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ASSESSMENT OF ICT COMPETENCIES OF LIBRARY STAFF IN SELECTED UNIVERSITIES IN KWARA STATE, NIGERIA

ABSTRACT

Information and communication technology (ICT) has changed the world of library such that activities been carried out manually before are now been automated. The work of library staff are now being characterized by information and communication technologies. Academic libraries were observed to be more equipped with information infrastructures more than any other type of libraries, but no library no matter how well equipped that doesn't require the service of a workforce that is highly competent in the use of ICT tools, as such information infrastructure will remain unused or under-utilized. It is in connection to the above, that this study assessed the ICT competence of library staff in selected universities in Kwara state using a descriptive survey design of quantitative research method, where sample size of one hundred and twenty two (122) were drawn from population of one hundred and ninety one (191). Questionnaire served as instrument for data collection, with one hundred and nine participants (which constitute 89.3% return rate) fully completed and returned the instrument. Result of findings demonstrated a high level of ICT competency on the part of library staff in selected university libraries (University of Ilorin, Kwara State University and Al-Hikmah University), most especially on skills that were considered basic and intermediate ICT skill. Verdict from the study has it that library staff in those universities can effectively deploy ICT tools for operations in the library. They identified library schools, computer training centers, workshops and seminars, personal training, watching demonstrations on YouTube, guidance from friends and relatives as sources from which Library staff can acquirer ICT skills, but more emphases is on having additional qualification in computer science. Constraints to ICT skills acquisition identified include; tight working schedule, lack of motivation, lack of experience, inadequate training, and inappropriate library and information science curriculum. Identified challenges militating against effective utilization of ICT tools in the library for dynamic information service delivery include; lack of adequate information infrastructure, absent of provision for staff training and development, limited and tighter budget for the library, lack of technological know-how, fear of technology on the part of library staff as well as epileptic power supply. Sequential to the above identified challenges and constraints, the study recommends that library management should make available adequate information infrastructure and as well make provision for staff development and training. Experienced staff should as well train the upcoming or new staff in the library. Library schools should revise curriculum and design one that will accommodate development in information and communication technology. Professional associations and regulatory bodies should organized regular seminars and workshops that will improve ICT skills of librarians.

Keywords: ICT Competency, Library Staff, Academic Library, Library Automation, Library Education, Kwara State.

INTRODUCTION

Background to the Study

Information and Communication Technology (ICT) is one of the greatest inventions of mankind which played unprecedented roles in changing the landscape of human and organization activities around the globe from which libraries are not exempted. In corroboration to that Dhanavandan, Esmail, Mohammed and Nagarajan (2012) stressed that ICT has drastically changed every facet of human endeavors of which library is not an exception, such that libraries are now deeply engaged in digitization of almost all library resources in order to provide a fast, interactive and dynamic information services to users. In reflection to that, information has therefore been disseminated speedily around the globe due to advancement in the channel of communication. Library resources are being transformed from print to digital and web resources, which is being used extensively and subsequently resulted in tremendous growth of information dissemination and service delivery in the library. The use of Information and Communication Technology (ICT) facilities in performing library functions are becoming very useful in the libraries because it makes service delivery to the user faster and more efficient.

Nwachukwu (2005) defined ICT as a device or tool that allows for the collection, storage, processing or the communication of information. Ekoja, (2007) was of the opinion that ICT is a kit or equipment used for capturing, processing, storing and accessing information. Chrisita and Shoko (2010) defined ICT in a library context to mean the application of various technologies such as computer, retro-graphics, audio-visuals and other electronic devices for storage, reproduction, and dissemination of information in a library environment. In a similar vein, Vijayakumar and Vijayan (2011) defined ICT as the application of computers and technologies for acquisition, organization, storage, retrieval, and dissemination of information. Malanga (2015) explained the definition further to mean a revolution that provides the platform and technical means of handling information and communication. With the definitions above, ICT can rightly be said to be a catalyst for generating, processing, storing and disseminating information.

Seena and Sudhier-Pillai (2014) emphasized that early 70s usher in the evolution of library automation process and late 90s, the invention of internet bring about web based services and digitization of library resources while the latest invention of last decade gives birth to Web 2.0 that revolutionize information service delivery. ICT revolutionized many traditional library practices which in-turn posed a new challenge, opportunities, and competition for LIS professionals (Narasapa & Kumar, 2016). Complementing the above assertions, was Itsekor and James (2012) who underscored that evolving technologies, globalization and digitization, as well as information explosion of today information society, led to library automation, Web 2.0 and Library 2.0 applications, which can be simply stated to means that the traditional ways of doing things in the library are giving ways for digital operations. This occurrence tasked LIS professionals to keep abreast of the latest technology advancement as well as their applications to library operation. ICT skills are imperative such that, they now have an enduring impact on career development of LIS professionals. It is very crucial for library and information science professionals to acquire ICT skills in order to be more competitive in the face of competition with other professionals. Without adequate ICT skills, librarians would not be able to cope with information explosion of today information society.

The beginning of 21st Century ushered in evolutionary change to the ways users' access information, such that they now demand for anytime anywhere communication and access to

electronic resources (Okiy, 2010). This development brought revolutionary changes to modes and methods of information storage, retrieval, and transmission. During the ancient and medieval era, the functions of the libraries were majorly collection and preservation of information carriers, but advent of twenty-first century, extends the roles of libraries from mere preservation to provision of access and dissemination of information (Kehinde and Tella 2013). In reflection to that, Itsekor and Ugwunna (2014) emphasized that ICT has transformed the face of librarianship as the role of library and information science professionals shift from custodian of books to information professionals, with the responsibility of creating, processing, storing, manipulation and disseminating information electronically.

ICT provides efficient and effective ways in executing information related activities. It provides convenience in terms of usage for the users; speedy, accuracy and preciseness of information. Ezeani and Ekere (2009) are of the opinion that the use of ICT encourages diversity and built a foundation for continuous innovative learning in the academic environments, it also reinterprets traditional library skills, and explore new ways of putting these skills to work through the effective use of ICT. The effectiveness of library services in this century largely depends upon Information and Communication Technology (ICT), such that libraries with necessary infrastructural capabilities can tap the ICT skills of their staff for development. This evolving development in library world now tasked libraries to develop their information infrastructure and as well develop the skill of their workforce to one that meet the information need of today users who are millennial and technologically savvy. ICT plays a significant role in shaping and revamping information service delivery of libraries and this calls for the need for LIS professionals to acquire core ICT competency and skills that will enable them to overcome the threat of becoming obsolete in the face of competition in today digital environment where libraries operate (Narasappa & Kumar, 2016). The above is in consonance with Ferdinand (2011) assertion, who earlier stressed that the situation on the ground requires that library and information science professionals to be up and doing because potentials of information age can't be realized without proper acquisition of ICT skills.

The advent of Internet and advancement in ICT makes access to various information sources and databases that are available in various parts and locations of the world to be possible. In consonance to the above, Kehinde and Tella (2012) stressed that some of the valuable resources freely available on the Internet have become indispensable tools for the dissemination of information. In reflection to that, Adebisi (2009) earlier opined that ICT foster users with the opportunity to have unlimited access to information and as such enhance anytime and anywhere access to information in time and space with little or no regard to the location of such information. Information and communication technology is the modern science of gathering, storing, manipulating processing and communicating information. ICT tools such as the internet and World Wide Web (WWW) makes it possible to access information from unlimited sources without much consideration for geographical features. It also encourages independent usage as it allows users to work at their own pace and according to their self-defined needs. This development has a consequence of repositioning library staff for the new digital environment libraries find themselves. LIS professionals are urged to do the needful by acquiring adequate ICT skills expected of them in today digital world. The role of LIS professionals keeps changing not only in the face of changes in users' preference for web based services but also change in job specification that requires ICT skills for the position of a librarian (Itseko & James, 2012).

Singh and Pinki (2009) stressed that information management constitutes the core mandate of any academic libraries alongside other support services tailored towards attaining the mission and vision of their parent institutions. Learning, teaching, research and community service constitute the focal point from which every university mission and vision are fashioned out. Academic libraries are in the forefront of providing information service to their community of users which include: students, lecturers, researchers, other staff of the faculty and community members of where the university is situated (Abubakar, 2011). Academic libraries are the heartbeat of the academic environment for learning, teaching and research activities due to their function of acquisition, organization, storage, retrieval and dissemination of information. Achieving the mission and vision of academic institution is the precursor behind the establishment of academic libraries (Ferdinand, 2011). LIS professionals are at the threshold of information handling of their parent institutions but today digital age has brought about new tools and technologies for information handling and management and for academic libraries to be able to serve the academic community effectively in current digital environment and globalization. Therefore, library staff need to be trained and equipped with adequate ICT skills. Staff training and development will play a significant role in equipping library staff for quality library services (Ajeemsha & Madhusudhan, 2014). The assertion above is true to a great extent in that the quality of any academic library depends on the quality of its workforce, who can transform even the poorest library into an excellent performing library.

Deregulation of telecommunication industry as well as implementation of information technology policies by the federal government of Nigeria cause a proliferation and affordability of internet access which subsequently makes library users to be internet savvy and considered internet as their primary source of information and physical library as last resort (Okojie, 2010; Whong & Gaje, 2016). But library users are overwhelmed by information overload and they are in need of reliable, accurate, and quick information (Gaje, 2007). The intermediary role of the librarian is still required, but for them to be able to perform their role effectively, they need to possess a high level of ICT competencies. In reflection to that Singh (2004) posited that acquisition, processing, organization, storage, preservation, and dissemination of information in the library will continue to revolve around ICT tools. This is because physical location and collection of a library are not as important as the accessibility of the information resources in the library's repository (Faboyinde, 2006; Devchoudhary, 2007; Ezeani, 2010; Adelokun, 2011). In congruence to that, Igun and Adogbeji (2007) rightly observed that librarian competency is very crucial to the successful implementation and application of ICT to library operations. Even where there is a fund for acquiring ICT tools for the library, library staff competency is still very important to the success of ICT incorporation for information handling and management. However, a significant ICT competency gap was identified among LIS professionals in Nigeria as observed by Aschroft and Watts (2005) and they posited that the skill gap occurs as a result of underutilization of information resource in Nigeria. Ferdinand (2011) also observed that there is a digital divide between developed countries and developing countries of the world and this reflected in digitally rich countries having a high rate of ICT competent librarians as compared to their counterpart in third world countries. This resulted for the need to bridge this yawning gap so as to have a proper and effective globalization and for LIS professionals in this part of the world to have an appreciable level of ICT competencies.

In view of the above, arises the need to carry out a study of assessment of ICT competency of LIS professionals that will showcase the state of the affair and as well make recommendations

that will prepare them for the new role of today information society. This study tends to have a national view but because of time constraint and proximity factor, the study selected three universities in Kwara state: one from federal University, other from the state university and another from a privately owned university. University of Ilorin, Ilorin, Nigeria was selected to represent federal university while Kwara State University, Molete was selected to represent State owned university and Al-Hikmah University representing the private university.

Statement of the Problem

Academic libraries are very positive with the integration of ICT tools into library operations such that most of them are now equipped with information infrastructure and various ICT based resources and services (even though not adequate in some cases) to cater for information need of users (Bansode & Viswe, 2015). But no library can effectively deploy this information infrastructure without a competent workforce. Many studies have been conducted on ICT competencies among LIS professionals, prominent among them are (Itsekor & Uguanyi, 2014; Narasappa & Kumar, 2016) but there is still scarcity of localized study on assessment of ICT competencies of library staff in Kwara state, Nigeria. So filling this empirical gap is what this study is geared towards achieving. In corroboration with the above, Tyson (2007) opined that with the current scenario, library staff needs to be trained to serve the present generation of users, who desire to have access to information anytime, anywhere. In reflection to that, uncertainty still exists whether library staff possesses adequate competencies to operate ICT facilities effectively. It is in connection and based on the above gap, the study embarks on the assessment of ICT competencies of staff in the selected university libraries in Kwara State, Nigeria.

Objectives of the Study

The broad objective of this study is to investigate the ICT competencies of library staff in selected universities in Kwara state, Nigeria. The specific objectives are to:

1. Assess the types of ICT skills possessed by the library staff;
2. Examine the levels of ICT competencies of library staff;
3. Ascertain the sources of ICTs skill acquisition of library staff;
4. Identify constraints to ICT skill acquisition of library staff;
5. Identify the challenges associated with the use of ICT in delivering library services.

Significance of the Study

An assessment of ICT competencies of library staff would provide a practical look into the skills, technology know-how and personal attribute that enable librarians to fully take advantages of information technology in delivering dynamic information services. The rapid pace at which information technology keeps growing and advancing, makes it difficult to determine what technological skills librarians should possess, but a study like this will help to identify the core competencies require of a librarian as the result of this study tends to arrive at the most basic and essential ICTs skills required of a Librarian.

It is expected that the finding of this study when completed would be useful to practicing librarians (as well as those in training) by exposing them to ICT competencies they need to possess in order to perform optimally in the profession and develop their competencies in such area.

The finding would motivate university authority to make provisions for library staff training and development and as well provide the necessary ICT infrastructure and facilities that would enhance teaching, learning, and research. Library and information science educators can find insight in the study by identifying areas where the curriculum needed to be revisited and revised. It will also contribute to the existing body of knowledge.

Scope and Limitation of the Study

This study covers Information and Communication Technology (ICT) competencies of library staff of selected university libraries in Kwara state: University of Ilorin Library Staff, Kwara State University Library Staff, and Al- Hikmah University Library Staff.

The intention of the study is to have a national view but time and financial constraints tend to restrict the study only to selected university libraries in Kwara state with each selected university libraries representing federal, state and private owned university.

REVIEW OF RELATED LITERATURE

Information and Communication Technology (ICT) and ICT Competencies

There is no universally accepted definition of ICT because the concepts, methods and applications involved in ICT are constantly evolving almost on daily basis. It is difficult to keep up with the changes - they happen so fast. A good way to think about ICT is to consider all the uses of digital technology that already exist that is been used in helping individuals, businesses and organizations to manage information. ICT covers any product that is capable of storing, retrieving, manipulating, transmitting or receiving information electronically in a digital form. The term ICT is also used to refer to the convergence of audio-visual and telephone networks with computer networks through a single cabling or link system. Gurari (2009) defines ICT as a combination of computer hardware, software and telecommunication devices such as telephone system, modem, router, optic cables, satellite communication system etc. Murray (2011) pointed out that ICT is an extended term for information technology (IT) that include the integration of telecommunication devices such as telephone line, wireless signals, computer hardware and software which encompasses storage device and audiovisual systems that ensure access, storage and dissemination of information. In a similar vein, Zuppo (2012) stressed that ICT is associated with technologies that provide access to information through telecommunication gadgets and appliances. He further stressed that ICT covers any product that store, retrieve, manipulate, transmit and receive information electronically in digital format. Rouse (2017) on the other hand opines that ICT is the information infrastructure and component that enable modern computing. She further stressed that is a term that encompasses all information technology, networking components and application software that allow interaction in a digital world.

Competency on the other hand is the ability to do something successfully and efficiently. It is the skills, quality, the ability needed to perform a task. It also tends to describe the level of proficiency of an individual in executing a particular task or job. Competency is the ability, skills, attributes, proficiency of an individual to perform or do something efficiently. Ojiegbe (2010) view competency as a way of demonstrating the knowledge, skills, experience, and attribute of an individual to carry out a defined function successfully. Competency is a set of predefined skills that provide a structured guide against which proficiency of an individual performance in executing a task is been measured and evaluated. Competency could be seen as a combination of

practical and theoretical knowledge, skills, behavior, and value needed to improve on a performance. It could also be seen as a state or quality of being adequately equipped and qualified to perform a given task. In corroboration to the above, Larzen (2006) stressed that competency is a combination of theoretical knowledge and practical experience that form the hallmark of individual skills in taking the right action in executing a task. Ferreira et al. (2007) emphasized that competencies include knowledge, skills, abilities, and attitudes that should be acquired through education and training. Competency strives to measure the level of professionalism of an individual. ICT Competency of library staff is a measure of their capacity to make appropriate use of ICT tools for information selection and acquisition, organization, and storage, retrieval, and dissemination. In reflection to that, Marshall, Taylor and Yu (2003) contend with two type of competencies for librarians: first are professional proficiencies which as to do with knowledge of information resources, information technology, leadership and managerial skills and research; and secondly competencies representing a set of skills, attitude and value that emphasize continuous learning throughout librarians' career as well as ability to cope with change. In reflection to the above, Gulati and Raina (2000) expressed that competency requires of librarians include knowledge of print and electronic information resources.

There is hardly any human endeavor that advent of ICT has not transformed, one of which academic library is not an exception. The use of ICT is skyrocketing almost every day and libraries are expected to provide services that support wide users' learning and research activities (Head, 2016). It is in connection to this that Ojiegbe (2010) opined that ICT is a force to reckon with for upgrade of academic libraries' services as well as improvement on library staff competencies that provide faculty members and students with dynamic information system and services. Over the past three decades, academic libraries have been affected by information and communication technology. The introduction of various information technologies (ICTs) led to the reorganization, change in work patterns, and demand for new skills, job retraining and reclassification of positions. The technological advancement of the past twenty-five years, such as the electronic database, online services, CD- ROMs and introduction of internet has radically transformed access to information.

ICT tools are been used in Libraries to manage library more efficiently and as well cater for users' information need more effectively (Satpathy & Maharana, 2011). The impact of ICT in libraries cannot be over-emphasized, as there is no division and section of the library that has not been shaped and reshaped with the advent of ICT. It is in connection to this that Ezeani and Ekere (2009) opine that ICT is a medium by which quality service in the library can be achieved. In reflection to this Nwalo (2000) stressed that librarian is duty bound to implement ICT in their operation if they are to be relevant in this 21st Century. Many studies observed that using ICT in the library have a tremendous impact on library operations, resources, services and other routines (Nwalo, 2009; Ramana, 2006; Faulkner, 1998). Adebisi (2009) buttressed the foregoing by stressing that ICT provide libraries with the capabilities to locate, store, retrieve and disseminate information across the globe.

Introduction of ICT to library operation change many activities of the library from ways information are been gathered, processed and disseminated which is been done manually but now automated. The new era librarians and practitioners are expected to acquire ICT skill that will enable them to assume a new role as required by the new environment in which they now operate. Consonance to the above, Achebe (2010) rightly observed that ICT has strengthened operations in the academic library by providing the necessary support for learning, teaching and research of their

parent institutions. Adebisi (2009) recognized some of the benefit of ICT to library operation to include speed and ease of access to information, remote access, that is, unlimited access which combats the constraint of closing hours that restricted access to a particular time and hours. It is in regard to this recognition that National Universities Commission (NUC), which is responsible for the supervision of universities in Nigeria initiated a Nigerian Virtual Library project that gives every university in Nigeria access to e-resources and e-journals.

Information and Communication Technology (ICT) and Academic Libraries

ICT has changed our world and ways we do things, which bring us not only tremendous benefit but also tough challenges of quickly adapting to new trends (Amuche & Solomon, 2014). Adoption of ICT to library operation shaped and revamped many operations ranging and not limited to library automation, digitization, Web 2.0 and Library 2.0, Barcode technology application, mobile phones application, the internet and web-based services, networking technology, scanning technology etc. (Parvez, 2011; Rehman & Shafique, 2011).

Academic libraries are the nerve center of the university activities such as teaching, learning, research and other programs of an institution of higher learning. Now, these libraries are passing through a transition as pointed out by Singh and Pinki (2009). Academic libraries are under threat due to pressure mounted on them to improve on their service delivery as present ICT and digital revolution demanded from them. This revolutionary require them to shift their focus from traditional library routines and activities such as acquisition, knowledge organization and bibliographical control, dissemination of information and so on to one that fit in into digital world that foster the use of electronic resources such as e-book, e-journals, networking and consortia etc. Most academic libraries are presently using computers and other ICT tools in performing library activities.

The rationale for the establishment of a university library is to support the university functions of teaching, learning, research and community services in such a manner that is consistent with supporting the mission and objectives of the parent institution (Whong & Ezra, 2016). DeWatteville and Gilbet (2000) contend that the term ICT as related to librarianship is the acquisition, analysis, manipulation, storage and distribution of information using ICT tools as well as making provision of infrastructure for such purposes. In consonance to the above, Mayer (2006) posited that ICT in Libraries is a concept that covers acquisition, processing, storage, and dissemination of information in textual, numerical, pictorial and audio-visual formats. The use of ICT tools in the libraries cannot be over- emphasized as digital libraries are capable of satisfying users; information needs more than capacities of manual system as pointed out by Whong and Ezra (2016).

Academic libraries are known for their duties of serving as gatekeeper and custodian of their parent institutions information resources through their processes of collection development, users instructions, circulation and reference services, SDI, CAS, etc. using physical materials, but the advent of ICT has transformed the processes which now poses opportunities and challenges that shake up the whole operations of information service delivery (Ayoku & Okafor, 2015). Today users of information are millennial, who preferred to use the internet as their primary source of information and considered going to the library as last resort or port of call for information. Aina (2004) contends with the fact that ICT has greatly influence library operation such that storage, processing and dissemination of information are been orchestrated by library automation. With the foregoing facts and assertions, university libraries in Nigeria are now witnessing a radical

integration of ICT tool into library routines and operations as pointed out by Ayoku and Okafor (2015). This development calls on librarians to assume a new role and acquires skills and competencies relevant to today information handling and management as demanded by today knowledge society and users' preference for remote access to information. In reflection to the above, Batool and Amen (2010) rightly suggested that libraries should be equipped with necessary information technologies that tend to meet the demand of users' information needs. They further suggested that the ICT skills of librarians should be as per with the information infrastructures require for today information management.

ICT tools are been used in Libraries to manage library more efficiently and as well cater for users' information need more effectively (Satpathy & Maharana, 2011). The impact of ICT in libraries cannot be over-emphasized, as there is no sector or segment and section of library operation or practice that has not been shaped and reshaped with the advent of ICT. It is in connection to this that Ezeani and Ekere (2009) opine that ICT is a medium by which quality service in the library can be achieved. In reflection to this Nwalo (2000) stressed that librarian are duty bound to implement ICT in their operation if they are to be relevant in this 21st century. Many studies observed that the use of ICT in the library have proven to have a tremendous impact on library operations, resources, services and other routines (Nwalo, 2009; Ramana, 2006 and Faulkner, 1997). Adebisi (2009) buttressed the foregoing by stressing that ICT provide libraries with the capabilities to locate, store, retrieve and disseminate information across the globe.

Introduction of ICT to library operation change many activities of the library from ways information are been gathered, processed and disseminated which are been done manually but now automated which require new era librarian and practitioners to acquire ICT competencies as this will enable them to assume a new role as required by the new environment in which they now operate. In corroboration to that, Anyaoku (2012) emphasized that incorporation of ICT tools into library operations have gone beyond partial integration that there is hardly any operations in the

The world of an academic library is changing in the face of technological advancement which resulted in the paradigm shift from print media to web-based services; from ownership of documents to information access and from the physical location of a library to digital or virtual library (Babu, Vinayagamorthy & Gopalakrishnan, 2007). In consonance to the above, Adebisi (2009) recognized some of the benefit of ICT to library operation to include speed and ease of access to information, remote access that is unlimited which combat the constraint of closing hours that restrict access to a particular time and period. It is in regard to this recognition that National Universities Commission (NUC), which is responsible for the supervision of universities in Nigeria initiated a Nigerian Virtual Library project that gives every university in Nigeria access to e-resources and e-journals.

ICT Competencies of Library and Information Science Professionals

APLEN (2008) defines ICT competency of LIS professionals to be a combination of skills, knowledge, and behaviors related to library technologies which are important to the success of parent institutions, personal performances and capacity building. East (2007) observed that among various desired skills and competencies required of an academic librarian, ICT skills remain the most desirable and important. ICT competencies of library staff could, therefore, be viewed to be those relevant skills and knowledge to be acquired by those working in the library to be able to fully exploit information search, retrieval, and delivery using electronic format. Buttressing the

assertion above is Chisita and Shoko (2010) who stressed that modern technology help transformed library from mere store house of book to an important access point for information which calls for professional re-strategizing on the part of LIS professionals to keep on acquiring more and more ICT skills relevant to information handling and management.

The impact of ICT characterized on information services by changes in format, contents, and method of production and contents and method of production and delivery of information products. The Internet is the largest repository of information and knowledge, changed the role of library and information science professionals from intermediary to a facilitator, new tools for dissemination of information and shift from physical to virtual services environment and extinction of some conventional information services and the emergence of new and innovational web based. The power and influence of ICT in LIS is undeniable as it's all-encompassing in library practice and training (Kamba, 2011). This position pointed out the need to train librarians for sustainable ICT competency. Curry (2000) rightly stressed that for a librarian to be as per with world standard, ICT needs to be incorporated in LIS professionals training. Minish-Manjaja (2007) corroborate the above by stressing that librarian needs to be thoroughly diffuse of ICT competencies. The foregoing exhibit the fact that library professionals need to be sufficiently equipped with adequate ICT skills that will assist them in handling users' information needs and management of information resources in the library. Library schools in Nigeria recognize the importance of ICT as regard its applications in performing library routines and services, so they have taken the giant stride by integrating and infusing ICT skills into the curriculum. As great as this initiative is, the bottleneck is the fact that most of this ICT competencies are been taught in theory as most library schools do not have laboratories of a computer, poor internet access that hindered the optimal goal of incorporating ICT skills into the curriculum (Kamba, 2011).

Mahmood and Ajmal (2007) argued that the majority of library professionals in Pakistan need to learn specialized courses of ICT-like computer programming in Visual Basic, JAVA, and networking, etc. Besides, they also need to learn about particular courses of librarianship, for example, designing of a digital library, MARC etc. Ekoja (2007) notes that Librarians especially those that were trained in the traditional library schools must demonstrate that they are willing to be trained and be retrained in ICT skills if they are not to become irrelevant in the ICT age. Therefore, Koneru (2006) opines that training is inevitable to bridge knowledge and skill gaps, so as to meet the state of efficiency. Aguolu and Aguolu (2002) opined that no library professional would be able to meet his responsibility if he does not take the trouble to keep up with current literature in the field, develop himself through seminars, conferences, workshops, refreshers courses and through a conscious study of new developments in the field. They further recommend on the job training, which according to him is the employer's responsibility to provide on the job training to their new employees as part of their orientation programs. Similarly, Garuba (2007) support this view when he holds that the changing role requires that librarians learn new ways of performing their duties. He adds that computer literacy is of paramount importance to library professionals not only in Nigeria but other developing countries.

Ocholla (2003) observed that requirement for the job of a librarian which includes but not limited to competencies such as computer literacy, word processing, spreadsheet, database management, online search, text digitization, content management, document management, library automation, web design and development etc. even with the above been integrated into the curriculum, need still arises for evaluation of ICT competency of LIS professionals time to time

as some of the ICT competencies integrated into the curriculum are been taught theoretically without adequate practical training. Diso and Njoku (2007) buttressed the above expression by stressing that the training of librarian in Nigeria is inadequate and need radical restructuring so as to enable producing a new era librarian that can perform excellently in this era of digital age and knowledge society. The exponential growth of ICT has catapulted the world into an information-driven society that relies on information which causes change to service delivery for librarians (Salisu, 2002). Nwachuku (2005) opines that using computers to make information accessible and consumable require a diverse skill, especially librarian. He further contends that computer enhance work efficiency and librarian must acquire relevant computer skills and competent to make their professional roles more relevant in this knowledge-driven society. In consonance to the above, Garuba (2007) assert that the ever changing roles of librarians expected them to learn new ways of performing their duties that ICT competency is of great important most especially for librarians in Nigeria and other developing countries of the world who are lagging behind compare to their counterpart in the developed world.

The advent of ICT to the global scene caused a revolution in libraries and this has changed the ways and patterns in which information services is been delivered (Ademodi & Adepoju, 2009). In corroboration to that, Nwachukwu (2005) contends that change in information processing, access, storage, dissemination require LIS professionals to acquire new skills to cope with change. Sharp (2001) rightly opines that for a librarian to maintain relevance, that is, there is a need to place themselves where their users are, even if they are not physically available. Embracing change and moving closer to where their clientele resides (digital world) require LIS professionals to be ICT competent and compliance. Owoyemi (2001) pointed out that prominent among ICT tools are computer, which inculcates mechanism that is capable of accepting, storing, retrieving and processing of information based on pre-defined instructions. Ademodi and Adepoju (2009) buttressed the fact that computer plays a major role in libraries of today in that computer is capable of quickly accomplishing a large volume of activities done manually in the library. They further stressed that a computer is a vital tool for generating and processing of information in the library. In a similar vein, Salisu (2002) stressed that the world is been driven by technology that information service providers are s a matter of necessity require to be technology compliance and advocate for continuous professional training and education.

Application of ICT in the library requires librarians who are going to be operating them to possess a certain level of competency in order to be able to leverage the full potentials ICT tends to offer for information management. On yet another ground, librarians are expected to continuously update their knowledge and competencies as regard ICT skills to be able to perform optimally in today ever changing the environment that was driven by technology. The above expression was justified by Nagarajan (2012) assertion who stressed that LIS professionals need to be trained with the latest ICT skills to keep them up to date in order to enhance their performance in providing improved and dynamic information service to users. Many authors and researchers have suggested ICT competencies require of a librarian to include but not limited to: knowledge of operating system, software packages, programming language, online services, project management, searching skills (OPAC and search engines), database management, web design and development, metadata skills, word processing, spread sheet, electronic presentation, web navigation, e-mail, information packaging and brokerage, internet and networking etc. (Nyamboga, 2007; Islam and Islam, 2007; Pairy, 2007, Levin, 2007 and Morgan, 1998).

Beckett and Hager (2002) and Babu (2007) outlined some ways library staff can acquire and develop their ICT competencies. These methods are: through formal continuing education such as Master's program, informal education (distance learning), education through colleagues, self-study (learning by doing), training by suppliers, attending IT programs, participation courses, workshops, and conferences. Competency acquisition programs can be internal, that is organized within the workplace, or externally, outside the workplace. Mahmood and Ajmal (2007) argued that the majority of library professionals in Pakistan need to learn specialized courses of ICT-like computer programming in Visual Basic, JAVA, and networking, etc. Besides, they also need to learn about particular courses of librarianship, for example, designing of a digital library, MARC etc.

Kinds of Information and Communication Technology Skills Possessed by Librarians

Most libraries of the world had experience technology advancement, globalization and digitization of information, as pointed out by Emiri (2015), which resulted in increased use of ICT tools in everyday communication, work and activities in the library. The ability to use and operate word processors, data management, spreadsheet, data analysis applications constituted the hallmark of ICT competencies which is now essential job requirement for position of a librarian today. The degree of ICT proficiency require varies from one position to another based on the tasks and duties involved.

Acquiring ICT skills is a matter of prerequisite to meet the demand of today knowledge-driven economy (Maneschijn, Botha & Biljon, 2013). The forgoing expression reflected in the job requirement for the post of a librarian in the labour market. Claro et al. (2012) expatiated that ICT skills encompasses the capacity to solve problems of information, communication and knowledge in digital environment. Buttressing the above was Oliver and Tower (2000) who ascribed that ICT skills are set of skills required for deployment of ICT tools in solving a particular problem. This is true as it regards to the level, kind and type of ICT required by various profession and organization, which are varies and library profession is not an exemption. It is also true that the kind of ICT skills required in developing countries varies to that of third world countries. What is assumed an advance ICT skills in developing country could be considered a basic ICT skills in a developed world.

Reflecting to the above, make it necessary to categorized ICT skills into various group or type and levels as demanded by different profession and required by first and third world countries. Literature presented some categorization of ICT skills into various types and levels. Lotriet, Mathee and Alexander (2010) emphasized that ICT skills range from basic skills to more advance skills. Just in elaboration to that, Atasoy, Banker and Pavlou (2012) grouped ICT skills into basic skills, medium level ICT skills and advanced ICT skills.

Buttressing the above is Akoojee, Arends and Roodt (2008), who suggested level of ICT skills for developing countries as follows:

1. Lower or basic ICT skills: this include considerable ICT know-how needed for basic data processing and analysis which include competency in the use of generic tools such as word processing, spreadsheet, outlook and PowerPoint Presentation.
2. Intermediate ICT skills: this require extensive use of ICT tools for accomplishment of core tasks and functions.

3. Higher level of advance ICT skills: this is characterized by specialist nature of been part of development of software and hardware as well as it maintenance.

Source of ICT Skills Acquisition

Information and communication technology competencies are set of skills needed for handling of information in various format and media. Bell and Shank (2008) also attributed ICT competency as ability to use digital technology, communication tools and networking technology to locate, evaluate, use and create information.

Babu (2007) outline methods of ICT skills acquisition for librarian to include formal education (such as master program), informal education (such as distance learning, self-study and training, attending IT training, workshop, seminar and conference). ICT skills acquisition could be in form of on the job training or outside the work place. Safahieh and Asemi (2008) assessed the computer literacy skill of librarians in Isfahan University in Iran, and they observed that most librarian acquire ICT skills through formal education. Just in consonance to the forgoing, Beebe (2004) identified different method of acquiring ICT skills, which include formal training, informal training form friends and relative as well as self-studying of user manual. Kumar and Kaur (2006) was of the opinion that ICT skills could be acquire through trial and error, guidance from colleagues and friends, training from college, self-study and training as well as external courses.

Constraints to ICT Skills Acquisition

Ayoku and Okafor (2015) study of ICT skills acquisition and competencies among librarians in Nigeria universities, indicated some constraint to ICT skills acquisition by librarians to include: lack of interest in ICT skills acquisition (conservative), technophobia (fear of technology), nonchalant attitude, ignorance and apathy, poor funding of library, insufficient skilled personnel to trained librarian in the country, limited training opportunities, and lack of motivation.

Mathew and Baby (2012) study of developing technological skills for academic librarians in universities in Kerala, India underscored that constraints librarian encounter in utilization of ICT tools in delivering information services include: inadequate training in ICT applications, lack of information infrastructures, lack of support from management, lack of coordination among library staff and lack of initiative from professional associations to conduct specialized training programs.

The forgoing constraints to ICT skills acquisition of librarians have a repercussion on the level at which libraries utilized ICT tools for better and dynamic information service to users. This expression was buttressed by Watts and Ibegbule (2006), who asserted that lack of adequate ICT infrastructure and in-depth digital skills among library staff constituted barriers to use of ICT tools and resources in the library. Oduwole and Sowole (2006) also identify lack of adequate digital skills among library staff as one of the barriers to use of ICTs in the library.

Challenges Associated with the use of ICT in Delivering Library Services

Krubu and Osawaru (2011) revealed some factors hindering the impact of ICT in Nigerian university libraries as lack of search skills, epileptic power supply, expensive software and hardware, and the huge amount of money spent to fuel generators. Oketunji (2002) affirms that the Internet and other ICTs provide a golden opportunity for the provision of value-added services by libraries. Indexing, abstracting and publication of local research and their digitization are means of facilitating learning. Aina (2004) identified the negative laissez-faire attitude of lecturers, students, and libraries as other factors militating against the development and use of ICT in

university libraries in Nigeria. Furthermore, Aina (2004) admits the high cost of ICT training but opined that library staff and users should do something on their own to improve their IT skills.

Findings by Makara (2002), and Ugboma (2006) identified lack of fund as one of the constraining factors for the acquisition of skills and competency development in ICT for library staff in the universities. The yearly budget allocation of university libraries is small and this is compounded largely by poor financial provision for staff training and development as well as the fact that some of the employers and superior officers in the profession are morally less supportive to their subordinates for active participation in long programs. (Balarabe, 2005).

Some studies attribute reasons for low utilization of ICT among LIS professionals in Nigeria to lack of technical manpower, cost of information infrastructures, epileptic power supply, lack of full installation of ICT tools, lack of willingness on the part of librarians, lack of implementation policy on the part of management, lack of proper training for librarian in library schools (Mohammad, 2009; Nwalo, 2000).

Empirical Studies

Mathews and Pardue (2009) carried out an in-depth analysis of computer skills for academic librarians and their study identifies skills such as library automation, online database searching, computer applications, computer hardware, networking, internet search, multimedia, web development, programming language, project management, web 2.0 tools etc. as the fundamental information technology skills require of librarians of today digital age. Babu, Vinayagmoorthy, and Krishan (2007) assessed the ICT skills of 171 librarians of engineering educational institute of Tamil Nadu. Their findings revealed that 48% of librarians had some knowledge of library automation software but were weak in web page design and electronic bulletin board. Adomi and Anie (2006) analyzed the computer skills of professional librarians at Nigerian universities. Their findings showed that librarians were not highly computer literate as most of them had recently been introduced to computers in libraries. Computers were used mostly for cataloging and for serials on a limited scale.

In a similar vein, Batool and Amen (2010) investigated the level of technology skills possessed by academic librarians and their study revealed that respondents which are librarians are only proficient in computer hardware and word processing that they still need IT skills to implement library automation. Sampath-Kumar and Birada (2010) carried out an investigation in the use of ICT in college libraries in Karnataka, India and study revealed that application of ICT in college libraries has not reached a very high level and that main constraint to library automation is lack of fund, manpower, competent workforce and training opportunity for librarians.

In Idowu and Mabawonku (1999) study of information technology facilities and application in selected Nigerian research and university libraries, the study indicated that 92.3% of the selected university libraries use library management software for their library operations. Igben and Akobo (2007) also carried out a study of the state of ICT in libraries in River state, Nigeria, and the study indicated that 75% of the libraries in River state incorporate ICT in their library operations. Azubogu and Madu (2007) and Adeniji, Adeniji and Oguniyi. (2011) observed in their studies that the internet is the most used tools in academic libraries in Nigeria. The result of Adedoyin (2005) study of eighteen university libraries in Nigeria revealed that 32% of the respondents are ICT competent which infer that librarians in Nigeria are yet to achieve the desired level of competency needed for today changing environment driven by technology. Adomi and Anie (2006) analyzed the computer skills of professional librarians at Nigerian universities, their findings showed that librarians were not highly computer literate as most of them had recently

been introduced to computers in libraries. Computers were used mostly for cataloging and for serials on a limited scale.

Bakar (2005) surveyed information professionals in Malaysia on their IT competencies in 13 categories from basic competencies like Word processing, emails, Internet and intranet, graphics, presentations, publishing, spreadsheets, and project management to system maintenance, system analysis, and programming. Kumaravel (2006) made a comparative survey to ascertain the ICT literacy level among university library staff of Anglophone and Francophone countries of West Africa. The findings of the survey showed a very high level of ICT illiteracy among all levels of library staff both in the Anglophone and Francophone countries.

In another research conducted by Jegede (2009) to examine the attitude, competency, use pattern of ICT by teacher educators, the result of the study showed that generally, older teachers are naturally wary of ICT use. This tally with the result of Anunobi's (2004) study of computer literacy of librarians in Imo state which revealed that younger professionals with fewer years in service have ICT skills more than their older counterparts.

Adeyoyin (2006) investigated on the ICT literacy level of library staff in West African universities. His findings showed that in Anglophone countries, 48.38% of professional staff were ICT literate whereas 51.62% were not ICT literate. Bakar (2005) surveyed information professionals in Malaysia on their IT competencies in categories from basic competencies like Word processing, emails, Internet and intranet, graphics, presentations, publishing, spreadsheets, and project management to system maintenance, system analysis, and programming. Abubakar (2010) in a study on availability and use of ICT in six Nigerian university library schools; notably identified the availability of computers, the internet, CD-ROMS, email, microfilm, microfiche, videotapes, and slide projectors as resources available and that they use the resources notably for education and training.

Also, a study carried by Babu, Vinayagamorithy, and Gopulakrishnan, (2007) on ICT Skills among Librarians in Engineering Educational Institutions in Tamil Nadu, using 171 libraries of engineering educational institutions. The questionnaire was used for the survey and result revealed that Librarians in one way or the other are acquiring considerable basic skills in ICT, but they need to concentrate more on network-based services and digital library services. It also discovered that formal education; Informal education (distant education); education through colleagues; Self-study; Training at the workplace; Training by suppliers; Attendance of IT programs and workshops are the main sources of acquiring ICT skill by library staff.

As Anunobi (2004) notes, many librarians and library staff especially the younger staff with lower years in service are not lagging behind completely in information technology. Through training, skills are thought and competencies are developed It is the process through which library staff develops new competencies that will transform them from the state of not being efficient to be able to do effectively. Ekoja (2007) asserts that ICT competency acquisition among library staff in Nigerian universities is still below average. According to him, many librarians and library staff working in the Nigerian university libraries are unable to use ICTs even when they are available. Only very few library staff who have made effort to acquire competencies in the use of ICTs have put them into practice. Also, Ezeani and Ekere (2009) observe that ICT use is relatively low among practicing librarians especially the older librarians.

METHODOLOGY

Research Design

The research design for this study is a descriptive survey which is the most appropriate when studying a phenomenon that tends to seek the opinion of the respondents without the researcher attaching his value (Palmquist, 2017). It involves the collection and analysis of data about people or materials with the intention to compare existing and required standards and to identify information which is likely to be used to improve the existing condition of people or things. The descriptive survey is the most appropriate for the study because it enable the researcher to investigate the Information and Communication Technologies (ICTs) competencies of library staff.

Population of the Study

The population of the study comprises of library staff of selected university libraries in Kwara state. The total population for this study consisted of library staff at the University of Ilorin, Kwara State University, and Al-Hikmah University. According to library staff list collected from each universities library management, the total number of library staff in Al-Hikmah University Library is 20 while that of University of Ilorin library is 148 and 23 library staff for Kwara State University. Therefore the total population for the study is 191.

Distribution of the Study Population

S/N	Title	Al-Hikmah University	University of Ilorin	Kwara State University
1	Professionals	6	51	9
2	Para-Professionals	4	46	6
3	Support Staff	10	51	8
Total		20	148	23

Source: Staff list from Al-Hikmah University Library, Kwara State University Library and University of Ilorin Library (2017).

Sample Size and Sampling Techniques

This study adopts judgmental sampling technique as consideration will only be given to both paraprofessionals and professional librarians in the selected university libraries. Judgmental sampling technique is a purposed incline sampling where the researcher select sample based on knowledge and professional judgement. In congruence to the above, the sample size for this studies is the paraprofessionals and professional librarians in those university libraries and their size stood at 122.

Instrument for Data Collection

The instrument used for data collection is questionnaire, which was developed by the researchers in accordance with the research questions. The questionnaire is structured into two

sections, label section A and B of which section A take care of the demographical information of the respondents while section B take care of the research questions using five scale Likert format.

Validity and Reliability of the Instrument

The instrument was validated to ensure face, contents and construct validity with the view of checking its appropriateness and extent to which it accurately measures what it claims to measure before administration. The instruments was scrutinized by the project supervisor and two other experts from the Department of Library and Information Science.

The reliability of the instrument was determined to see the degree of consistency of the test instrument in measuring what it claims to measure by using a test-retest reliability which involves making use of the same research instrument to take two separate measurements of the same population at different times and the higher the correlation coefficient between the two measurements, the higher the reliability of the measuring instrument. The Cronbach alpha scored for the two separate administered questionnaire is 0.878.

Administration of the Instrument

The administration of the questionnaire was personally done by the researchers with the assistance of one library staff from each of the selected university libraries.

DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic Information of the Respondents

Item	Frequency	Percentage
Institution: University of Ilorin	89	81.7%
Kwara State University	12	11%
Al-Hikmah University	8	7.3%
Total	109	100%
Gender: Male	63	57.8%
Female	46	42.2%
Total	109	100%
Age Distribution: 18-25	29	26.6%
26-33	17	15.6%
34-41	31	28.4%
42-49	15	13.8%
50 and Above	17	15.6%

Total	109	100%
Marital Status: Single	28	25.7%
Married	81	74.3%
Total	109	100%
Years of Experience: 0-10	39	35.6%
11-20	41	37.6%
21-30	28	25.7%
31 and Above	1	0.9%
Total	109	100%
Academic Qualification: Diploma	40	36.7%
Bachelor Degree	38	34.9%
Master	28	25.7%
PhD	3	2.8%
Total	109	100%
Level of Professionalism: Para-Professional	41	37.6%
Professional	68	62.4%
Total	109	100%
Department in the Library: Circulation	16	14.7%
Reference	26	23.9%
Cataloguing	21	19.3%
Acquisition	14	12.8%
Serial	14	12.8%
E-Library	4	3.7%
Others	14	12.8%
Total	109	100%

Source: Field Survey

Table 1 above shows that library staff of University of Ilorin have more representatives as they constitute 89 (81.7%) of the participants, while Kwara State University and Ali-Hikmal University only had 12 (11%) and 8 (7.3%) participants respectively, as both universities have a small number of library staff.

Gender distribution shows male constituting 63 (57.8%) of participants while female participants constitute 46 (42.2%). This indicates that there are more male library staff than their female counterparts.

Most respondents fall within the age bracket of 34-41 years representing 31 (28.4%), followed by 18-25 years with frequency of 29 (26.6%) while others with frequencies 17 (15.6%), 17 (15.6%) and 15 (13.8%) fall within the age bracket of 26-33 years, 50 years and above, and 42-49 years respectively. This indicates that age bracket 34-41 years constitute the majority of the respondents.

Respondents constituting 81 (74.3%) are married while 28 (25.7%) are still single, indicating that most library staff are married.

Most respondents that constitute 41 (37.6%) had spent 11-20 years in service, followed by another 39 (35.6%) who have spent less than a decade in service while 28 (25.7%) and 1 (0.9%) have spent 21-30 and 31 and above respectively. The data distribution indicates that most respondents have had between 11 to 20 years of experience.

Respondents with Diploma in library science participated more in the survey as they constitute 40 (36.7%), followed by Bachelor of library and information science and Master of library science representing 38 (34.9%) and 28 (25.7%) respectively while least participants representing 3 (2.8%) are PhD holders.

Most participants in the survey were professional representing 68 (62.4%) while paraprofessionals only constitute 41 (37.6%). The disparity in qualification of respondents and their level of professionalism was as a result of few library staff, who have possessed minimum of first degree in library and information science but yet to be confirmed by their institutions.

Participants from reference section/department of the selected university libraries participated more in the study, constituting 26 (23.9%) participants, followed by cataloguing and classification department with 21 (19.3%) representatives, circulation has 16 (14.7%) representatives while others like acquisition, serial and e-library has 14 (12.8%), 14 (12.8%) and 4 (3.7%) respectively.

Types of Information and Communication Technology Skills Possessed by Library Staff (N=109)

Table 2: Basic ICT Skills Possessed by Library Staff

Basic ICT Skills	V-High	High	Moderate	Low	V-Low	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Word Processing (Microsoft word)	74(67.9%)	34(31.2%)	1(0.9%)	-	-	Very High
2. Statistical Analysis	42(38.5%)	50(45.9%)	15(13.8%)	-	-	High
3. Scanning and Uploading	52(47.7%)	40(36.7%)	2(1.8%)	14(12.8%)	1(0.9%)	Very High
4. Electronic Presentation (PowerPoint)	15(13.8%)	63(57.8%)	29(26.6%)	2(1.8%)	-	High

Source: Field Survey.

Table 2 presents the level of basic ICT skills possessed by library staff and it illustrated a very high level of proficiency on the part of library staff on basic skills like: word processing with

76 (67.9%) participants rated very high, 34 (31.2%) rated high, and 1 (0.9%) moderate. Participants that constitute 50 (45.9%) were rated high, 42 (38.5%) very high, 15 (13.8%) moderate and 2 (1.8%) were rated low in statistical analysis. Participants that constitute 52 (47.7%) were rated very high, 40 (36.7%) high, 2 (1.8%) moderate and 14 (12.8%) low in scanning and uploading. Participants constituting 63 (57.8%) were also rated high, 29 (26.6%) moderate, 15 (13.8%) very high and 2 (1.8%) low in electronic presentation. Proficiency of library staff seems to be very high in word processing more than every other basic ICT skills.

Table 3: Intermediate ICT Skills Possessed by Library Staff

Intermediate ICT Skills	V-High	High	Moderate	Low	V-Low	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Content Management	31(28.4%)	49(45%)	28 (25.7%)	2 (1.8%)	-	High
2. Document/Database management	28 (25.7%)	63(57.8%)	3(2.8%)	15 (13.8%)	-	High
3. Online Book Selection/Acquisition	41 (37.6%)	36 (33%)	18(16.5%)	14 (12.8%)	-	Very High
4. Online Copy Cataloging	53 (48.6%)	55 (50.5%)	1 (0.9%)	-	-	High
5. Use of Internet	74 (67.9%)	21(19.3%)	14 (12.8%)	-	-	Very High
6. Information Search Strategy	55(50.5%)	38 (34.9%)	15 (13.8%)	1 (0.9%)	-	Very High
7. Use of Library Software	56 (51.4%)	50 (45.8%)	3 (2.8%)	-	-	Very High

Source: Field Survey

In table 3 above, library staff were assessed on their level of proficiency with intermediate ICT skills; 49 (45%) respondents recorded high level of competency in content management of the library website/portal, which is the highest frequency, while 31 (28.4%) recorded a very high level of competency, followed by 28 (25.7%) who are moderate with their competency level and 2 (1.8%) who are found to be low in their level of competency. Also found to be competent in document and database management were 63 (57.8%) who were rated high in their level of competency and 28 (25.7%) very high, while 3 (2.8%) are moderately competent and 15 (13.8%) are rated low. In online book selection and acquisition, 41 (37.6%) are very competent, 36 (33%) are competent, 18 (16.5%) are moderate in their competency level while 14 (12.8%) are low in their level of competency. In online copy cataloging, 55 (50.5%) are rated high in their level of competency, which is the highest number of frequency, 53 (48.6%) are highly competent, and 1 (0.9%) moderate in competency level. In the use of internet, 74 (67.9%) are found to be very high in their level of competency followed by 21 (19.3%) who are high and 14 (12.8%) who are found to be moderately competent. In the use of search engines for information retrieval, 55 (50.5%) which has highest number of frequency are rated very high followed by 38 (34.9%) who are rated high and 15 (13.8%) moderate and 1(0.9%) rated low. And finally in the use of library software, 56 (51.4%) are rated very high followed by 50 (45.8%) who are rated high and 3 (2.8%) moderately proficient. Proficiency of library staff seems to be very high in the use of internet more than every other intermediate ICT skills.

Table 4: Advance ICT Skills Possessed by Library Staff

Advance ICT Skills	V-High	High	Moderate	Low	V-Low	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Programming (JAVA, HTML etc.)	13 (11.9%)	57 (52.3%)	17 (15.6%)	21 (19.3%)	1(0.9%)	High
2. Networking	53 (48.6%)	21 (19.3%)	19 (17.4%)	16 (14.7%)	-	Very High
3. Library Automation	27 (24.8%)	38 (34.9%)	16 (14.7%)	28 (25.7%)	-	High
4. Knowledge Taxonomy/Ontology	16 (14.7%)	35 (32.1%)	29 (26.6%)	29 (26.6%)	-	High

In table 4, library staff of the selected universities were rated on their level of competency in the use of advance ICT tools; in programming for software development and web design, 70 (64.2%), of staff (very high and high combine) were found to be competent in programming language, while 17 (15.6%) moderately competent and 22 (20.2%) when combining low and very low together are not competent. In networking, 74 (67.9%) of participants (very high and high combine) are found to be highly proficient and 19 (17.4%) moderately proficient while 16 (14.7%) are not competent. In library automation, 65 (59.7%) are highly competent when combining very high and high together and 16 (14.7%) been moderately proficient while 28 (25.7%) found not to be competent. In organization of digital information through hyperlinking, knowledge taxonomy, semantic networking and ontology, their level of competency drop drastically compare to other ICT skills mentioned above, as 51 (46.8%) are found to be competent when combining very high and high together and 29 (26.6%) also found to be moderately competent and 29 (26.6%) not found to be competent. Proficiency of library staff seems to be very high in networking more than every other advance ICT skills.

Level of Information and Communication Technology Competency Possessed by Library Staff (N=109)

Table 5: ICT Tools for Library Acquisition

ICT Tools	V-High	High	Moderate	Low	V-Low	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Online Selection/acquisition	43 (39.4%)	38 (34.9%)	28 (25.7%)	-	-	Very High
2. Preparation of order list using Office Suite Applications	43 (39.4%)	50 (45.9%)	16 (14.7%)	-	-	High
3. Preparing Accessioning List using Spreadsheet	41 (37.6%)	48 (44%)	3 (2.8%)	17 (15.6%)	-	High
4. Information Search Strategy	43 (39.4%)	50 (45.9%)	16 (14.7%)	-	-	High

Source: Field Survey

Table 5 above illustrates that library staff are competent in deployment of ICT tools for collection development in the library, as 43 (39.4%), 38 (34.9%), and 28 (25.7%) of library staff were rated very-high, high and moderate respectively in selection and acquisition of information online. 43 (39.4%), 50 (45.9%) and 16 (14.7%) of participants were ranked very high, high and moderate in preparing order list via office suite applications. Respondents that constitute 41 (37.6%), 48 (44%), 3 (2.8%) and 17 (15.6%) were rated very-high, high, moderate and low respectively on their level of competency in preparing accession list using spreadsheet. Participants

that were rated very high and high and moderate in the use of search engines for information search and information retrieval constitute 43 (39.4%), 50 (45.9%) and 16 (14.7%) respectively.

Table 6: ICT Tools for Cataloguing and Classification in the Library

ICT Tools	V-High	High	Moderate	Low	V-Low	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. online public access catalogue	59 (54.2%)	25 (22.9%)	25 (22.9%)	-	-	Very High
2. Content Creation/Management on the library website	41 (37.6%)	47 (43.1%)	5 (4.6%)	16 (14.7%)	-	High
3. Database Management	32 (29.4%)	57 (52.3%)	5 (4.6%)	15 (13.8%)	-	High
4. Preparing Metadata	30 (29.5%)	58 (53.2%)	6 (5.5%)	15 (13.8%)	-	High
5. Online Copy Cataloguing	55 (50.5%)	53 (48.6%)	-	1 (0.9%)	-	Very High
6. Knowledge Taxonomy	25 (22.9%)	62 (56.9%)	6 (5.5%)	16 (14.7%)	-	High
7. Semantic Networking	16 (14.7%)	58 (53.2%)	20 (18.3%)	15 (13.8%)	-	High
8. Knowledge Ontology	16 (14.7%)	70 (64.2%)	7 (6.4%)	16 (14.7%)	-	High
9. Library Management Software	42 (38.5%)	34 (31.2%)	31 (28.4%)	1 (0.9%)	1 (0.9%)	Very

Source: Field Survey

In table 6 above, participants were rated high in deployment of ICT tools for content management, database management, preparing metadata for electronic information resources, knowledge taxonomy, semantic networking and ontology- processes involved in knowledge organization (sometimes refers to as cataloguing and classification). They were also rated very high in the use library management software applications, online copy cataloguing as well as in open public access catalogue on library portal/website as analysis shows that 59 (54.2%), 25 (22.9%) and 25 (22.9%) of participants were respectively rated very high, high and moderate in the use of online open access catalogue (OPAC). They are also rated very high, high, moderate and low representing 41 (37.6%), 47 (43.1%), 5 (4.6%) and 16 (14.7%) respectively in content management. Their rating in database management includes, 32 (29.4%) very high, 57 (52.3%) high, 5 (4.6%) moderate and 15 (13.8%) low. Their competency levels in metadata range from 30 (29.5%), 57 (53.2%), 6 (5.5%) and 15 (13.8%) who are rated very high, high, moderate and low respectively. Participants rating in online copy cataloguing constituting very high are 55 (50.5%), high are 53 (48.6%) and 1 (0.9%) with low level of competency. In knowledge taxonomy, 25 (22.9%) are rated very high, 62 (56.9%) high, 6 (5.5%) moderate and 16 (14.7%) low level of competency. Participants ranking in semantic networking recorded 16 (14.7%) been rated very high, 58 (53.2%) high, 20 (18.3%) moderate and 15 (13.8%) low in competency. Competency in knowledge ontology shows participants that constitute 16 (14.7%), 70 (64.2%), 7 (6.4%) and 16 (14.7%) been rated very high, high, moderate and low respectively. Rating in the use of library software records 42 (38.5%), 34 (31.2%), 31 (28.4%), 1 (0.9%) and 1 (0.9%) been rated very high, high, moderate, low and very low in level of competency.

Table 7: ICT Tools for Reader Services

ICT Tools	V-High	High	Moderate	Low	V-Low	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Web 2 0 Tools	47 (43.1%)	32 (29.4%)	15 (13.8%)	15 (13.8%)	-	Very High
2. Online Registration of patron	72 (66.1%)	16 (14.7%)	7 (6.4%)	14 (12.8%)	-	Very High
3. Users interfaces on library website	43 (39.4%)	47 (43.1%)	4 (3.7%)	15 (13.8%)	-	High
4. Virtual help desk	55 (50.5%)	34 (31.2%)	6 (5.5%)	14 (12.8%)	-	Very High
5. E-Referencing	44 (40.4%)	46 (42.2%)	4 (3.7%)	15 (13.8%)	-	High

Source: Field Survey

It was illustrated in the table 7 above that library staff are more competent in the use of ICT tools for reference services as participants were rated very high in the use of Web 2.0 tools such as email, social networking sites, blogs and wikis via virtual help desk to delivered dynamic information service to users in time and space instantaneously as participants were rated very high, high, moderate and low constituting 47 (43.1%), 32 (29.4%), 15 (13.8%) and 15 (13.8%) respectively in the use of web 2.0. participants that constitute 72 (66.1%), 16 (14.7%), 7 (6.4%) and 14 (12.8%) are rated very high, high, moderate and low respectively in electronic registration of library users. Effectiveness in the use of user interface on library portal/website recorded 43 (39.4%), 47 (43.1%), 4 (3.7%) and 15 (13.8%) of participants been rated very high, high, moderate and low respectively. Virtual help desk (ask a librarian) recorded 55 (50.5%), 34 (31.2%), 6 (5.5%) and 14 (12.8%) of participants been rated very high, high, moderate and low. And finally in e-referencing, participants constituting 44 (40.4%), 46 (42.2%), 4 (3.7%) and 15 (13.8%) are rated very high, high, moderate and low respectively of their competency level.

Table 8: Sources from which Library Staff Acquire Information and Communication Technology Skills (N=109)

Sources of ICT Skills Acquisition	S-Agree	Agree	Undecided	Disagree	S-Disagree	Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Library Schools	24 (22%)	82 (75.2%)	1 (0.9%)	2 (1.8%)	-	Agree
2. Computer Training Centers	20 (18.3%)	86 (78.9%)	1 (0.9%)	1 (0.9%)	1 (0.9%)	Agree
3. Workshops and Seminars	35 (32.1%)	73 (67%)	1 (0.9%)	-	-	Agree
4. Qualification in computer science	66 (60.6%)	41 (37.6%)	1 (0.9%)	1 (0.9%)	-	Agree
5. On the job Training	41 (37.6%)	56 (51.4%)	-	12 (11%)	-	Agree
6. Personal Training/Self-study	40 (36.7%)	68 (62.4%)	-	1 (0.9%)	-	Agree
7. Web-based tutorial (YouTube, webinar)	18 (16.5%)	87 (79.8%)	4 (3.7%)	-	-	Agree
8. Friends and colleagues	17 (15.6%)	90 (82.6%)	1 (0.9%)	1 (0.9%)	-	Agree

Source: Field Survey

In table 8 above, participants were asked their level of agreement and disagreement with sources where ICT skills could be acquired, the result revealed that respondent agree with sources like; library schools, computer training center, attending workshops and seminars, personal training, watching tutors on YouTube and attending webinars online as well as receiving training from friends and colleagues and emphases on additional qualification in computer science.

Respondents constituting 24 (22%) strongly agreed with library schools as source of ICT skills acquisition, 82 (75.2%) agreed, 1 (0.9%) give no option, and 2 (1.8%) disagreed. Participants constituting 20 (18.3%) strongly agreed with computer training centers as another source of ICT skills acquisition, 86 (78.9%) agreed, 1 (0.9%) give no option, 1 (0.9%) disagree and 1 (0.9%) strongly disagree. Respondents constituting 35 (32.1%) strongly agreed that attending workshops and seminars as another source of ICT skills acquisition, 73 (67%) agreed and 1 (0.9%) give no option. Participants constituting 66 (60.6%) strongly agreed on additional qualification in computer science as source of ICT skills acquisition, 41 (37.6%) agreed, 1 (0.9%) give no option and 1 (0.9%) disagreed. Respondents constituting 41 (37.6%) strongly agreed with on the job training as another sources of ICT skills acquisition, 56 (51.4%) agreed, and 12 (11%) disagreed. 40 (36.7%) strongly agreed with personal training for ICT skills acquisition, 68 (62.4%) and 1 (0.9%) disagree. Participants constituting 18 (16.5%) strongly agreed with watching tutorials on the web (YouTube and webinars) as sources of ICT skills acquisition, 87 (79.8%) agreed, and 4 (3.7%) give no option. Respondents constituting 17 (15.6%) strongly agreed with guidance from friends and colleagues, 90 (82.6%) agreed, 1 (0.9%) give no option and 1 (0.9%) disagreed.

Table 9: Constraints to Information and Communication Technology Skills Acquisition (N=109)

Constraints	S-Agree Agree Undecided Disagree S-Disagree					Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Tight working schedule	42 (38.5%)	52 (47.7%)	-	15 (13.8%)	-	Agree
2. Lack of Incentive motivation	45 (41.3%)	55 (50.5%)	6 (5.5%)	3 (2.8%)	-	Agree
3. Inadequate training	53 (48.6%)	46 (42.2%)	6 (5.5%)	4 (3.7%)	-	Strongly Agree
4. Inadequate library curricula	55 (50.5%)	34 (31.2%)	5 (4.6%)	15 (13.8%)	-	Strongly Agree
5. Lack of interest	30 (27.5%)	32 (29.4%)	2 (1.8%)	45 (41.3%)	-	Disagree
6. Personal trait	14 (12.8%)	34 (31.2%)	5 (4.6%)	30 (27.5%)	26 (23.9%)	Agree
7. Lack of experience	26 (23.9%)	36 (33%)	3 (2.8%)	32 (29.4%)	12 (11%)	Agree
8. Lack of Awareness	20 (18.3%)	42 (38.5%)	4 (3.7%)	29 (26.6%)	14 (12.8%)	Agree

Source: Field Survey

In table 9 above, participants were asked their level of agreement and disagreement with some constraints to ICT skills acquisition for library staff: result of survey shown that 87.2% (strongly agreed and agreed combine) of participants attested to tight working schedule as constraint to ICT skills acquisition while remaining 13.8% disagreed.

Participants representing 91.8% (strongly agreed and agreed combine) support the notion that lack of motivation and incentive on the part of management constitute constraint to skills acquisition, 5.5% give no options while 2.8% disagree with the notion. Respondents constituting 90.8% (when strongly agreed and agreed are combine together) emphasized on inadequate ICT training as another constraint to ICT skills acquisition, 5.5% give no option and 3.7% disagree. 81.7% of respondents (when strongly agreed and agreed are combine together) pinpointed inappropriate library science curriculum as a constraint to ICT skill acquisition for library staff, 4.6% give no option while 13.8% disagree. Respondents, representing 41.3% disregard lack of interest on the part of library staff as constraint to ICT skills acquisition as most of them are ready and open to acquiring more ICT skills, 27.5% strongly agree, 29.4% agree, and 1.8% give no option. 44% of respondents (strongly agreed and agreed combine) attested to personal trait as

another form of constraint to ICT skills acquisition, 4.6% give no option, 27.5% disagreed and 23.9% strongly disagreed. 56.9% of respondents (strongly agreed and agreed combine) attested to lack of experience on the part of library staff as constraint to ICT skills acquisition, 2.8% make no decision, 29.4% disagree and 11% strongly disagree. 56.8% of respondents (strongly agreed and agreed combine) attested to lack of awareness as another form of constraints to ICT skills acquisition, 3.7% give no option, 26.6% disagree and 12.8% strongly disagree.

Table 10: Challenges Associated with the Use of ICT Tools in the Library (N=109)

Challenges	S-Agree Agree Undecided Disagree S-Disagree					Remarks
	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Inadequacy ICT infrastructure	54 (49.5%)	34 (31.2%)	2 (1.8%)	18 (16.5%)	1 (0.9%)	Strongly Agree
2. Lack of staff training/development	69 (63.3%)	32 (29.4%)	4 (3.7%)	3 (2.8%)	1 (0.9%)	Strongly Agree
3. Lack of technological know-how	39 (35.8%)	44 (40.6%)	6 (5.5%)	18 (16.5%)	2 (1.8%)	Agree
4. Limited budget for the library	58 (53.2%)	46 (42.3%)	1 (0.9%)	2 (1.8%)	2 (1.8%)	Strongly Agree
5. Conservative library staff	31 (28.4%)	43 (39.4%)	2 (1.8%)	5 (4.6%)	28 (25.7%)	Agree
6. Technophobia	7 (6.4%)	63 (57.8%)	17 (15.5%)	7 (6.4%)	15 (13.8%)	Agree
7. Lack of incentive for innovation	54 (49.5%)	44 (40.7%)	4 (3.7%)	6 (5.5%)	1 (0.9%)	Strongly Agree
8. Epileptic power supply	35 (32.1%)	56 (51.4%)	16 (14.7%)	2 (1.8%)	-	Agree
9. Library curriculum is not adequate	20 (18.3%)	30 (27.5%)	17 (15.6%)	28 (25.7%)	14 (12.8%)	Agree

Source: Field Survey

In table 10 above, participants were asked their level of agreement and disagreement with challenges associated with the use of ICT tools in the library, result of survey revealed that most respondents constituting 80.7% (strongly agreed and agreed combine) consent to the fact that inadequate ICT infrastructure in the library is one of the challenges militating against the use of ICT tool in the library, 1.8% give no option, while 17.4% (disagreed and strongly disagreed combine) differ on the notion; 92.7% of respondents (strongly agreed and agreed combine) concur that lack of adequate provision for staff training and development is a major challenge to use of ICT tool in the library, 3.7% give no option while 3.7% (disagreed and strongly disagreed combine) disputed the notion.

Respondents that constitute 76.4% (strongly agreed and agreed combine) acquiesce that lack of technological know-how posed challenge to use of ICT tools in the library, 5.5% are indifference while 18.3% (disagreed and strongly disagreed combine) dissent; limited and tighter budget was agreed upon by 95.5% of participants (strongly agreed and agreed combine) as another form of constraint, 0.9% was neutral while 3.6% of respondents (disagreed and strongly disagreed combine) altercate the notion; inability of library staff to embraced change was agreed upon by 67.8% of the respondents (strongly agreed and agreed combine), 1.8% are indifference while 30.3% (disagreed and strongly disagreed combine) disapproved the notion; fear of technology on the part of library staff was agreed upon by 64.2% of respondents (strongly agreed and agreed combine), 15.5% remain indifferent while 20.4% dissent (disagreed and strongly disagreed combine).

Participants representing 90.2% contend (strongly agreed and agreed combine) that lack of motivation on the part of management also militate against efficient use of ICT tools in the library, 3.7% remain indifferent while 6.4% disapproved (disagreed and strongly disagreed combine); epileptic power supply is another challenge to use of ICT in the library as agreed upon (strongly agreed and agreed combine) by 83.5%, 14.7% give no option while 1.8% disagree; participants representing 45.8% (strongly agreed and agreed combine) consent to inadequate library science curriculum as a challenge to utilization of ICT tools in the library, 15.6% remain inconclusive while 38.5% (disagreed and strongly disagreed combine) dispute such notion.

Discussion of Findings

Findings from current study categorized Information and Communication Technology skills into three; basic, intermediate and advance skills level, which is in congruence with what is obtainable in the literature (Akoojee, Arends & Roodt, 2008; Loties, Mathee & Alenxander, 2010; Atasoy, Banker & Pavlou, 2012) where ICT skills was also categorized into lower/basic ICT skills, medium/intermediate ICT skills and higher level/advance ICT skills. Current study demonstrated high level of library staff ICT competency in basic skills such as word processing, data analysis, electronic presentation as well as digitization of library information resource through scanning and uploading. They were also found to be proficient in intermediate ICT skills such as use of internet, library management software, search engines, database management, and online selection and acquisition of library materials. They were also not found wanting in the level of proficiency with the use of advance ICT tools such as programing, networking, hyperlinking, knowledge taxonomy and library automation, but not as competent as they were with basic and intermediate ICT skills, as there is still room for improvement. This study is in advocacy with Babu, Vinyagamorothy and Gopulakrishan (2007) result of investigation into the ICT skills among librarians, which indicated that librarians had acquire considerable basic skills in information and communication technology (ICT) but they needed to concentrate more on network-based services and digital library services. Just in partial agreement to the current study, Batool and Ameen (2010) study of technological skills possessed by academic librarian demonstrated proficiency in computer hardware and word processing.

Findings from the study revealed library staff to be proficient in deployment of ICT tools in performing library operations such as; collection development through online selection and acquisition of information resources, organization of knowledge through hyperlinking, semantic networking and knowledge taxonomy, as well as management of library databases. But, it obvious that library staff are more competent in deploying ICT tools in delivery of reference services most especially through web 2.0 tools such as; email, social media, blogs, wikis and many more, all combined in what is called virtual help desk.

The study reveals sources from which library staff acquire ICT skill to include library schools, guidance from friends and colleagues, attending webinars and watching tutors on YouTube, attending workshops and seminars as well as self-training/personal study. But library staff consider acquiring additional qualification in computer science as a major source of ICT skills acquisition, since library schools had failed to adequately training librarian the necessary ICT skills required in today information society.

Identified constraints to ICT skills acquisition for library staff include tight working schedule, lack of motivation, personal trait, lack of experience, inadequate ICT training and inappropriate library science curriculum for adequate ICT training and competency. This is in

agreement with Mathew and Baby (2012) study of technological skills for academic librarians in universities in Kerala, India, which accentuated that inadequate training, lack of infrastructure, lack of support from management, lack of coordination among library staff as well as lack of initiation from professional association to conduct specialized training programs. Participants disagree with lack of interest on the part of library staff as a constraint to ICT skills acquisition, which is contrary to Ayoku and Okafor (2015) study of ICT skills acquisition and competencies among librarians in Nigerian universities, which indicated lack of interest as one of constraint to ICT skills acquisition. The reason for disparity of result may be owing to the national and broad view of formal study whose finding cut across the whole country compare to current study that was limited to a state (Kwara state) out of the thirty six (36) states in Nigeria.

Analysis of challenges militating against the use ICT tools in the library emphasize lack of adequate ICT infrastructure, lack of provision for staff training and development, limited and tighter budget, lack of motivation, lack of technological know-how, inability of library staff to embrace change, fear of technology, epileptic power supply and inadequate ICT training.

Conclusion

Ratiocination from the study was based on interpretation of data and discussions of findings. Sequitur to that, it was deduced that library staff in the selected university libraries are highly proficient in both basic ICT skills (such as: word processing, statistical analysis, electronic presentation as well as scanning and uploading for digitization of library resources) and intermediate ICT skills (library management software, database management, content management on library website/portal, use of internet, online selection and acquisition of library materials, information search using search engines as well as copying bibliographical information of materials online), but their competency in advanced ICT skills (such as: programming language, networking, library automation and knowledge taxonomy) is not as great as it is in basic and intermediate ICT skills as more still need to be done on their proficiencies on programming languages (for software development and website design), library automation and knowledge organization through hyperlinking, ontology, semantic networking and taxonomy.

Verdict from the findings illustrated high level of proficiency on the part of library staff in deployment of ICT tool for activities and services in the library ranging from library acquisition, cataloging and classification, but they seems to be more competent in deploying ICT tools for reference services.

Resolve from the findings identified sources of ICT skills acquisition to include: library schools, computer training center, workshops and seminars, personal training, attending webinars and watching illustrations on YouTube as well as receiving guidance from friends and relatives. But participant emphasized more on acquiring additional qualification in computer science. Tight working schedule, lack of motivation, personal trait, lack of experience, inadequate ICT training and inappropriate library science curriculum for adequate ICT training and competency, were some of the constraints confronting library staff to acquire adequate ICT skills.

Illation from the study identify challenges militating against effective utilization of information and communication technology in the library to include lack of adequate ICT infrastructure, lack of provision for staff training and development, limited and tighter budget, lack of motivation, lack of technological know-how, inability of library staff to embrace change, fear of technology, epileptic power supply and inadequate ICT training.

Recommendations

Sequence to discussion of findings and cogitations deduced from the assessment of ICT competencies of library staff in selected universities in Kwara state, the following recommendations were made:

The governing councils and management of the selected universities should make available adequate information infrastructure in their libraries and as well allocate fund for staff training and development.

Library staff with higher level of ICT skills should not feel reluctant to share such knowledge with colleagues, and inexperience staff, “newbies” as well should be ready to receive training by embraced change and not been conservative.

Library schools should initiate effort to revamp and redesign library and information science curriculum to one that will accommodate development in information and communication technology.

Professional bodies like Nigeria Library Association (NLA) and regulatory bodies like Librarians’ Registration Council of Nigeria (LRCN) should initiate specialized seminars or workshops that will focus on training librarians for ICT competencies require for dynamic information services of today information society.

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