number of respondents (13; 2.7%) had between 21-25 years of work experience. This is an indication that most of the library personnel in the study were quite experienced.

4.4 Answers to research questions

4.4.1 Research question one: What are the types of library services delivered by library personnel in universities in southwestern Nigeria?

Results of responses relating to the types of services delivered in university libraries in southwestern Nigeria are presented in Table 4.3.

Table 4.3: Types of library services delivered by the library personnel in the universities

Types of services	Responses (n=476)								\bar{X}	SD
	VHD		HD		RD		ND			
	N	%	N	%	N	%	N	%		
Internet services	266	55.9	194	40.8	10	2.1	6	1.3	3.51	0.61
Information provision on Library website	178	37.4	279	58.6	4	0.8	15	3.2	3.30	0.65
User education	200	42	206	43.3	53	11.1	17	3.6	3.24	0.79
Assisting users to locate information on materials not held locally	218	45.8	169	35.5	54	11.3	35	7.4	3.20	0.91
Providing bibliographies of library holdings to users	217	45.6	173	36.3	43	9	43	9	3.18	0.93
Providing a platform for research and communication through serials' services	223	46.8	169	35.5	30	6.3	54	11.3	3.18	0.98
Circulation of new arrivals list	185	38.9	193	40.5	83	17.4	15	3.2	3.15	0.82
Current awareness services	174	36.6	202	42.4	87	18.3	12	2.7	3.13	0.79
SDI services	142	29.8	234	49.2	88	18.5	12	2.5	3.06	0.76
Electronic document delivery	172	36.1	166	34.9	122	25.6	16	3.4	3.04	0.87
Multimedia service	157	33	201	42.2	69	14.5	49	10.3	2.98	0.94
Online reference services	101	21.2	273	57.4	78	16.4	24	5	2.95	0.76
Web/OPAC	132	27.7	195	41	139	29.2	10	2.1	2.94	0.81
Indexing and abstracting	81	17	273	57.4	107	22.5	15	3.2	2.88	0.71
CD/DVD based service	96	20.2	260	54.6	83	17.4	37	7.8	2.87	0.82
Referral services	142	29.8	180	37.8	96	20.2	58	12.2	2.85	0.98
Consortia collaboration	109	22.9	185	38.9	166	34.9	16	3.4	2.81	0.82

Table 4.3:Types of library services delivered by the library personnel in the universities (cont'd)

Types of services	Responses (n=476)								\bar{X}	SD
	VHD		HD		RD		ND			
	N	%	N	%	N	%	N	%		
Digitisation of local resources	122	25.6	177	37.2	142	29.8	35	7.4	2.81	0.90
Reprographic services	116	24.4	230	48.3	52	10.9	78	16.4	2.81	0.99
Translation services	58	12.2	284	59.7	69	14.5	65	13.7	2.70	0.85
Inter library loan	81	17	173	36.3	131	27.5	91	19.1	2.51	0.99
Loans services	83	17.4	139	29.2	167	35.1	87	18.3	2.46	0.98

Key: VHD= Very Highly Delivered, HD= Highly Delivered, RD = 5RTRarely Delivered, ND= Not Delivered

The result as shown in Table 4.3 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 universities were internet services (\bar{X} =3.51, STD=0.61), information provision on library website (\bar{X} =3.30, STD=0.65), user education (\bar{X} =3.24, STD=0.79), assisting users to locate information on materials not held locally (\bar{X} =3.20, STD=0.91), providing bibliographies of library holdings to users (\bar{X} =3.18, STD=0.93), providing a platform for research and communication through serials' services (\bar{X} =3.18, STD=0.98) and circulation of new arrivals list (\bar{X} =3.15, STD=0.82). On the other hand, the seven least lowly rated library services delivered by the library personnel were loans (\bar{X} =2.46, STD=0.98), inter library loans (\bar{X} =2.51, STD=0.99), translation services (\bar{X} =2.70, STD=0.85), reprographic services (\bar{X} =2.81, STD=0.99), digitisation of local resources (\bar{X} =2.81, STD=0.90) and consortia collaboration (\bar{X} =2.81, STD=0.82). digitisation of local resources (\bar{X} =2.81, STD=0.90), referral services (\bar{X} =2.85, STD=0.98), web/OPAC (\bar{X} =2.94, STD=0.81) and electronic document delivery (\bar{X} =3.04, STD=0.87). 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.

4.4.2 Research question 2: What are the capacity building programmes available for and participated in by library personnel in universities in southwestern Nigeria?

Results of responses relating to capacity building programmes are presented in Tables 4.4a and 4.4b.

Table 4.4a: Capacity building programmes available in the universities

S/N	Which capacity building programmes are available in your library?	SA		A		D		SD		\bar{X}	SD
a.	Teleconferencing	76	16.0	243	51.1	139	29.2	18	3.8	2.79	0.75
b.	Sabbatical appointment	107	22.5	181	38.0	128	26.9	60	12.6	2.70	0.96
c.	Mentoring	100	21.0	158	33.2	187	39.3	31	6.5	2.69	0.88
d.	Staff exchange	94	19.7	181	38.0	121	25.4	80	16.8	2.61	0.99
e.	Links with other libraries	76	16.0	118	24.8	223	46.8	59	12.4	2.44	0.90
f.	Conference attendance	36	7.6	163	34.2	229	48.1	48	10.1	2.39	0.77
g.	Staff retraining	49	10.3	114	23.9	270	56.7	43	9.0	2.36	0.79
h.	On-line development courses	45	9.5	146	30.7	207	43.5	78	16.4	2.33	0.86
i.	In-house retreat	44	9.2	101	21.2	245	51.5	86	18.1	2.22	0.85
j.	Self -instruction manuals	13	2.7	112	23.5	301	63.2	50	10.5	2.18	0.65
k.	Regular certificated education programmes (for example, degrees)	44	9.2	33	6.9	345	72.5	54	11.3	2.14	0.73
l.	Workshop/Seminars	45	9.5	110	23.1	170	35.7	151	31.7	2.10	0.96

An observation of Table 4.4a reveals the capacity building programmes available for library personnel in universities in southwestern Nigeria. The table shows that the five prevalent programmes available are teleconferencing ($\bar{X}=2.79$, $STD=0.75$), sabbatical appointments ($\bar{X}=2.70$, $STD=0.96$), mentoring ($\bar{X}=2.69$, $STD=0.88$), staff exchange ($\bar{X}=2.61$, $STD=0.99$) and links with other libraries ($\bar{X}=2.44$, $STD=0.90$). The least rated available programmes are, workshop/seminars ($\bar{X}=2.10$, $STD=0.96$), regular certificated education programmes ($\bar{X}=2.14$, $STD=0.73$), self -instruction manuals ($\bar{X}=2.18$, $STD=0.65$) and in-house retreat ($\bar{X}=2.22$, $STD=0.85$). This result indicates a generally low availability of capacity building programmes for library personnel in universities in Southwestern Nigeria.

Table 4.4b: Capacity building programmes participated in by the library personnel

Capacity building program	SA		A		D		SD		\bar{X}	SD
	N	%	N	%	N	%	N	%		
Workshop/Seminars	110	23.1	245	51.5	93	19.5	28	5.9	2.92	0.81
Self-instruction Manuals	57	12	305	64.1	38	8	76	16	2.72	0.87
Regular certificated education programme (for example, degrees)	60	12.6	180	37.8	176	37	60	12.6	2.50	0.87
Staff retraining	4	0.8	268	56.8	114	24	84	17.6	2.38	0.78
On-line development courses	33	6.9	199	41.8	155	32.6	89	18.7	2.37	0.86
In-house retreat	16	3.4	245	51.5	98	20.6	117	24.6	2.34	0.88
Teleconferencing	11	2.3	246	51.7	110	23.1	109	22.9	2.33	0.85
Mentoring	34	7.1	163	34.2	160	33.6	119	25	2.24	0.91
Links with other libraries	8	1.7	196	41.2	162	34	110	23.1	2.21	0.81
Staff exchange	43	9	118	24.8	202	42.4	113	23.7	2.19	0.90
Conference attendance	2	0.4	188	39.5	179	37.6	107	22.5	2.18	0.78
Sabbatical appointment	6	1.3	114	23.9	241	50.6	115	24.2	2.02	0.73

Table 4.4b shows the capacity building programmes participated in by library personnel in universities in southwestern Nigeria. The table reveals that the five prevalent programmes participated in were workshop/seminars ($\bar{X}=2.92$, $STD=0.81$), self-instruction($\bar{X}=2.72$, $STD=0.8$),regular certificated education programme ($\bar{X}=2.50$, $STD=0.87$), staff retraining ($\bar{X}=2.38$, $STD=0.78$)and on-line development courses($\bar{X}=2.37$, $STD=0.86$).Conversely, the programmes least attended by the respondents were sabbatical appointment ($\bar{X}=2.02$, $STD=0.73$),conference attendance ($\bar{X}=2.18$, $STD=0.78$), staff exchange ($\bar{X}=2.19$, $STD=0.90$),links with other libraries ($\bar{X}=2.21$, $STD=0.81$). This implies that many of the library personnel did not take up sabbatical appointments to enable them imbibe values, attitudes and cultures, theywere not opportune to attend conferences where they could be informed about the best and current practices in the profession.

4.4.3 Research question three: What are the types, frequency and purpose of ICT facilities used for service delivery by library personnel in universities in southwestern Nigeria?

The library personnel were asked to indicate the types, frequency and purpose of ICT facilities they use for service delivery. Nineteen types of ICT facilities were presented to them and the findings are presented in Tables 4.5a to 4.5c.

Table 4.5a: Types of ICT facilities used by the library personnel

ICT facilities	Responses (n=476)								\bar{X}	SD
	VHU		HU		OU		NU			
	N	%	N	%	N	%	N	%		
Computers (Desktop pc laptop, notebooks, Tablets, ipad)	409	85.9	34	7.1	13	2.7	20	4.2	3.75	0.70
Photocopiers	356	74.8	76	16	38	8	6	1.3	3.64	0.68
Printers	310	65.1	72	15.1	77	16.2	17	3.6	3.42	0.88
Databases	266	55.9	126	26.5	79	16.6	5	1.1	3.37	0.79
Social networking (e.g. Facebook, Twitter, Weblogs),	314	66	62	13	44	9.2	56	11.8	3.33	1.05
Email/instant messaging/chat	217	45.6	162	34	44	9.2	53	11.1	3.14	0.99
OPAC	274	57.6	75	15.8	40	8.4	87	18.3	3.13	1.17
Discussion group (e.g Google/Yahoo! Groups)	244	51.3	80	16.8	98	20.6	54	11.3	3.08	1.08
Wikis (e.g. Wikipedia, LISWiki)	215	45.2	123	25.8	80	16.8	58	12.2	3.04	1.05
Scanners	221	46.4	98	20.6	105	22.1	52	10.9	3.03	1.06
Internet services	233	48.9	39	8.2	148	31.1	56	11.8	2.94	1.13
RSS feeds	142	29.8	197	41.4	83	17.4	54	11.3	2.90	0.96
Content management systems (e.g. Drupal, Joomla)	206	43.3	103	21.6	74	15.5	93	19.5	2.89	1.16
Multimedia Projectors	149	31.3	170	35.7	101	21.2	56	11.8	2.87	0.99
Audio/video sharing/webcasting (e.g. Flickr, Skype, YouTube)	176	37	132	27.7	92	19.3	76	16	2.86	1.09
Digital cameras	218	45.8	74	15.5	76	16	108	22.7	2.84	1.23
Social book marking/aggregating (e.g. Delicious, FriendFeed)	185	38.9	71	14.9	118	24.8	102	21.4	2.71	1.19
Blogging (e.g. weblogs)	141	29.6	109	22.9	148	31.1	78	16.4	2.66	1.07
Listservs (e.g. Lisforum, Nmlis)	144	30.3	98	20.6	15	3.15	84	1.6	2.07	1.13

Key: VHU= Very Highly Used, HU= Highly Used, OU= Occasionally Used, NU= Not Used.

An observation of Table 4.5a revealed that all the nineteen types of ICT facilities suggested were used in varied frequencies for service delivery by the library personnel in universities in southwestern Nigeria and the scores recorded were generally high. The seven major types of ICT facilities used as reflected were computers ($\bar{X}=3.75$, $STD=0.70$), photocopiers ($\bar{X}=3.64$, $STD=0.68$), printers ($\bar{X}=3.42$, $STD=0.88$), databases ($\bar{X}=3.37$, $STD=0.79$), social networking ($\bar{X}=3.33$, $STD=1.05$), email/instant messaging/chat ($\bar{X}=3.14$, $STD=0.99$), and OPAC ($\bar{X}=3.13$, $STD=1.17$). On the other hand, the five least utilised facilities were Listservs ($\bar{X}=2.07$, $STD=1.23$), blogging ($\bar{X}=2.66$, $STD=0.107$), social bookmarking/aggregating ($\bar{X}=2.71$, $STD=1.19$), digital cameras ($\bar{X}=2.84$, $STD=1.23$), and Audio/video sharing/webcasting ($\bar{X}=2.86$, $STD=1.09$), (e.g. Flickr, Skype, YouTube). This implies that these ICT facilities were not readily available to the library personnel and therefore, they were not favourably disposed to it and could not maximise the use of social media for service delivery.

Table 4.5b: Frequency of use of ICT facilities by the library personnel

ICT facilities used	Responses (n=476)								\bar{x}	STD
	Daily		Weekly		Monthly		Never			
	N	%	N	%	N	%	N	%		
Internet services	386	81.1	76	16	6	1.3	8	1.7	3.76	0.55
Computers (Desktop pc laptop, notebooks, Tablets, ipad)	381	80	43	9	47	9.9	5	1.1	3.68	0.69
Printers	343	72.1	118	24.8	6	1.31	9	1.9	3.67	0.60
Databases	310	65.1	107	22.5	47	9.9	12	2.5	3.50	0.77
Photocopiers	313	65.8	77	16.2	73	15.3	13	2.7	3.45	0.85
OPAC	316	66.4	74	15.5	39	8.2	47	9.9	3.38	0.99
Social networking (e.g. facebook, Twitter, Weblogs),	262	55	151	31.7	5	1.1	58	12.2	3.29	0.98
Audio/video sharing/webcasting (e.g. Flickr, Skype, YouTube)	306	64.3	46	9.7	40	8.4	84	17.6	3.21	1.18
Email/instant messaging/chat	235	49.4	135	28.4	15	3.2	91	19.1	3.08	1.13
Content management systems (e.g. Drupal, Joomla)	183	38.4	167	35.1	79	16.6	47	9.9	3.02	0.97
Wikis (e.g. Wikipedia, LISWiki)	193	40.5	176	37	15	3.2	92	19.3	2.99	1.10
Discussion groups (e.g. Google/Yahoo! Groups)	202	42.4	104	21.8	113	23.7	57	12	2.95	1.07
Social book marking/aggregating (e.g. Delicious, FriendFeed)	171	35.9	177	37.2	40	8.4	88	18.5	2.90	1.08
Blogging (e.g. weblogs)	184	38.7	107	22.5	131	27.5	54	11.3	2.88	1.05
Multimedia Projectors	205	43.1	83	17.4	105	22.1	83	17.4	2.86	1.15
RSS feeds	138	29	178	37.4	105	22.1	55	11.6	2.84	0.97
Scanners	107	22.5	172	36.1	151	31.7	46	9.7	2.71	0.92
Digital cameras	122	25.6	77	16.2	200	42	77	16.2	2.51	1.04
Listservs (e.g. Lisforum, Nmlis)	92	19.3	146	30.7	107	22.5	131	27.5	2.41	1.09
Weighted mean									3.11	0.96

Table 4.5b shows the result of the frequency of use of ICT facilities by the library personnel. Findings revealed that all the listed facilities have been used at varied frequencies for service delivery. Internet services were most frequently used for service delivery with the highest ranking (\bar{X} =3.76, STD=0.55). Majority of the respondents 386 (81.1%) use it daily, 76 (16.0%) weekly, and 8 (1.7%) had never used it. The use of computers ranked second (\bar{X} =3.68, STD=0.69). On a daily basis, 381(80%) of the respondents used computers for service delivery, 43 (9%) weekly while 5 (1.1%) had never used it. Printers was the third most frequently used ICT facility with a score of (\bar{X} =3.67, STD=0.70), 343 (72.1%) used it daily, 118 (24.8%) weekly and 9 (1.9%) had never used it. Databases was the fourth most frequently ICT facility (\bar{X} =3.50, STD=0.77); 310 (65.1%) used it daily, 107 (22.5%) weekly, 47 (9.9%) monthly while 12 (2.5%) had never used it. Photocopiers was the fifth most frequently used (\bar{X} =3.45, STD=0.85) as 313 (65.8%) used it daily, 77(16.2%) weekly, 73 (15.3%) monthly and 13 (2.7%) had never used it. On the other hand, the least frequently used ICT facility was Listserv (\bar{X} =2.41, STD=1.09); 92 (19.3%) used it daily, 146 (30.7%) weekly and 131 (27.5%) had never used it. Digital cameras were the second least used ICT facility according to the mean score (\bar{X} =2.51, STD=1.04); 122 (25.6%) daily used it, 77 (16.2%) weekly and 77 (16.2%) never used it. The use of scanners for service delivery was ranked the third least used ICT facility by the library personnel (\bar{X} =2.71, STD=0.92), 107 (22.5%) used it daily, 172 (36.1%) weekly and 46 (9.7%) had never used it. Blogging also recorded a low frequency of use as only 184 (38.7%) used it daily, 107 (22.5%) weekly while 54 (11.3%) had never used it. This implies that the social media which is interactive was not frequently employed for service delivery by the library personnel. The result of the purpose of use of ICT facilities by the library personnel is presented in Table 4.5c.

Table 4.5c: Purpose of use of ICT facilities by the library personnel in universities

I use ICT:	Responses (n = 476)								\bar{X}	SD
	SA		A		D		SD			
	N	%	N	%	N	%	N	%		
To reduce stress in service delivery	335	70.4	128	26.9	9	1.9	4	0.8	3.67	0.56
To enhance networking/collaboration with colleague	329	69.1	125	26.3	11	2.3	11	2.3	3.62	0.65
For global content delivery	290	60.9	171	35.9	11	2.3	4	0.8	3.57	0.58
For faster service delivery	305	64.1	146	30.7	15	3.2	10	2.1	3.57	0.66
To enhance social media use	285	59.9	165	34.7	5	1.1	21	4.4	3.50	0.73
To save cost	191	40.1	263	55.3	9	1.9	13	2.7	3.33	0.65
For maximal information retrieval and dissemination	244	51.3	166	34.9	11	2.3	55	11.6	3.26	0.96
To make minimal mistakes	148	31.1	253	53.2	63	13.2	12	2.5	3.13	0.73

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

The result presented in Table 4.5c revealed that all the eight purposes suggested for the use of ICT facilities were indicated in deferred but high frequencies. The scores revealed that the four most common purposes of ICT use by the library personnel in universities in southwestern Nigeria was stress reduction ($\bar{X}=3.67$, $STD=0.56$); to enhance networking/collaboration with colleague ($\bar{X}=3.62$, $STD=0.65$); for global content delivery ($\bar{X}=3.57$, $STD=0.58$); for faster service delivery ($\bar{X}=3.57$, $STD=0.66$). On the other hand, the least important purposes identified was to make minimal mistakes ($\bar{X}=3.13$, $STD=0.73$); and for maximal information retrieval and dissemination ($\bar{X}=3.26$, $STD=0.96$). This suggests that the primary purpose of ICT use by the library personnel was to deliver enhanced services. The result of the acquisition of ICT skills by the library personnel is presented in Table 4.5d.

Table 4.5d: Acquisition of ICT skills by library personnel in the universities

Statement: Through	Responses (n = 476)								\bar{X}	SD
	SA		A		D		SD			
	N	%	N	%	N	%	N	%		
Self-instruction	236	49.6	144	30.3	21	4.4	75	15.8	3.14	1.17
Formal training by the producers/vendors	216	45.4	137	28.8	34	7.1	89	18.7	3.01	0.84
Knowledge acquired at workshops/ seminars	169	35.5	199	41.8	21	4.4	87	18.3	2.95	1.00
The assistance of friends and colleagues	101	21.2	280	58.8	46	9.7	49	10.3	2.91	1.07
The staff of the Library providing the database services	101	21.2	238	50	48	10.1	89	18.7	2.74	1.13
The instruction manuals provided by the producers	130	27.3	150	31.5	57	12	139	29.2	2.57	1.06

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

Table 4.5d presents the responses on the mode of acquisition of the ICT skills possessed by the library personnel in the universities in southwestern Nigeria. Results revealed that the ICT skills were majorly acquired through self-instruction (\bar{X} =3.14, STD=1.17); formal training by the producers/vendors (\bar{X} =3.01, STD=0.84) and workshops/seminars (\bar{X} =2.95, STD=1.00). 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.

4.4.4 Research question four: What is the level of ICT skills possessed by library personnel in university libraries in southwestern Nigeria?

The purpose of research question four was to ascertain the level of ICT skills possessed by the library personnel. The result is presented in Table 4.6.

Table 4.6: Level of ICT skills possessed by the library personnel

ICT Skills	Responses (n=476)								\bar{X}	SD
	High		Moderate		Low		Very Low			
	N	%	N	%	N	%	N	%		
Computing skills										
Word processing	287	60.3	92	19.3	84	17.6	13	2.7	3.68	0.97
Printing, editing, retrievals	68	14.3	147	30.9	215	45.2	46	9.7	3.25	1.14
Presentation packages (power point presentation)	12	2.5	1	0.2	127	26.7	336	70.6	3.11	1.06
Scanning and uploading skills	46	9.7	147	30.9	68	14.3	215	45.2	2.86	1.02
Weighted mean									3.23	
Networking skills:										
Retrieving information on the web	62	13.0	150	31.5	222	46.6	42	8.8	2.97	1.07
Ability to browse the Internet	46	9.7	68	14.3	147	30.9	215	45.2	2.87	1.15
Ability to use different search engines	15	3.2	86	18.1	131	27.5	244	51.3	2.67	1.10
Use of the Internet for teleconferencing	112	23.5	91	19.1	19	4.0	46	9.7	2.29	1.22
Web page creation	31	6.5	43	9.0	151	31.7	251	52.7	1.34	0.96
Weighted mean									2.43	
Programming skills:										
Ability to install software	13	2.7	84	17.6	92	19.3	287	60.3	1.65	1.20
Ability to use OCLC for online cataloguing	60	12.6	85	17.9	230	48.3	101	21.2	2.77	1.09
Ability to use Web 3.0 for library services	113	23.7	202	42.4	118	24.8	43	9.0	2.55	1.27
Weighted mean									2.32	
Communication skills:										
Data and text communication using e-mail	128	26.9	230	48.3	102	21.4	16	3.4	3.03	1.08
Data and text communication using voice mail	68	14.3	46	9.7	215	45.2	147	30.9	3.26	1.15
Online discussions	48	10.1	204	42.9	144	30.3	80	16.8	3.05	1.14
Weighted mean									3.11	
Digitisation skills:										
Scanning and uploading of documents	58	12.2	214	45.0	133	27.9	71	14.9	2.89	1.09
Managerial skills	35	7.4	105	22.1	297	62.4	39	8.2	2.34	0.98
Digitisation skills	48	10.1	80	16.8	144	30.3	204	42.9	2.72	1.02
Weighted mean									2.65	
Grand mean									2.73	

Table 4.6 presents the responses on the ICT skills possessed by library personnel and this was itemised under their computing, networking, programming, communication and digitisation skills. Responses on computing skills revealed that the library personnel possessed the highest level of skill in word processing (\bar{X} = 3.68, STD = 0.98). The results on networking skills showed that respondents were most highly skilled in retrieving information on the web (\bar{X} = 2.97, STD = 1.07). It was further revealed that the highest level of skill possessed under programming was the ability to use OCLC for online cataloguing (\bar{X} = 2.77, STD = 1.08), while data and text communication using voice mail had the highest ranking in communication skills (\bar{X} = 3.26, STD = 1.14). The finding also showed that in digitisation skills, scanning and uploading of documents was ranked highest (\bar{X} = 2.89, STD = 1.09). The level of ICT skills of the library personnel was determined using test norm (Appendix III; Tables 4.13- 4.18).

The level of computing skills possessed by library personnel was evaluated using the test norm where a maximum obtainable mean score is 16.00 (that is, 4 points x 4 items). Thus, the score range of 1.00-5.33 indicates low level of skill, 5.34-10.67 indicates moderate level of skill and 10.68-16.00 denotes high level of skill. It could be observed that in Table 4.6 the total mean score under computing skills was 12.90 which falls within the high range of computing skills. This shows that the level of computing skills of library personnel in universities in southwestern Nigeria is high (Table 4.13).

The level of networking skills of the library personnel was determined using the test norm where a maximum obtainable mean score is 20.00 (that is, 4 points x 5 items). The result indicated that 1-6.67 represents low skill, 6.68-13.33 represents moderate skill and 13.34-20.00 represents high skill. The findings further showed that the total mean score is 12.14 and falls within the moderate range of networking skills. This indicates that the level of networking skills of library personnel in universities in southwestern Nigeria is moderate (Table 4.14).

Furthermore, test norm was carried out on the level of programming skills of the respondents. A maximum obtainable mean score is 12.00 (that is, 4 points x 3 items) and the result indicated that 1.00-4.00 represents low skill, 4.01-8.00 represents moderate skill and 8.01-12.00 denotes high skill. The total mean score is 6.97 and is within the moderate range of programming skills. This confirms that the level of programming skills of library personnel in universities in southwestern Nigeria is moderate (Table 4.15).

Test norm was also used to determine the level of communication skills of library personnel in universities in southwestern Nigeria. A maximum obtainable mean score is 12.00 (that is, 4 points x 3 items). The result indicated that 1.00-4.00 represents low skill, 4.01-8.00 signifies moderate skill and 8.01-12.00 denotes high skill. Results show a total means score of 9.34 which is within the high range of communication skills. This confirms that the level of communication skills of library personnel in universities in southwestern Nigeria is high (Table 4.16).

The level of digitisation skills possessed was also ascertained using test norm where a maximum obtainable mean score is 12.00 (that is, 4 points x 3 items). The result showed that 1.00-4.00 denotes low skill, 4.01-8.00 indicates moderate skill and 8.01-12.00 represents high skill. Results indicate a total mean score of 7.95 which is within the moderate range of digitisation skills. This affirms that the level of digitisation skills of library personnel in universities in southwestern Nigeria is moderate (Table 4.17).

On the whole, the level of ICT skills possessed by library personnel in universities in southwestern Nigeria was evaluated using test norm on the combination of the five types of ICT skills presented (computing, networking, programming, communication and digitisation). The maximum obtainable mean score was 72.00 (18 points x 4 items). The test norm was therefore set such that mean score range of 1.00-24.00 represents a low level of skills, 24.01 - 48.00 represents a moderate level of skills while 48.01 – 72.00 represents a high level of ICT skills. It could be observed that the overall mean score indicated in Table 4.6 was 49.30 and it falls within the high range. This affirms that the level of ICT skills possessed by library personnel in universities in southwestern Nigeria was high (Table 4.18).

4.4.5 Research question five: What is the relative influence of capacity building, ICT skills and use by library personnel on service delivery in universities in southwestern Nigeria?

The relative influence of capacity building, ICT skills and use by library personnel on library services delivery was expressed as beta weights and the result is presented in Table 4.7.

Table 4.7: Relative influence of capacity building, ICT skills and use by library personnel on service delivery

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant	0.749	0.121		6.206	0.000
	Capacity Building	0.236	0.042	0.241	5.668	0.000
	ICT Skills	0.423	0.050	0.428	8.510	0.000
	ICT Use	0.139	0.039	0.164	3.596	0.000

Dependent variable: Library Service Delivery

Table 4.7 revealed that using the regression coefficients to determine the relative contributions of the three independent variables (capacity building, ICT skills and use) to the explanation of the dependent variable (library service delivery), the relative contributions of the independent variables to the dependent variable are as follows: capacity building ($\beta = 0.236$, $t = 5.668$), ICT skills ($\beta = 0.423$, $t = 0.428$) and ICT use ($\beta = 0.139$, $t = 3.596$). The positive value of capacity building, ICT skills and use indicate that service delivery by the library personnel is dependent on the three independent variables. This implies that capacity building, ICT skills and use have positive influence on service delivery in university libraries in southwestern Nigeria and the coefficients are significant.

To determine the challenges faced by the library personnel in service delivery, fourteen challenges were suggested and the result is presented in Table 4.8.

4.4.6 Research question six: What are the challenges faced by library personnel in service delivery in universities in southwestern Nigeria?

The answer to research question 6 is presented in Table 4.8.

Table 4.8: Challenges faced by the library personnel in service delivery (n=476)

S/N	Challenges	SA		A		D		SD		\bar{X}	SD
1	Lack of motivation by superior officer	164	34.5	208	43.7	99	20.8	5	1.1	3.12	0.76
2	Inadequate budgetary allocation to library	178	37.4	190	39.9	68	14.3	40	0.4	3.06	0.92
3	Lack of appropriate ICT policy in library	140	29.4	147	30.9	174	36.6	15	3.2	2.87	0.88
4	Inactive role of LIS professional associations to encourage capacity building of library personnel	136	28.6	174	36.6	88	18.5	78	16.4	2.77	1.04
5	Inadequate library materials	132	27.7	136	28.6	172	36.1	36	7.6	2.76	0.94
6	Lack of awareness of capacity building programmes	85	17.9	220	46.2	96	20.2	75	15.8	2.66	0.95
7	Lack of exposure to international standards and experience	101	21.2	116	24.4	242	50.8	17	3.6	2.63	0.85
8	Inadequate capacities and ICT skills of library personnel	77	16.2	131	27.5	246	51.7	22	4.6	2.55	0.82
9	Lack of trained and skilled manpower	82	17.2	130	27.3	199	41.8	65	13.7	2.48	0.93
10	Low information literacy rate among library personnel	92	19.3	111	23.3	200	42	73	15.3	2.47	0.97
11	Inadequate ICT infrastructure in libraries	69	14.5	102	21.4	217	45.6	88	18.5	2.32	0.94
12	Poor information literary skills and digital literacy	69	14.5	102	21.4	207	43.5	98	20.8	2.30	0.96
13	Low professional status	70	14.7	76	16.0	248	52.1	82	17.2	2.28	0.92
14	Lack of library accreditation	68	14.3	74	15.5	237	49.8	97	20.4	2.24	0.94

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

Table 4.8 reveals the challenges associated with service delivery of library personnel in universities in southwestern Nigeria. All the fourteen challenges suggested were accepted by respondents. The five major challenges were: lack of motivation by superior officers (\bar{X} = 3.12, STD = 0.76); inadequate budgetary allocation to library (\bar{X} = 3.06, STD = 0.99); lack of appropriate ICT policy in library (\bar{X} = 2.87, STD = 0.88), inactive role of LIS professional associations (\bar{X} = 2.77, STD = 1.04) and inadequate library material (\bar{X} = 2.76, STD = 0.94). It could also be observed, that the least four challenges were lack of library accreditation (\bar{X} = 2.24, STD = 0.94), low professional status (\bar{X} = 2.28, STD = 0.92), poor information literacy skills and digital literacy (\bar{X} = 2.30, STD = 0.96) and inadequate infrastructure in libraries (\bar{X} = 2.32, STD = 0.94). It could therefore, be concluded that although there were several challenges identified by library personnel in universities in southwestern Nigeria in the course of their service delivery, the most preponderant challenges included low level of motivation by superior officers, lack of financial support, lack of appropriate ICT policy, inactive role of LIS professionals associations to encourage capacity building of library personnel as well as inadequate library material.

4.5 Test of the Hypotheses

4.5.1 Hypothesis 1. There is no significant relationship between capacity building and library services delivery by library personnel in universities in southwestern Nigeria.

Hypothesis 1 was tested using Pearson Product Moment Correlation at 0.05 level of significance and the result is summarised in Table 4.9.

Table 4.9: Relationship between capacity building and library services delivery by library personnel

Variables	Mean	Std. Dev.	N	r	Df	Sig. (p)	Remark
Capacity building	30.69	10.036	476	0.271	474	0.000	Sig.
Library services delivery	65.32	18.671					

The result of hypothesis 1 as shown in Table 4.9 revealed that there was a positive and significant relationship between capacity building and library services delivery by library personnel in universities in southwestern Nigeria ($r=0.271$; $P < 0.05$). Since the $P=0.000$ is less than 0.05 level of significance, then the null hypothesis is therefore rejected. This means that there was a significant relationship between capacity building and library services delivery by library personnel in universities in southwestern Nigeria.

4.5.2 Hypothesis 2: There is no significant relationship between ICT skills possessed by library personnel in universities in southwestern Nigeria and library services delivery.

Hypothesis 2 was tested using Pearson Product Moment Correlation and the result is presented in Table 4.10.

Table 4.10: Relationship between ICT skills possessed and library services delivery by library personnel

Variables	Mean	Std. Dev.	N	r	Df	Sig. (p)	Remark
ICT Skills	49.30	19.72	476	0.392	474	0.000	Sig.
Library services delivery	65.32	18.671					

The result of hypothesis 2 as shown in Table 4.10 revealed that there was a positive and significant relationship between ICT skills possessed by library personnel in university libraries in southwestern Nigeria and library services delivery ($r=0.392$; $P< 0.05$). Since the $P=0.000$ is less than 0.05 level of significance, then the null hypothesis which states that there is no significant relationship between ICT skills possessed by library personnel in university libraries in southwestern Nigeria and library services delivery is hereby rejected. This means that there was a significant relationship between ICT skills possessed and service delivery of library personnel in universities in southwestern Nigeria.

4.5.3 Hypothesis 3: There is no significant relationship between ICT use and library services delivery by library personnel in universities in southwestern Nigeria.

The result of hypothesis 3 which was tested using Pearson Product Moment Correlation is shown in Table 4.11.

Table 4.11: Relationship between ICT use and library services delivery by library personnel

Variables	Mean	Std. Dev.	N	r	Df	Sig. (p)	Remark
ICT use	58.46	16.895	476	0.580	474	0.000	Sig.
Library services delivery	65.32	18.671					

It could be observed from the result shown in Table 4.11 that the coefficient of correlation was 0.580 indicating that a strong and positive relationship exists between the two variables namely ICT use and library services delivery. Similarly, the significant p value is 0.000 which is less than 0.05. Therefore, the hypothesis is rejected. This means that there was a significant relationship between ICT use and library services delivery by library personnel in universities in southwestern Nigeria.

4.5.4 Hypothesis 4: There is no significant composite influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria.

Results on composite influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria using multiple regression is presented in Table 4.12.

Table 4.12: Summary of Regression analysis of composite influence of capacity building, ICT skills and use by library personnel on library service delivery

Model summary					
R	R-square	Adjusted -Square	Std. Error of the Estimate		
0.652	0.425	0.422	0.58550		
ANOVA					
Source of Variation	Sum of Square	Df	Mean square	F	Sig.
Regression	119.732	3	39.911	116.424	0.000*
Residual	161.804	472	0.343		
Total	281.536	475			

The result as shown in Table 4.12 revealed that capacity building, ICT skills and use have significant composite influence on library services delivery by library personnel. The result further revealed a coefficient of multiple correlations (R) of 0.652, a multiple R square (R^2) of 0.425 and adjusted R-square (adjusted R^2) of 0.422. This means that 42.5% of the variance in the service delivery by library personnel was accounted for by the three variables when taken together and the remaining unexplained 57.5 percent could be attributed to other factors that were not considered in the study. The significance of the composite contribution of the prediction was tested at $\alpha < 0.05$ using the F- ratio at the degrees of freedom ($df = 3, 476$). Also, it could be observed from the Table that the analysis of variance for the regression yielded a F-ratio of 116.424 at 0.05 level of significance. This implies that the joint contribution of the independent variables to the dependent variable was significant and that other variables not included in this model may have accounted for the remaining variance. Thus, the hypothesis which stated that there was no significant composite influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria is rejected.

This implies that capacity building, ICT skills and use will jointly, individually and significantly affect service delivery by library personnel in universities in southwestern Nigeria.

4.6 Findings from the interview

The University Librarians of the selected universities were interviewed through telephone calls and face-to-face, and the results are presented thematically.

4.6.1 Capacity building programmes available in library

The study revealed that the most common capacity building programmes available and participated in by the library personnel was formal education followed by in- house training and workshops/seminars. Federal and state universities participated more than their private counterparts in workshops/seminars which were not organised by the Nigerian Library Association. However, in most private universities, library personnel were often sponsored to annual general meetings/conferences organised by the Nigerian Library Association. Library personnel in federal and state universities participated more in sabbatical appointments than their

private counterparts, who, though allowed and eligible had not even applied. Four universities had facilities for training outside the country.

4.6.2 Methods of ICT /training available in library

The study revealed that most university libraries had a synergy with the ICT department/Directorate of their university. They were often called upon to assist/train library personnel on ICT issues in the library. Some libraries also invited seasoned Automation librarians/IT staff from other institutions to train their library personnel. Less than a quarter of the universities had systems librarians, furthermore, most of these system librarians could not function as computer engineers, and therefore, they often needed assistance. This implies that challenges with ICT facilities in the library may not be resolved immediately because the library would need to source for external resource person to alleviate the problem, and the individual may not be available when needed. The study also showed that library personnel were allowed to attend workshops and conferences both within and outside the country.

4.6.3 Types of ICT facilities used for service delivery in library

The findings revealed that the most common ICT facilities used for service delivery were computers, printers, online public access system (OPAC), the Internet, social media and photocopiers, while the less commonly used were scanners, projectors, digital cameras and blogging. The study discovered that some universities (private) tended towards digital services delivery while some others (federal universities) delivered both traditional and electronic services and some (state libraries) delivered traditional services most.

4.6.4 Local Area Network (LAN) in library and names of the network provider.

The interview revealed that almost all the university libraries had a Local Area Network (LAN). Less than a quarter of the libraries did not have a URL and so hooked up with the university URL. Most libraries that did not have a URL were limited in their service delivery because they could not use facilities such as the social media. The most common service providers used was MTN and GLO. Other providers include, RECOLL and NONET. A few universities also had their own Integrated Library Management System.

4.6.5 Types of services delivered by library

Investigation revealed that the most common library services delivered were, internet services, user education, current awareness service, loans service, photocopying, OPAC. Only eight universities had embarked on digitisation and very few universities provided information on library website. Services least delivered included translation services, inter library loan and digitisation of local resources.

4.6.6 Challenges of service delivery in library

The most prevalent challenges faced in service delivery in the universities as revealed by the University Librarians were inadequate funding, low internet bandwidth, irregular power supply and inadequate capacities and skills of the library personnel.

4.7 Discussion of the findings

The study investigated the influence of capacity building, Information and Communication Technology skills and use on service delivery of library personnel in universities in southwestern Nigeria. This section therefore, discusses the findings of the study in relation with results from previous studies.

4.7.1 Types of library services delivered by the library personnel

The seven most highly rated library services delivered by library personnel in universities in southwestern Nigeria 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 seven 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 fastchanging 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), Asogwa, Ugwu and Idoko (2016), Singh and Das (2014), Verma and Verma (2014) and Mbakwe (2010). 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 corroborated by Robertson (2018) in a survey of the training of contact librarians at Deakin University, Australia, he submitted that ICT use brings about change from traditional library services to modern library services; Tait et. al, (2016) who investigated the impact of IT application on tertiary institution libraries in the United Kingdom, averred that potentials of the Internet and its usage is replacing to a large extent, the delivery of traditional library services with modern library services. Asogwa, Ugwu and Idoko (2016) in their study of the influence of Internet facilities on printed resources in educational institution libraries in Nigeria, noted that the Internet has become very vital in service delivery. Singh and Das (2014) in an evaluation of the needs of library users in Indian Institutes of Technology (IIT), reported that library users now prefer information provision on library website and electronic document delivery and library personnel need to satisfy them. The finding also concurs with Inskip (2017) who investigated ICT application by librarians in the United Kingdom and Mbakwe (2010) who affirmed that the role of library personnel has changed from keepers of information to teachers of information literacy. The finding is however, at variance with Gama (2013) in a survey of service delivery of library personnel in twelve universities in North-west Zone, Nigeria. He averred that the Internet, current awareness and loans services were the three most highly delivered library services.

On the other hand, the delivery of low services has various implications. The low delivery of loans and interlibrary loan services implies that the library personnel may not be able to meet all the needs of their users. The low delivery of translation services may be attributed to use of Internet and ICT facilities, whereby there is access to free online translation services that are not locally based. Low delivery of reprographic services insinuates that there's a gradual trend of move from print to electronic services. It may also be inferred that digitisation and consortia collaboration services was lowly delivered because of inadequate funds, furthermore low delivery of referral services could be attributed to the fact that users now prefer self service. The investigation of Gama (2013) corroborates this finding. The study emphasised that no library can by herself adequately meet the needs of all her users and there is need for interlibrary loan services in libraries. The finding concurs with the Association of Research Libraries (ARL, 2012) in her statistical report of 2010-2011 which affirmed the decrease in reference queries and inter-library loans in America between 2009-2011. Empirical studies at variance with the findings include, Tella and Sidiq (2017) in their study of six tertiary institution libraries in Kwara State, Nigeria, the study affirmed that all the six libraries understudied, delivered interlibrary loan services; Gama (2013) also found that the least delivered services were, referral service, information service and compilation of union list.

Findings from the interview on the most highly delivered services were at variance with the submission of the library personnel. While the interview revealed that loans was predominantly applied for service provision, library personnel indicated low delivery. Furthermore, findings from the interview revealed that very few universities provided information on library website, this is at variance with the submission of the library personnel who claimed that this was one of their most highly delivered services. Some of the services least delivered were however, in agreement with the submission of the library personnel, namely, inter library loan and translation services among others.

The identification of Internet services and information provision on library website as the two most highly delivered services in this study shows that there is a synergy between TAM 2 (pages 68-70 on Perceived Usefulness; the library personnel made use of ICT when they perceived it would improve their service delivery) and the Human Capability Theory (pages 75-76) in which they adapted to the global change of ICT for service delivery and thirdly with the Capability Approach Theory- the aspect of "functionings" (pages 70-75), the functionings in this

case refer to delivery of value added services in the digital age, most importantly, internet services and information provision on library website as well as 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.

4.7.2 Types of capacity building programmes available for and participated in by library personnel in universities in southwestern Nigeria

Findings on the capacity building programmes available in the libraries under study revealed that teleconferencing, sabbatical appointments, mentoring and staff exchange were the most available. This suggests there were opportunities for capacity building through these programmes. This finding is at variance with Njeze and James (2013) in a study of methods of conservation in universities in Nigeria. The study showed that seminars, conferences, in house retreat, regular certificated programmes and online courses were the most available. The finding also revealed that the least available programmes were workshop/seminars, regular certificated programmes and self instruction. This finding is in agreement with Cobblah (2015) who reported that most library staff in two Ghanaian universities had never participated in regular certificated education programmes and workshops/seminars/conferences.

Findings on the capacity building programmes participated in by the library personnel revealed that the five major programmes participated in by the library personnel were workshops/seminars, self- instruction, regular certificated programmes, staff retraining and online development courses. This implies that these capacity building programmes were more available and affordable. Seminars and staff retraining are often organised by library management at little or no cost which makes it affordable. The library personnel engaged in self –instruction so as to enhance their capacity in the face of inadequate capacity and funds, while online development courses was probably highly participated in because of an enabling environment, that is, availability of the Internet in office environment. This finding is in line with Shidi and Nwachukwu (2015) in an evaluation of the acquisition of digitisation skills by library personnel in Benue state, Nigeria; Ugwu and Ekere (2010) in a study of the training needs of librarians for digital library projects in Nigeria, whereby it was concluded that library personnel should endeavor to use different capacity building programmes to develop themselves because the cost

of training programmes may be too much for the employer to bear. The programmes include seminars, workshops, retraining courses as well as conscious efforts to understudy the new developments in information science. However, the finding is at variance with Cobblah (2015) who evaluated capacity building and its effect on service delivery in university libraries in Ghana and concluded that majority of the library personnel had never participated in regular certificated education programmes and workshops/seminars/conferences. Furthermore, the finding is at variance with Ezejiofor (2018) who investigated the impact of capacity building and its challenges on librarians' service delivery in Nnamdi Azikiwe University, Awka, Nigeria and submitted that library personnel acquired their skills through participation in conferences.

The study however, also found that sabbatical appointments and conference attendance were the capacity building programmes least participated in by the library personnel. This implies that there were not enough funds to engage staff on sabbatical appointments and sponsor conference attendance and this deprived the library personnel the information of the best and current practices in the profession which is often learnt in such environment. This finding is at variance with Sommerville (2015) in a study of the capacity building of library personnel in the United Kingdom and concluded that sabbatical leave and staff exchanges is a benchmark for library personnel to enhance their professional skills, share know-how as well as network.

In relation to the Capability Approach Theory (pages 70-75), the "resources" in this finding are the different capacity building programmes available to the library personnel, while the "capability set" is the choice to use workshops/seminars, self-instruction, regular certificated programmes, staff retraining and online development courses to continuously build capacity despite inadequate funds. Furthermore, the low participation of the library personnel in capacity building programmes like sabbatical appointment, conferences and staff exchange (this implies that these programmes were insufficient or not accessible to all), and the provision of low cost-implicating programmes, is at variance with Sen (1999) in his Capability Approach Theory where he stressed that an enabling environment to build/utilise capacities is dependent on positive changes in financial resource and institutional settings (library policy).

The findings from the available capacity building programmes is at variance with some of the findings of the programmes participated in by the library personnel. Thus, the most available programmes were lowly participated in while the least available programs recorded higher participation. This suggests that the availability of the programmes may not necessarily

determine participation because of other factors, this can be exemplified in the availability of ICT facilities which may not necessarily indicate high use because of prevailing environmental conditions, such as, non- functionality of the facility.

The finding from the interview is partially in agreement with the above. The University Librarians attested that the most common capacity building programmes participated in by the library personnel was formal education, that is, regular certificated programmes, staff retraining and workshops/seminars, thus there was divergent opinion on the ranking of the programmes. Furthermore, the library personnel claimed that self-instruction was the foremost programme they most often participated in but the interview report revealed that it was in-house retreat. This divergence reveals that the opinion of management is sometimes different from that of the personnel in an organisation.

4.7.3 Types, frequency and purpose of use of ICT facilities by library personnel in universities in southwestern Nigeria

This study showed that the major types of ICT facilities used by library personnel for service delivery in universities in southwestern Nigeria were computers, photocopiers, printers, databases, emails, social networking and OPAC. This finding is not surprising, since librarianship and the global world is now in a Digital age and computers, photocopiers, printers, databases and emails are facilities which improve the functionality and visibility of Web 3.0 for service delivery. This finding is consistent with Egoeze, Misra, Akman and Colomo- Palacios (2014) who evaluated the use of ICT facilities in Nigerian universities and submitted that the most highly utilised ICT facilities were telephone (mobile/ fixed), computers and the Internet. The finding also concurs with Qutab, Bhatti and Ullah (2014) in a comparison of ICT use in fifty-five public and private universities in Pakistan and found that photocopiers and printers were the most highly used ICT facilities by the library personnel. Furthermore, Adewoyin, Onuoha and Ikonne (2017) in an evaluation the capacities of library personnel in the application of social media tertiary institutions in southwestern Nigeria confirmed the prevalent use of social networking by the respondents.

On the other hand, the three ICT facilities least utilised by the respondents across the universities were Listservs, blogging and social bookmarking. This implies that these ICT facilities were not readily available to the library personnel and therefore, they were not

favorably disposed to it. This finding is in line with Chung and Hussain (2011) who surveyed general practitioners in Australia and their utilisation of social network, they claimed that the utilisation of a new technology is determined by its availability, compatibility with the job to be done, experiences, inclinations to use, cost and accessibility. The finding is also in agreement with Oyedipe and Popoola (2018) who assessed the information literacy skills of library staff in higher institutions in southwestern Nigeria. They averred that social media (web 2.0) use for job performance was low. The finding is however, at variance with Decker (2014) in an investigation of the use of blogs by library personnel for service delivery in America, he submitted that library blogs are a good media for vital information provision about library operations, current awareness services and new technologies.

The findings in relation to the types of ICT used by the library personnel show prevalent use of emails, social networking, computers, photocopiers, printers, databases and social networking, email and OPAC for service delivery in this digital age in which the information environment is unstable due to constant emergence of new ICTs. This is in agreement with the Human Capital Theory (pages 75-76) that the theory is more about the ability to adapt to changing environment, thus, these library personnel are adapting to the use of new ICTs for enhanced service delivery. Furthermore, the Perceived Usefulness (PU) in TAM 2 (pages 68-70) is portrayed through the adoption and use of these ICT facilities because the library personnel perceive that it will enhance value added service delivery. This finding however, is in contrast to Capability Approach Theory (pages 70-75) which advocates enabling environment, since the low usage of listserv, blogging and social bookmarking imply that they are not available.

There are many purposes for the use of ICT in this digital age. This study revealed that the three major purposes of use of ICT facilities by library personnel in universities in southwestern Nigeria was to reduce stress, for networking and collaboration with colleagues and for global content delivery while the least important purpose was to make minimal mistakes. This indicates that the library personnel made use of ICTs for enhanced library service delivery in order to keep up with technological advancements and current trends in information science. Tiwari and Sahoo (2013) in corroboration submitted that libraries in Rajasthan, India, now use ICTs for global content delivery and networking and collaboration. The finding also concurs with Robert and Edem (2016) who found that the major purposes of ICT use by the library personnel in universities in Akwa-Ibom state, Nigeria, was for resource sharing, reduction of duplication of

efforts and to make minimal mistakes. The study established that the capacity building programmes enhanced the capacity of the library personnel to search and retrieve information, to get acquainted with information sources as well as users' need, provide effective information services and timely delivery of information to library users.

4.7.4 Types and level of ICT skills possessed by library personnel in universities in southwestern Nigeria

Result of the test norm performed revealed that overall, the level of ICT skills possessed by library personnel in universities in southwestern Nigeria was high. Specifically, the computing skills were high, networking-moderate, programming-moderate, communication-high and digitisation-moderate. This implies that library personnel are building their skills to enhance service delivery commensurate to the global information environment. This finding differs from Ojowhoh (2016) assessed the influence of staff development on service provision of university libraries in Bayelsa and Delta State and affirmed that the majority of library personnel had low ICT skills. The finding is also at variance with Umeji et. al. (2013) who investigated the information and ICT skills of library personnel in Madonna University, Okija, Nigeria. They found out that only about one fifth of the library personnel had high ICT skills, a little over half of them had moderate skills and about one fifth had very low ICT skills. The findings, however, corroborates Oyedokun et. al. (2018) surveyed the maximisation of ICT by library staff in universities in Kwara State, Nigeria, they concluded that the library personnel had high ICT skills. The finding also concurs with Ezema, Ugwuanyi and Ugwu (2014) in their investigation of skills requirement of library personnel in University of Nigeria, Nsukka, where the study showed, that three quarters of the library personnel had high ICT skills.

In terms of computing skills, the findings revealed that in all the universities, the skills of the library personnel was highest in word processing (perhaps because this is more frequently used) and generally low in presentation packages while scanning, and uploading skills were moderate. This concurs with Oyedokun et. al. (2018), they found out that almost all the library personnel had high computing skills (wordprocessing). The finding also concurs with Shidi and Nwachukwu (2015), who surveyed the digitisation skills required by library personnel in Benue State, Nigeria. They averred that an overwhelming number had computing skills. This development is a good one because it is at variance with the finding of Ademodi and Adepoju (2009) that library personnel in developing countries generally have low ICT skills.

In terms of networking skills, majority of the library personnel possessed moderate skills. The highest skill possessed was in the ability to retrieve information on the web while the lowest was in web creation. This finding corroborates Oyedokun et. al (2018) and Seena and Sudhier-Pillai (2014) who assessed the ICT competencies of library personnel in selected universities in Kerala, India and found that almost all the respondents had high networking skills. This indicates that service delivery was effective because the personnel will retrieve current materials for information dissemination to users.

In programming skills, ability to use web 3.0 for library services was the highest skill possessed by the library personnel in all the universities. This is perhaps because the use of web 3.0 is one of the fundamental programmes for effective service delivery in this digital era. This result is at variance with Shidi and Nwachukwu (2015) who found that library staff in Benue State, Nigeria lacked programming skills to deliver effective service in this digital age. In communication skills, the level of skills possessed in data and text communication using e-mail was the highest skill possessed by the library personnel in all the universities. This implies that e-mail services were more often delivered. This finding concurs with the submission of Kiilu and Otike (2016) in an assessment of digital services in University of Botswana, that utilisation of e-mail for service delivery in libraries is now a common practice, as a significant number of students were intimated about arrival of new books via e-mail alerts.

The study revealed that the level of digitisation skills of library personnel in the universities was moderate, however, they were more highly skilled in scanning and uploading documents than in the core digitisation skills and the overall management of the digitisation processes. This finding corroborates Adeleke (2018) who investigated the ICT skills of librarians in eleven selected public and private universities in Nigeria. He affirmed that digitisation was still in its early stages in most of the libraries and submitted that many of the librarians scored themselves below average in several of the specific digitisation skills.

4.7.4b Acquisition of ICT skills by library personnel

This study showed that the three main mode of acquisition of ICT skills by library personnel in universities in southwestern Nigeria was through self-instruction, formal training by the producers/vendors, workshops/seminars and assistance from friends. This assertion is corroborated by Oyedokun et. al (2018), they evaluated ICT utilisation by library personnel in South east Nigeria, where it was revealed, that the respondents acquired ICT skills through formal and informal education, workshops, in-house training, assistance from colleagues and seminars among others. The finding is also supported by Emiri (2015) in an evaluation of ICT skills among library professionals in two universities in Nigeria who submitted that respondents averred that their ICT skills were mainly acquired via assistance from friends, ICT developmental programs and formal education. Antidius (2018) from a survey of ICT use by library personnel in the University of Dar es Salaam, Tanzania however, noted that respondents acquired ICT skills through learning through practice, retreat organised by library management and workshops/seminars.

The willingness to acquire ICT skills from available and affordable sources such as self-instruction, formal training by the 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.

4.7.5 Influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria

The study revealed that there was a relative contribution of the independent variables to the dependent variable. When capacity is built, ICT skills increase and when the skills are used, library service delivery is positively influenced. This finding therefore, implies that capacity building, ICT skills and use have positive joint influence on service delivery in university libraries in southwestern Nigeria. It is when the capacity is built, that the skills can be acquired and maintained through regular capacity building, furthermore, it is when the acquired skills is used that service delivery is invariably enhanced. This finding concurs with Abban (2018) who submitted that capacity building develops library staff skills, but it must be maintained by

training at least two times in a year. The study also concurs with Oyedipe and Popoola (2018) who submitted that ICT skills and use jointly and significantly affect service delivery and there is need for capacity building if library personnel must deliver effective services in this digital age. The finding however, is at variance with Cobblah (2015) who maintained that staff development can only achieve desired results when accompanied with other strategies such as reward and promotion.

4.7.6 Challenges faced by library personnel on service delivery in universities in southwestern Nigeria

Results on challenges associated with service delivery of library personnel in universities in southwestern Nigeria showed that the five major challenges identified were lack of motivation by superior officers, inadequate budgetary allocation to library, lack of appropriate ICT policy, inactive role of LIS professional associations to encourage capacity building of library personnel and inadequate library material. The lack of financial support is an age long challenge of libraries and may be associated with declining budgets of the parent institutions, undermining of library needs and global recession as submitted by Peet (2018) with regard to the State library in Massachusetts; Intachomphoo, Jeske and Vellino (2016) with regard to Canadian libraries. The finding is in agreement with Cobblah (2015) who concluded that the most preponderant challenges of service delivery of library personnel in Ghana was lack of financial support and low level of motivation. This finding is however, at variance with Emezie and Nwaohiri (2015), Ahenkorah-Marfo and Akussah (2017) who submitted, that lack of ICT skills of library personnel, erratic power supply, low bandwidth among others were the most preponderant challenges of service delivery in academic libraries in Nigeria and Ghana respectively. The inference that could be drawn from this is that although the issue of finance was a challenge common to all the three categories of universities in the southwestern Nigeria, furthermore, it could be inferred that it was the bane of inadequate library material.

The challenge of inactive role of LIS professional associations to encourage capacity building of library personnel may be attributed to inadequate funding and inappropriate policies of the associations. This is corroborated by Uzuegbu and Onyekweodiri (2011) in a survey of the library community in Abia state and Khan and Bhatti (2014) in an investigation of the challenges encountered by the Pakistani library Associations in Pakistan. The lack of appropriate ICT

policy in library was identified as a predominant challenge of service delivery. This finding concurs with Babalola and Haliso (2011) who submitted from their survey of twenty-five academic libraries in Nigeria that only sixteen out of the surveyed libraries had ICT training policy and that lack of ICT policy is a major deterrent to the effective use of ICTs. The challenge of lack of awareness of capacity building programmes as indicated by the library personnel concurs with Abban (2018) who examined the continuous professional development practices of two universities in Ghana and found that a prevalent challenge was that library personnel were unaware of capacity building programmes.

The prevalent challenges of service delivery mainly inadequate financial support, low motivation, inappropriate ICT policy, are in contrast with the Capability Approach Theory (pg. 68) that if there must be improvement in capacities and service delivery, there must be adequate financial resources and implementation of appropriate policies.

4.7.7. Relationship between capacity building and library services delivery by library personnel

The study revealed that there was a positive relationship between capacity building and library service delivery of library personnel in universities in southwestern Nigeria. It was revealed that as the capacities of the library personnel are built so also the increase and enhancement of the services delivered. Thus, the capacity built determines services delivered. This implies that capacity building determines service delivery. This finding is in agreement with Kude (2016) in an investigation of computer skills amongst academic library personnel in universities in Nigeria and submitted that library staff cannot perform above their capacities. The finding however, is at variance with Oyedokun, et. al. (2018) who concluded that some capacities built by library personnel were not utilised because of lack of infrastructure in some of the universities in Nigeria.

4.7.8. Relationship between ICT skills possessed and library services delivery by library personnel

The study established that there was a positive significant relationship between ICT skills and library service delivery by library personnel in universities in southwestern Nigeria. It was revealed that since ICT skills of the library personnel are employed in the dispensation of their

duties, therefore, the more skills they possess, the varied and enhanced services delivered. This implies that possession of ICT skills determine service delivery of library personnel because this will spur library personnel to use the skills. This finding is in agreement with Adewoyin, Onuoha and Ikonne (2017) in an evaluation the capacities of library personnel in the application of social media tertiary institutions in southwestern Nigeria. The study established that ICT skills positively influenced library services. The finding also concurs with Abban (2018) who posited that possession of ICT skills by librarians in Ghana will lead to maximal use of ICTs for service delivery.

4.7.9. Relationship between ICT use and library services delivery by library personnel

The finding of this study revealed that there was a positive significant relationship between ICT use and library service delivery of library personnel in universities in southwestern Nigeria. ICT use by library personnel for service delivery will ultimately determine the types and quality of services delivered in this digital age. This implies that utilisation of ICT skills determine service delivery of library personnel in all. This finding is in agreement with Shidi and Nwachukwu (2015) who claimed that ICT use has greatly changed the concept of librarianship and service delivery in university libraries.

4.7.10 Composite influence of capacity building, ICT skills and use on service delivery

The finding of this study showed that there was a significant composite influence of capacity building, ICT skills and use on library service delivery by library personnel in universities in southwestern Nigeria. This infers that capacity building, ICT skills and use jointly had positive multiple correlations on services delivery. The implication is that capacities must first be built before skills can be possessed, after which, the skills are used to deliver services. The finding of this study encapsulates the fact that capacity building, ICT skills and use by library personnel in universities in southwestern Nigeria determine service delivery. This finding is in agreement with Adewoyin et.al., (2017) who claimed that when the capacity of library personnel is built, her ICT skills are increased as well as improved, moreover, when the skills are used it enables the delivery of effective service delivery.

The finding of the study established that the Capability Approach Theory, the qualitative aspect of the Human Capital Theory (ability to adapt to changing environment of library service

delivery in universities in the face of ICT emergence and globalisation) and TAM 2 (Perceived Usefulness and use of ICT for service delivery) are interrelated and contributed to improved service delivery in universities in southwestern Nigeria and if these theories are always given the principal position in service delivery, then there will be outstanding service delivery, referred to by the Capability Approach Theory as “utility” (pages 70-75 and fig. 2.2), that is, attaining the desired level of fulfillment or service delivery.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, conclusion and recommendations drawn from the analysis of the research data. In addition, it provides the contribution of the study to knowledge and recommends areas for further research.

5.2 Summary of the findings

The study is on the influence of capacity building, ICT skills and use on service delivery by librarians in universities in southwestern Nigeria. The following are the major findings of the study:

1. The seven most highly rated services delivered by the library personnel in universities 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 universities 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. The major types of ICT facilities used by the library personnel were computers, photocopiers, printers, databases, social networking and email/instant messaging, while the three least utilised were Listservs, blogging and social bookmarking/aggregating. The major purposes of use of ICT facilities was for stress reduction, global content delivery and networking, collaboration with colleague and to enhance social media use while the least purpose was to make minimal mistakes.

4. 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.
5. Capacity building, ICT skills and use have positive joint influence on service delivery in university libraries in southwestern Nigeria.
6. The major challenges encountered by the library personnel in the course of their service delivery were low level of motivation by superior officers, lack of funds, inappropriate ICT policy and inactive role of LIS professional associations to encourage capacity building of library personnel.
7. There was a significant relationship between capacity building and library services delivery by library personnel in universities in southwestern Nigeria.
8. There was a significant relationship between ICT skills and service delivery of library personnel in federal universities in southwestern Nigeria.
9. There was a significant relationship between ICT use and library services delivery by library personnel in universities in southwestern Nigeria.
10. There was significant composite influence of capacity building, ICT skills and use by library personnel on library service delivery in universities in southwestern Nigeria.

5.3 Conclusion

The study concludes that capacity building, ICT skills and use individually and jointly influence service delivery of library personnel in university libraries in southwestern Nigeria. It is expected that if library personnel have more opportunities to participate in capacity building programmes such as conferences and sabbatical appointments, their ICT skills will be enhanced. Furthermore, the provision of adequate ICT infrastructure, funding as well as appropriate training/ICT policies by the library and university management, will ensure maximal utilisation of enhanced skills and capacities and invariably, delivery of enhanced services commensurate to best services delivery in the Digital age. LIS professional associations could engender this by

playing more active roles in the influence of policies for improvement of service delivery in libraries.

5.4 Recommendations

Based on the findings of the study, the following recommendations are hereby made:

1. Library personnel should endeavor to create library blog while the library management should make available, adequate ICT infrastructure for blogging.
2. There should be frequent delivery of services such as blogging, Listserv and social bookmarking so as to provide fast answers to users' queries in the digital age, which is expected to be delivered without geographical boundaries and at the convenience of the ICT compliant users.
3. LIS professional associations should commence active roles so as to provide leadership for library personnel, create standardisation for the university libraries and influence policies for improvement of service delivery in libraries by strengthening their relationship with government.
4. Library and university management should make capacity building of library personnel a priority by constant assessment of their capacity needs, encourage participation in different capacity building programmes such as, online development courses, staff exchange, workshop/seminars teleconferencing, links with other libraries. Thus, the library personnel can develop and enhance their skills in networking, programming and digitisation as well as other skills that are synonymous with continuous changes in Information and Communication Technology and the role of the library as disseminator of knowledge.
5. 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.
6. There should be increased attendance of conferences whereby library personnel can learn the current and best practices of the profession.
7. It is necessary that library management makes available and accessible, appropriate training/ICT policies for sustainable capacity building and effective service delivery.

8. Universities should make available adequate budgetary allocation to libraries to enhance value added service delivery commensurate to the Digital Age.
9. Library management should source for grants to alleviate poor library funding to enhance effective service delivery.
10. Library management should ensure the provision of adequate and current ICT facilities and enabling environment for effective service delivery.

5.5 The Implication of the study

The inferences from the study indicated that the delivery of loans, inter library loan, translation services in universities is low, likewise blogging service which provides fast answers to users' queries on interactive interface and is an avenue for marketing library services This implies that concerted efforts must be made by library personnel and university management to ensure the building of consortia and resuscitation of inter library loans as well as the set-up of infrastructure for blogging services in order to ensure enhanced delivery of service and meet users' needs.

Library personnel possessed moderate skills in networking, programming and digitisation however, they need to be highly skilled for enhanced service delivery in this Digital age. Besides, capacity building programmes such as, staff exchange, teleconferencing, links with other libraries and conferences were not often participated in by library personnel. The findings serve as an indicator for the university library management to endeavor that library personnel are funded for participation in capacity building programmes so that they can deliver current and best services in library and information science. Library personnel should also endeavor to sponsor themselves even if they are not being sponsored. The study indicated that LIS professional associations were not very active. The implication of this is that they need to begin to play pivotal roles so as to provide leadership for library personnel, create standardisation for the university libraries and influence policies for improvement of service delivery in libraries.

5.6 Contributions of the study to knowledge

The study has contributed to knowledge in the following areas:

1. The study establishesthat the three most highly delivered services by library personnel in universities in southwestern Nigeria were Internet services, information provision on the

web and user education, while the least three lowly delivered services were loans, inter library loan and translation services.

2. The study establishes that capacity building, ICT skills and use enhanced service delivery of library personnel in universities in southwestern Nigeria.
3. The study establishes that the level of ICT skills possessed by library personnel in universities in southwestern Nigeria is high.
4. The study serves as a guide to library management in the formation of policies in the development of an enabling environment for staff development and effective library service delivery.
5. The study has enlightened the library personnel in universities in southwestern Nigeria about their professional capacities and incapacities and has made recommendations for capacity building and effective service delivery.
6. The study has enriched the body of literature in library and information science.
7. 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 southwestern Nigeria and globally.
8. The study has enhanced the provision of library services which will help users carry out better researches and bring out qualitative results for the development of the society.

5.7 Suggestions for further studies

The following have been suggested for further studies:

1. Comparative analysis of the influence of capacity building, ICT skills and use by library personnel on services delivery in universities in southeastern and southwestern Nigeria could be studied.
2. Influence of ICT skills and use on knowledge management and dissemination by librarians in universities in Nigeria could be investigated.
3. Capacity building, ICT skills and use as determinants of services delivery by library personnel in judiciary libraries in Nigeria.
4. Users' perception of service delivery in university libraries in southwestern Nigeria could also be investigated.

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APPENDIX I
Department of Library, Archival and Information Studies,
Faculty of Education,
University of Ibadan,
Ibadan.

I am conducting a study on Capacity Building and ICT Use by Library personnel in Nigeria. This research work is in partial fulfilment of the requirement for the award of the Ph.D in the Department of Library, Archival and Information Studies (LARIS), University of Ibadan. The questionnaire is intended for librarians and library officers. Your sincere and genuine response to the questions will be of great value to the study. All information given will be treated confidentially and used for academic purposes only.

Thank you very much for your assistance and cooperation.

Akintola, B. O.
(Research Student)
08060071516

Section A: Demographic Information

1. University.....
2. Department.....
3. Professional () Para-professional ()
4. Position/Rank.....
5. Age: (a) 21-26years () (b) 27-32 years () (c) 33-38years () (d) 39-44years ()
(e) 45-50years () (f) 50years and above ()
6. Sex: Male () Female ()
7. Marital status: Single () Married () Divorced () Widowed ()
8. Academic Qualification (a) N.D () (b) H.N.D () (c) B.A () (d) B.Sc. ()
(e) BLIS ()
f) Edu.Tech () (g) M.L.S () (h) M.Inf.() (i) Ph.D () (j) Others
(Please specify)....
9. Subject background: (a) Arts () (b) Sciences () (c) Librarianship ()
(d) Social Sciences () (g) Others (Please specify).....
10. Length of service in a University library (a) 1-5yrs () (b) 6-10yrs () (c) 1-15yrs ()
(d) 16-20yrs () (e) 21-30yrs () (f) 31-35yrs ()
11. Years of service in current University library

Section B: Capacity Building Programmes (CBP) In Libraries

Please respond to the following items by a tick (√) in front of the response that depicts your opinion. SA-Strongly Agree; A- Agree; D-Disagree; SD-Strongly Disagree

12.

S/N	Which capacity building programmes are available in your library?	SA	A	D	SD
a.	Workshop/Seminars				
b.	Regular certificated education programmes (for example, degrees)				
c.	Conference attendance				
d.	On-line development courses				
e.	In-house retreat				
f.	Self -instruction manuals				
g.	Staff retraining				
h.	Teleconferencing				
i.	Links with other libraries				
j.	Staff exchange				
k.	Sabbatical appointment				
l.	Mentoring				
S/N	Which CB programmes have you participated in your library?	SA	A	D	SD
a.	Workshop/Seminars				
b.	Regular certificated education programme (for example, degrees)				
c.	Conference attendance				
d.	On-line development courses				
e.	In-house retreat				
f.	Self -instruction manuals				
g.	Staffretraining				
h.	Teleconferencing				
i.	Links with other libraries				
j.	Staff exchange				
k.	Sabbatical appointment.				
l.	Mentoring				
m.	Please tick, the CB programmes you have attended in the last three years. Kindly indicate sponsorship: Institution sponsored (IS), Scholarship (S), Self-sponsorship (SS), Others (OT)	IS	S	SS	OT
1.	Workshop/Seminars				
2.	Regular certificated education programme (for example, degrees)				
3.	Conference attendance				
4.	On-line development courses				
5.	In-house retreat				

		IS	S	SS	OT
6.	Self -instruction manuals				
7.	In-house training				
8.	Teleconferencing				
9.	Links with other libraries				
10.	Mentoring				
13	Perception of staff to capacity building	SA	A	D	SD
a.	Library Management is highly committed to capacity building				
b.	Library Management is not committed to capacity building				
c.	Library Management is partially committed to capacity building				
d.	Capacity building programme of library is adequate				
e.	Capacity building programme of library is in adequate				
f.	Capacity building programme of library needs improvement				
g.	Capacity building enhances my efficiency				
		SA	A	D	SD
h.	Capacity building improves my service delivery				
i.	Capacity building motivates me				
j.	Capacity building reduces cost of production				
k.	Capacity building produces highly skilled staff				
14	Staff training policy operating in your library (Written)	SA	A	D	SD
a.	My library has a policy for staff capacity building and ICT training				
b.	The Library personnel's staff training policy is clear and understandable				
c.	The policy is accessible to all concerned				
d.	The policy is relevant and up to date				
e.	The staff training policy is favourable to all staff				
f.	The staff training policy is prejudiced				
g.	The staff policy is effected in all staff				
i.	The policy allows me to choose which training to attend				
j.	The policy is reviewed regularly				
k.	The policy is reviewed occasionally				
l.	The policy is reviewed systematically and continuously				

		SA	A	D	SD
m.	Staff members review the policy				
n.	The present policy in my library can adequately assist my development into a modern library personnel				
o.	I am satisfied with the staff training policy in my library				
15	Unwritten staff training policy				
a.	The unwritten policy in my library is acceptable to me				
b.	The unwritten policy is favourable to me				
c.	The staff training policy is favourable to all staff				
d.	Mid-level library personnel contributed to the formation of the policy				
e.	I have access to information on training in my library.				
h.	The policy is relevant and effective to building my capacity				
16	Funding opportunity for staff training				
a.	My employer supports my training financially				
b.	I get at least 50% financial support from my employer for each training				
c.	I get sponsors from other bodies for my training				
d.	I sponsor myself always				
e.	I sponsor myself sometimes				
f.	Lack of funds does not allow me to sponsor myself				

17. Please indicate the reason for attending the capacity building program

	Statement	SA	A	D	SD
a.	To acquire new skills				
b.	To update knowledge or basic education				
c.	To get trained in the latest technologies				
d.	To improve library services				
e.	To get trained in order to train other staff				
f.	To improve relations with fellow professionals				
g.	It is mandatory for promotion				
h.	I have not attended before				

18. Please indicate by a tick (√), (a) the method of further training available in your library and (b), the method of training you would prefer by using the following scale: 4 (most preferred), 3 (more preferred), 2 (least preferred) and 1 (preferred) in the boxes below:

	Statement	Further training available	Preferred method of further training			
			4	3	2	1
a.	In-service training outside the institution					
b.	In-house training within the institution					
c.	Group sessions					
d.	Self-instruction manuals					
e.	Through the use of audio-visuals					

19. Factors inhibiting capacity building in university library

Please respond to the following items by a tick (√) in front of the response that depicts your opinion. SA-Strongly Agree; A- Agree; D-Disagree; SD-Strongly Disagree.

S/N	What are the factors militating against capacity building in your library?	SA	A	D	SD
a.	Inconsistency in sponsoring by Institution				
b.	Excessive workload				
c.	Lack of time to build capacity				
d.	Disapproval by boss				
e.	Non recognition of certificate obtained				
f.	High cost of training program				
g.	Lack of interest by library personnel				
h.	Lack of awareness of capacity building program				
i.	Inadequate/lack of training infrastructure				
j.	Lack of funds				
k.	Lack of trainers locally				
l.	Location of training program by the organisers				
m.	Lack of training in areas of interest				
n.	Lack of information on training program				
o.	Inability to use ICT facilities				

Section C: Information and Communication Technology (ICT) skills

Previous ICT skills use

20. Please rate the level of your skill in the use of the following ICTs before assumption of duties in this present university. Kindly use the following: H=High , M=Moderate, L=Low, VL=Very low.

Statement	H	M	L	VL
Computing skills:				
Word processing				
Printing, editing, retrievals				
Presentation packages (power point presentation)				
Scanning and uploading skills				
Networking skills:				
Retrieving information on the web				
Ability to browse the Internet				
Ability to use different search engines				
Use of the Internet for teleconferencing				
Web page creation				
Programming skills:				
Ability to install software				
Ability to use OCLC for online cataloguing				
Ability to use Web 3.0 for library services				
Communication skills:				
Data and text communication using e-mail				
Data and text communication using voice mail				
Online discussions				
Digitisation skills:				
Scanning and uploading of documents				
Managerial skills				
Digitisation skills				

21. Please rate the level of your skill in the use of the following ICTs in the university library where you work presently. Please use the following: H=High, M=Moderate, L=Low, VL= Very low.

Statement	H	M	L	VL
Computing skills:				
Word processing				
Printing, editing, retrievals				
Presentation packages (power point presentation)				
Scanning and uploading skills				
Networking skills:				
Retrieving information on the web				
Ability to browse the Internet				
Ability to use different search engines				
Use of the Internet for teleconferencing				
Web page creation				
Programming skills:				
Ability to install software				
Ability to use OCLC for online cataloguing				
Ability to use Web 3.0 for library services				
Communication skills:				
Data and text communication using e-mail				
Data and text communication using voice mail				
Online discussions				
Digitisation skills:				
Scanning and uploading of documents				
Managerial skills				
Digitisation skills				

22. Kindly indicate how you learnt to use ICTs using the following scale: SA – Strongly Agree; A - Agree; SD - Strongly Disagree; D - Disagree

	Statement: Through	SA	A	SD	D
a.	Formal training by the producers/vendors				
b.	The assistance of friends and colleagues				
c.	Self-effort				
d.	The instruction manuals provided by the producers				
e.	Knowledge acquired at seminars and conferences attended				
f.	The staff of the Library providing the database services				

Section D: Use of ICT in the library

23. Indicate the ICTs you use for service delivery in your library. Kindly use these rating scales: Very Highly Utilised (VHU), Highly Utilised (HU), Occasionally Utilised (OU), Not (NU)

S/N	Types of ICT facilities used	VHU	HU	OU	NU
a.	Computers (Desktop, laptop, notebooks, Tablets, iPad)				
b.	Printers				
c.	Photocopiers				
d.	Digital cameras				
e.	Scanners				
f.	Multimedia Projectors				
g.	Blogging (e.g. weblogs)				
h.	Audio/video sharing/webcasting (e.g. Flickr, Skype, YouTube)				
i.	Email/instant messaging/chat				
j.	Discussion groups (e.g. Google/Yahoo Groups)				
k.	Listservs (e.g. Lisforum, Nmlis)				
l.	RSS feeds				
m.	Wikis (e.g. Wikipedia, LISWiki)				
n.	Social book marking/aggregating (e.g. Delicious, FriendFeed)				
o.	Social networking (e.g. Facebook, Twitter, weblog)				
p.	Content management systems (e.g. Drupal, Joomla)				
q.	OPAC				
r.	Internet services				
s.	Databases				

Frequency of ICT use in library

24. Indicate the frequency of use of these ICTs for service delivery in your library. Kindly use these rating scales: Daily (4), Weekly (3), Monthly (2), Never (1).

S/N	Frequency of ICT facilities used	4	3	2	1
a.	Computers (Desktop pc laptop, notebooks, Tablets, ipad)				
b.	Printers				
c.	Photocopiers				
d.	Digital cameras				
e.	Scanners				
f.	Multimedia Projectors				
g.	Blogging (e.g. weblogs)				
h.	Audio/video sharing/webcasting (e.g. Flickr, Skype, YouTube)				
i.	Email/instant messaging/chat				
j.	Discussion groups (e.g. Google/Yahoo! Groups)				
k.	Listservs (e.g. Lisforum, Nmlis)				
l.	RSS feeds				
m.	Wikis (e.g. Wikipedia, LISWiki)				
n.	Social book marking/aggregating (e.g. Delicious, FriendFeed)				
o.	Social networking (e.g. Facebook, Twitter, Weblogs),				
p.	Content management systems (e.g. Drupal, Joomla)				
q.	OPAC				
r.	Internet services				
s.	Databases				

Purpose of ICT use in library

25. Kindly indicate your reasons for using ICTs using the following scale: SA – Strongly Agree; A -Agree; SD - Strongly Disagree; D - Disagree

	Purpose of ICT use	SA	A	SD	D
a.	ICT reduces stress in service delivery				
b.	Delivery of global content				
c.	networking/collaboration with colleague				
d.	There is minimal mistakes in use of ICT				
e.	It saves cost				
f.	Service delivery faster with ICT use				
g.	There is maximal information retrieval and dissemination via ICT use				
h.	ICT enhances social media use				

Section E: Types of library services delivered in the library

26. Please indicate the types of services you are involved in your Library. Kindly use these rating scales: Very Highly Delivered (VHD), Highly Delivered (HD), Rarely Delivered (RD) and Not Delivered (ND).

Types of services	VHD	HD	RD	ND
Current awareness services				
SDI services				
Circulation of new arrivals list				
Electronic document delivery				
Multimedia service				
CD/DVD based service				
Web/Opac				
Information provision on Library website				
Internet services				
Assisting users to locate information materials not held locally				
Providing bibliographies of library holdings to users				
Providing a platform for research and communication through serials services				
Digitisation of local resources				
Loans services				
Inter library loan				
Online reference services				
Consortia collaboration				
Indexing and abstracting				
User education				
Referral services				
Reprographic services				
Translation services				

Challenges faced by library personnel on services delivery

27. Rate the following challenges as may be peculiar to you in your library using the scale: SA (Strongly Agree), A (Agree), D (Disagree), SD (Strongly Disagree)

S/N	Challenges	SA	A	D	SD
1	Inadequate budgetary allocation to library				
2	Lack of awareness of capacity building programmes				
3	Inadequate library materials				
4	Lack of trained and skilled manpower				
5	Lack of appropriate ICT policy in library				
6	Low information literacy rate among library personnel				
7	Lack of motivation by superior officer				
8	Inactive role of LIS professional associations to encourage capacity building of library personnel				
9	Inadequate capacities and ICT skills of library personnel				
10	Poor information literary skills and digital literacy				
11	Lack of library accreditation				
12	Inadequate ICT infrastructure in libraries				
13	Low professional status				
14	Lack of exposure to international standards and experience				

APPENDIX II
INTERVIEW SCHEDULE FOR UNIVERSITY LIBRARIAN ON CAPACITY
BUILDING AND ICT USE BY LIBRARY PERSONNEL IN NIGERIA

Department of Library, Archival and Information Studies,
Faculty of Education,
University of Ibadan,
Ibadan.

I am conducting a study on Capacity Building and ICT Use by Library personnel in Nigeria. This research work is in partial fulfilment of the requirement for the award of the Ph.D in the Department of Library, Archival and Information Studies (LARIS), University of Ibadan. Your sincere and genuine response to the questions will be of great value to the study. All information given will be treated confidentially and used for academic purposes only.

Thank you very much for your assistance and cooperation.

Akintola, B. O.

(Research Student)

1. What is the name of your University?
2. What is the name of the library?
3. What is your qualification?
4. How many years of experience do you have?
5. What is the URL of your library?
6. Which Capacity Building Programmes are available in your library?
7. Which methods of staff training in ICT are available in your library?
8. What are the ICT's used for service delivery in your library?
9. Do you have a local area network (LAN) in your library? Yes/No
10. Do you have a campus LAN in your University? Yes/No
11. If yes, please specify the names of the network you participate? INFLIBNET ()
DELNET () OTHER (please specify)
12. How many terminals are provided for the users?
13. What is the type of Internet connectivity you have in the library?
14. What types of services are provided by your library?
15. What are the challenges faced by you in applying ICT in your library?

APPENDIX III
TEST OF NORM SCALES

1. COMPUTING SKILLS (CS)

Maximum scores obtainable from the 4-item scale on CS $(4 \times 4) = 16$

The average score is $(4 + 3 + 2 + 1) / 4 =$ $10/4 = 2.5$

Interval score $(16/3) = 5.33$

Table 4.13: Interval table for computing skills (CS) of library personnel

Interval	Overall mean score image	Remark
0 - 5.33		Low
5.34 - 10.67		Moderate
10.68 – 16.00	12.90	High

2. NETWORKING SKILLS (NS)

Maximum scores obtainable from the 5-item scale on NS $(4 \times 5) = 20$
The average score is $(4 + 3 + 2 + 1) / 4 = 10/4 = 2.5$
Interval score $(20/3) = 6.67$

Table 4.14: Interval table for networking skills (NS) of library personnel

Interval	Overall mean score image	Remark
0 - 6.67		Low
6.68 - 13.33	12.14	Moderate
13.34 – 20.00		High

3. PROGRAMMING SKILLS (PS)

Maximum scores obtainable from the 4-item scale on PS	$(4 \times 3) =$	12
The average score is $(4 + 3 + 2 + 1) / 4 =$	$10/4 =$	2.5
Interval score	$(12/3) =$	4.00

Table 4.15: Interval table for programming skills of library personnel

Interval	Overall mean score image	Remark
0 - 4.00		Low
4.01 -8.00	6.97	Moderate
8.01 – 12.00		High

4. COMMUNICATION SKILLS (COS)

Maximum scores obtainable from the 4-item scale on (COS) $(4 \times 3) = 12$

The average score is $(4 + 3 + 2 + 1) / 4 = 10/4 = 2.5$

Interval score $(12/3) = 4.00$

Table 4.16 Interval table for communication skills of library personnel

Interval	Overall mean score image	Remark
0 - 4.00		Low
4.01 -8.00		Moderate
8.01 – 12.00	9.34	High

5. DIGITISATION SKILLS (DS)

Maximum scores obtainable from the 4-item scale on (DS) $(4 \times 3) = 12$
The average score is $(4 + 3 + 2 + 1) / 4 = 10/4 = 2.5$
Interval score $(12/3) = 4.00$

Table 4.17: Interval table for digitisation skills of library personnel

Interval	Overall mean score image	Remark
0 - 4.00		Low
4.01 -8.00		Moderate
8.01 – 12.00	7.95	High

6. INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS

Maximum scores obtainable from all the ICT skills 18-item scale $(18 \times 4) = 72.0$

The average score is $(4 + 3 + 2 + 1) / 4 = 10/4 = 2.5$ Interval
score $(72/3) = 4.00$

Table 4.18: Overall Interval table for ICT skills of library personnel

Interval	Overall mean score image	Remark
0 - 24.00		Low
24.01 - 48.00		Moderate
48.01 – 72.00	49.30	High