

CONTRIBUTIONS OF LIBRARIANS' ICT COMPETENCE ON EFFECTIVE SERVICE DELIVERY IN COLLEGES OF EDUCATION IN NORTH CENTRAL, NIGERIA

BY

Ohanado, Clara Chibuzor:

Department of Library, Federal College of Education, Okene;

E-mail: claraohanado20@gmail.com

Abstract

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 examined the Contributions of Librarians' ICT Competence on Effective Service Delivery in Colleges of Education in North Central, Nigeria. Descriptive survey research design was adopted for the study. The population of the study consists of 63 professional librarians from 9 selected colleges of education in North-central Nigeria. The census of 63 professional librarians in the 9 colleges of education libraries constituted the sample size for the study. The researcher designed questionnaire title 'Contributions of Librarians' ICT Competence on Effective Service Delivery in Colleges of Education (CLICTCESDCOE)' was used for data collection. The draft questionnaire was face and content validated by three experts from the Department of Library and Information Science, University of Nigeria Nsukka. Also, to establish the reliability of the instrument, Cronbach Alpha was used and yielded a reliability coefficient of 0.895. The data for the study were collected by direct administration by the researcher with the help of three research assistant. Out of the 63 copies of the questionnaire administered, 60 copies were retrieved, completely filled and used for the study representing about 95% rate of return. The data collected were analyzed using frequency distribution, mean and standard deviation. The study revealed that 20 areas in which the acquisition of ICT competencies have contributed to effective service delivery of librarians, 10 methods by which librarians acquired ICT competencies, 10 problems that are associated with acquisition of ICT competencies by librarians and 7 strategies for enhancing the acquisition of ICT competencies for effective service delivery in Colleges of education libraries in north-central Nigeria. Arising from the result, the study recommended that stakeholders and the managements of the colleges of education should ensure adequate provision for ICT facilities for use towards to ensure effective acquisition of ICT competencies for service delivery in the libraries.

Keywords: Librarians, ICT Competence, Effective Service Delivery, Colleges of Education

Introduction

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. 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 ICT facilities in performing library functions is becoming very useful in the libraries because it makes service delivery to the user faster and more efficient. Seena and Sudhier-Pillai (2014) emphasized that early 70s usher in the evolution of library automation process and late 90s, the invention of internet brings 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. 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 mean 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 Library and Information Service (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 (Okoye, 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. In reflection to that, 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. 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 explores 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 call 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.

But library users are overwhelmed by information overload and they are in need of reliable, accurate, and quick information (Gbaje, 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). 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 significance ICT competency gap was identified among LIS professional 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 compare 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 Library and Information Services (LIS) professionals in this part of the world to have an appreciable level of ICT competencies.

Problem Statement

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. 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 North Central, 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 the Contributions of Librarians' ICT Competence on Effective Service Delivery in Colleges of Education in North Central, Nigeria.

Objectives of the study

The main objective of this study was to examine of the Contributions of Librarians' ICT Competence on Effective Service Delivery in Colleges of Education in North Central, Nigeria. Specifically, the study:

1. Determined the extent to which ICT competencies for librarians have contributed for effective service delivery.
2. Identify methods by which librarians acquired ICT competencies in the libraries.
3. identified problem associated with acquisition of ICT competencies by librarians in libraries.
4. Determined strategies for enhancing the acquisition of ICT competencies for effective service delivery in the libraries.

Research Questions

In line with the specific purposes of the study, the following questions guided the study:

1. To what extent do ICT competencies for librarians have contributed for effective service delivery in the libraries?
2. What are the methods by which librarians acquired ICT competencies in the libraries?
3. What are the problems associated with acquisition of ICT competencies by librarians in the libraries?
4. What are the strategies for enhancing the acquisition of ICT competencies for effective service delivery in the libraries?

Methodology

The research design for this study was descriptive survey. Nworgu (2015) pointed out that the purpose of description survey is to systematically describe the facts, qualities, or characteristics of a given population, event or area of interest regarding the problem under investigation. The population of the study consists of professional librarians from colleges of education in North-central Nigeria. The census of 63 professional librarians in the colleges of education libraries constituted the sample size for the study. This is based on the recommendation of Nworgu (2015), that when the population of a study is small, all the population could be used.

A researcher designed questionnaire title “Contributions of Librarians’ ICT Competence on Effective Service Delivery in Colleges of Education (CLICTCESDCOE)” was used for data collection. The questionnaire was made up of four (4) sections A-D. The section A had 20 items on extent to which the ICT competencies has contributed to service delivery, section B contained 10 items on the methods of ICT skill acquisition, section C has 10 items for collecting data on problems of ICT competencies while section D has 7 items which focused on strategies for enhancing ICT competencies. The questionnaire was based on a four-point rating scale response mode for section A - High Extent (HE) = 4, Moderate Extent (ME) = 3, Low Extent (LE) = 2 and No Extent (NE) = 1.; section B - Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2 and Strongly Disagreed (SD) = 1; section C - Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2 and Strongly Disagreed (SD) = 1 and section D - Very Appropriate (VA) = 4, Appropriate (A) = 3, Fairly Appropriate (FA) = 2 and Not Appropriate (NA) = 1.

The draft of the questionnaire was face and content validated by three research experts from the Department of Library and Information Science, University of Nigeria Nsukka. The experts corrected wrongly written items, grammatical errors and other suggestions which improved the quality of the instrument. Cronbach Alpha reliability method was used to determine the internal consistency of the instrument (questionnaire). Fifteen (15) copies of the questionnaire were trial tested on 15 professional librarians in colleges of education in north-west Nigeria. Their responses were analyzed using Cronbach Alpha and yielded a reliability coefficient of 0.895.

The researcher with the assistance of three research assistants that were colleagues in some states helped in administering copies of the questionnaire to the respondents. 60 copies of the questionnaire were completely filled, returned and used for the study. The data collected were be analyzed using a frequency table and mean score for answer to the research questions. A combination of four-point rating scale shall be used to determine the mean scores of respondent’s opinion on issues raised. The benchmark used for analyzing the mean was 2.5. Any item that ranks above 2.50 was regarded as positive and accepted while those below 2.50 were regarded as negative and rejected.

Results

Research Question One: To what extent do ICT competencies for librarians have contributed for effective service delivery in the libraries?

Table 1: Mean Ratings of the Responses of Respondents on the Extent to Which ICT Competencies Possessed Have Contributed to Effective Service Delivery in the Libraries

(n = 60)

SN	Extent of Contribution of ICT Competencies to Service Delivery	\bar{X}	SD	Rmks	Ranking
1	The skills acquired in ICT has generally enhanced library management and administration	3.75	0.43	HE	
2	ICT competencies acquired had helped displaying and carrying out automated cataloguing	3.75	0.53	HE	
3	The internet service to users has further been boosted by the ICT competencies acquired by librarians.	3.65	0.48	HE	
4	ICT competencies acquired had improved staff service delivery in uploading and retrieving the needed information at all times.	3.50	0.50	HE	
5	Ability to access library and research materials from remote locations	3.35	0.48	HE	
6	ICT competencies acquired has help in electronic document delivery	3.55	0.50	HE	
7	The digitization of library has achieved its aims and objectives by the ICT competencies of the staff.	3.60	0.49	HE	

8	ICT competencies acquired has helped in a great deal in circulation section of the library	3.35	0.66	HE
9	Inter-library cooperation and lending has been made easy by the acquisition of ICT competencies by librarians.	3.62	0.49	HE
10	Online public access catalogue (OPAC) is made easy with the acquisition of ICT competencies by library staff.	3.75	0.53	HE
11	The assessment of off-line resources by librarian has been boosted by their competencies in ICT.	3.43	0.49	HE
12	ICT competencies acquired by librarians has enhanced their participation and service delivery in video conferencing	3.85	0.36	HE
13	The acquisition of ICT competencies by librarians has contributed to their use of computers for official and personal work.	3.45	0.50	HE
14	ICT competencies acquired by librarians had enhanced the assistance they render to library users in need of help.	3.23	0.40	HE
15	Knowledge of existence and acquisition of some basic skills on how to locate such materials and information is now assured by ICT competencies.	3.65	0.58	HE
16	ICT competencies acquired had helped in having right approach to reference services in the library.	3.33	0.46	HE
17	The establishment and maintenance of catalogue database and Online cataloguing by librarians are now more effective by ICT competencies of the librarians.	3.35	0.68	HE
18	Resource sharing service among libraries has further been enhanced by acquisition of ICT competencies of library staff.	3.65	0.48	HE
19	Virtual reference services in libraries are more effective with ICT competencies of the library staff.	3.45	0.50	HE
20	Serial management services in libraries are more effective with ICT competencies of the library staff.	3.55	0.50	HE

Note: X = Mean; SD = Standard Deviation; HE = High Extent; n = number of respondents.

The data presented in Table 1 showed that the mean ratings of all the 20 items had their mean values ranged from 3.23 to 3.85 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicated that the 20 identified items are aspects in ICT competencies have to a high extent contributed to effective service delivery of librarians in Colleges of education libraries in north-central Nigeria. The standard deviation values of the 20 items ranged between 0.36 to 0.68 which indicated that the responses of the respondents on the items are close to one another and to the mean.

Research Question Two: What are the methods by which librarians acquired ICT competencies in the libraries?

Table 2: Mean Ratings of the Responses of Respondents on the Methods by Which Librarians Acquired ICT Competencies in College of Education Libraries (n = 60)

SN	Methods of Acquiring ICT Competencies	\bar{X}	SD	Rmks	Ranking
1	Formal Education	3.33	0.46	A	
2	Informal Education	3.25	0.63	A	
3	Training on-the-job	3.25	0.53	A	
4	Attending IT Programmes	3.63	0.49	A	
5	Attending workshops / seminars and conferences	3.53	0.50	A	
6	Short courses	3.83	0.40	A	
7	Job rotation	3.55	0.59	A	
8	Internship	3.55	0.50	A	

9	Teleconferencing	3.79	0.66	A
10	Through self study	3.25	0.53	A

Note: X = Mean; SD = Standard Deviation; A = Agreed; n = number of respondents.

The data presented in Table 2 revealed that the mean ratings of all the 10 items had their mean values ranged from 3.25 to 3.83 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicated that the 10 identified items are methods by which librarians acquired ICT competencies in Colleges of education libraries in north-central Nigeria. The standard deviation values of the 10 items ranged between 0.40 to 0.66 which indicated that the responses of the respondents on the items are close to one another and to the mean.

Research Question Three: What are the problems associated with acquisition of ICT competencies by librarians in the libraries?

Table 3: Mean Ratings of the Responses of Respondents on the Problems Associated with Acquisition of ICT Competencies by Librarians in the Libraries (n = 60)

SN	Problems Associated with ICT Competencies of Librarians	\bar{X}	SD	Rmks	Ranking
1	Lack of Fund	3.76	0.42	A	
2	Lack of ICT facilities	3.58	0.56	A	
3	Constant change in the ICT industry	3.61	0.49	A	
4	Lack of technical background among colleges of education administrators	3.73	0.54	A	
5	Administrators lack of interest in library knowledge	3.58	0.70	A	
6	Library management lack of interest in upgrading the ICT competencies of librarians	3.63	0.48	A	
7	Lack of partnership with highly computerized institutions	3.56	0.47	A	
8	Lack of ICT policy	3.78	0.51	A	
9	Overload of working hours	3.51	0.45	A	
10	Poor power supply	3.76	0.52	A	

Note: X = Mean; SD = Standard Deviation; A = Agreed; n = number of respondents.

From the data presented in Table 3, it was revealed that the mean values of all the 10 items ranged from 3.51 to 3.78 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicated that the 10 identified items are problems associated with acquisition of ICT competencies by librarians in Colleges of education libraries in north-central Nigeria. The standard deviation values of the 10 items ranged between 0.42 to 0.70 which indicated that the responses of the respondents on the items are close to one another and to the mean.

Research Question Four: What are the strategies for enhancing the acquisition of ICT competencies for effective service delivery in the libraries?

Table 4: Mean Ratings of the Responses of Respondents on the Strategies for Enhancing the Acquisition of ICT Competencies for Effective Service Delivery in the Libraries (n = 60)

SN	Strategies for Enhancing ICT Competencies of Librarians	\bar{X}	SD	Rmks	Ranking
1	Colleges of education libraries and their authorities should press for more funds from government	3.78	0.58	A	
2	They should seek for alternative forces of fund for ICT projects	3.61	0.69	A	
3	They should continually organize ICT training course for librarians	3.53	0.70	A	
4	They should monitor technological changes and development as well as monitor information preferences of their patrons	3.60	0.59	A	

5	Administrators should always go for constant ICT training to keep an update on ICT	3.48	0.69	A
6	ICT training policy should be mapped out in every college library	3.55	0.81	A
7	Government should provide solar back-ups in every college library	3.43	0.87	A

Note: X = Mean; SD = Standard Deviation; A = Agreed; n = number of respondents.

The data presented in Table 4 showed that the mean ratings of all the 7 items had their mean values ranged from 3.43 to 3.78 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicated that the 7 identified items are strategies for enhancing the acquisition of ICT competencies for effective service delivery in Colleges of education libraries in north-central Nigeria. The standard deviation values of the 7 items ranged between 0.58 to 0.87 which indicated that the responses of the respondents on the items are close to one another and to the mean.

Discussion

Extent to which ICT Competencies of Librarians have Contributed to Service Delivery: This study discovered that the ICT competencies of librarians has further contributed to effectiveness of their service delivery through: acquisition of skill in ICT has generally enhanced library management and administration, ICT competencies acquired had helped displaying and carrying out automated cataloguing, the internet service to users has further been boosted by the ICT competencies acquired by librarians, ability to access library and research materials from remote locations, ICT competencies acquired has help in electronic document delivery, the digitization of library has achieved its aims and objectives by the ICT competencies of the staff, ICT competencies acquired has helped in a great deal in circulation section of the library, inter-library cooperation and lending has been made easy by the acquisition of ICT competencies by librarians, ICT competencies acquired by librarians had enhanced the assistance they render to library users in need of help and ICT competencies acquired had helped in having right approach to reference services in the library among others.

This finding collaborated the work of Foley (2016) and Adekomi (2006) found that the contribution and relevance of ICT platform in teaching and research activities to include that it removal of age barrier, distance, and time constraints from any learning process and provides effective library services, makes for interactive learning, using a learner centred and activity oriented teaching approach, widened access to education through distance learning research resources, it energizes the students encourages deeper understanding about data collection, saves time on measuring and recording, and helps in analysis, facilitates communication, increase access to learning for students with special educational needs, stimulate a wide range of scientific phenomenon and generally motivate student, develop solving capabilities and aid deeper understanding. While corroborating the contribution of ICTs as found out by this study, Foley (2016) also reported that to work or study in a modern university is to work in a digital ecosystem where staff, faculty and students presume ubiquitous internet access through free Wi-Fi on campus grounds, in the library, canteens, halls of residence at home and even on the sport ground or bust stops. Emiri (2015) noted that the impact of electronic information resources was visible from the decrease in number of printed journals has increased. The printed material is being quickly replaced by the electronic resources. The study amongst several others recommended that the library should involve the university academic departments in the selection of electronic information resources, so that the required journals can be easily accessed.

Methods by which Librarians Acquired ICT Competencies in the Libraries: This study identified methods by which librarians acquired ICT competencies to include: formal education, informal education, training on-the-job, attending IT programmes, attending workshops / seminars and conferences, short courses, job rotation, internship, teleconferencing and through self-study. The finding of this study agreed with the finding of Sajjad (2011) who investigated the effective teaching methods at higher education level in Iraq

and found out that informal and formal teaching methods, lecture, group discussion, individual presentation, assignments, brainstorming, symposium, role play, p conferences, short courses, problem based learning and case study are the most effective methods for instructional delivery. The present study also agreed with the findings of Ugo (2015) who in a similar study identified the relevant teaching methods for vocational subjects to include: problem-based learning, conferences, short courses, planned repetition, video conference, instructor-led-classroom, demonstration method, discussion method, lecture method, discovery methods, role playing, project method and questioning method that involves the use of provocative answerable questions that leads to learners' active participation among others. Teaching methods serve as medium in which teachers transfer planned instruction to learners.

Problems Associated with Acquisition of ICT Competencies by Librarians in the Libraries: This study identified the problems associated with acquisition of ICT skills among librarians to include: lack of fund, lack of ICT facilities, constant change in the ICT industry, lack of technical background among colleges of education administrators, administrators lack of interest in library knowledge, library management lack of interest in upgrading the ICT competencies of librarians, lack of partnership with highly computerized institutions, lack of ICT policy, overload of working hours and poor power supply.

This finding is in agreement with the findings of Ssekakubo, Suleman and Marsden (2011) in their study titled "issues of adoption: have E-learning management systems fulfilled their potential in developing countries and the authors found that some probable causes of failure of E-learning management adoption in the countries to include; high ICT illiteracy rates among the student commodity, low comfort levels with technology, poor marketing strategies, ineffective maintenance strategies and insufficient user/technical support, Internet accessibility and knowledge gap between LMS stakeholders; which is corroborated with the result of the present study. The result of this study also conformed with the result of Lawal, Bassey and Ani (2008) who found that the constraints and hindrances such as insufficiency of resources to be shared, inadequate funds, communication bottlenecks, absence of relevant ICT facilities, epileptic power supply, lack of union catalogue and absence of a national policy on resource sharing were identified as obstacles in the way of efficient and effective resource sharing among law libraries in Nigeria. Ukachi (2010) who carried out a study on "awareness and utilization of open source software in Nigerian Libraries found that there are some impediments such as managements insensitivity to the relevance of the software, fear of service support problem, and non-availability of internet access in the libraries to enhance downloading of software. In a similar vein, Gbaje (2007a) identified the problems of ICT usage to include: misconceptions of what constitute a virtual library; absence of basic information infrastructure; poor library implementation; lack of web-technologies, skilled digital systems librarians, poor funding and computer-phobia and inadequate resources for digitalization among others as obstacles in the way of the effective implementing of the National virtual library project.

Strategies for Enhancing Acquisition of ICT Competencies by Librarians: The finding of this study identified the strategies for enhancing acquisition of ICT competencies by librarians to include: colleges of education libraries and their authorities should press for more funds from government, seeking for alternative forces of fund for ICT projects, continually organize ICT training course for librarians, monitoring technological changes and development as well as monitor information preferences of their patrons, administrators should always go for constant ICT training to keep an update on ICT, ICT training policy should be mapped out in every college library and government should provide solar back-ups in every college library. The findings of this study supported that of Tarus, Gichoya and Muumbo (2015) in their study on challenges of implementing e-learning in Kenya recommended expansion of ICT e-learning infrastructure to facilitate the access to e-learning by students, teaching staff and other stakeholders through allocation of more resources towards ICT and e-learning infrastructural development, prioritization of ICT and e-learning in budgetary allocation like other core activities of the university, reduction in the cost of Internet bandwidth to make it more affordable to universities. Gbaje (2007b) in a desk study on implementing a national virtual library for higher institutions in Nigeria examined the

virtual library project initiatives suggested improvements in the basic ICT infrastructure; increased capacity building for librarians and other information professionals who should learn and retool in information and web development technologies through professional development conferences and workshops. The study also purposed shift in emphasis from ownership to access as the high costs of both hardware and software and lack of web-technology skilled librarians encumbered the formation of library consortium which is a critical factor in the building of a successful virtual library project.

Conclusion

This study investigated ICT competencies of librarians for effective service delivery of colleges of education libraries in North Central of Nigeria. The study adopted survey research design in sampling the opinions of librarians across colleges of education in the study area. From the data collected and analysed, the study found that 13 out of the 22 identified library services are delivered by colleges of education libraries in north-central Nigeria having their percentage values greater than 50% while the remaining 9 services neither were nor provided by the libraries. This study also identified 20 areas in which the acquisition of ICT competencies has contributed to effective service delivery of librarians, 10 methods by which librarians acquired ICT competencies, 10 problems that are associated with acquisition of ICT competencies by librarians and 7 strategies for enhancing the acquisition of ICT competencies for effective service delivery in Colleges of education libraries in north-central Nigeria.

Through an effective acquisition of ICT competencies by librarians, lecturers and students who constitute the users in academic libraries in tertiary institutions will have access to online information resources and services. It is imperative to state that if the library staff ICT competency needs are met, they will be better equipped carry out the library duties efficiently. This will improve the organization of services in academic libraries. The finding that many library staff would have preferred to pass through library school to acquire ICT Competency training shows that most library schools do not possess adequate quantity and quality of facilities to carry it out such training.

Recommendations

Based on the findings made and conclusions drawn from the study, the following recommendations were made for implementation:

1. Stakeholders in the managements of colleges of education should ensure adequate provision for ICT facilities for use towards to ensure effective acquisition of ICT competencies for service delivery in the libraries.
2. There should be capacity building training for technical-know-how of staff on the use of ICT facilities for skill update in effective service delivery in colleges of education in the study area.
3. That the problems of inadequate funding should be properly addressed by the government and school authority for effective provision and in-service training of librarians in colleges of education.
4. There should be more dedication to funding of staff for sponsored into further studies, workshops and conference both locally and internationally for ICT skills acquisition for service delivery.

References

- Adekomi, A. A. (2006). *The use of internet in the teaching of adults*. Ondo: Macmillan
- Ashcroft, L. (2004). Developing Competencies, Critical analysis and personal transferable skills in future information and communication professionals. *Library Review*, 52(2): 82-83
- Ashcroft, L. & Watts, C. (2005). ICT skills for information professionals in developing Countries: perspectives from a study of electronic information environment in Nigeria. *IFLA Journal* 31(1), 6-12.

- Emiri, O. T. (2015) Digital literacy skills among librarians in university libraries in the 21st century in Edo and Delta state, Nigeria. *International Journal of Science and Technology Research*. 4(8), 153-159
- Faboyinde, E. O (2008). *The state of Information and Communication Technology (ICT) in selected libraries in Lagos and Ibadan metropolis*. In Libraries: Dynamic engines for the knowledge and information society. Nigerian Library Association 44th Annual National conference and AGM. National centre for Women Development, Abuja
- Foley, M. (2016). The role and status of National Research and Education Networks in Africa. *Salaam library journal*, 10(1&2), 126- 35.
- Gbaje, E. (2007a). Implementing a national virtual library for higher institutions. *Nigeria Libraries*. 17(2) 1-15.
- Gbaje, E. S. (2007b). Implementing a National Virtual library for Higher Institutions in Nigeria Library and information. *Science Research Electronic Journal*, 7(2).
- Istekor, V. O. & James, J. I. (2012). Influence of digital literacy on career progression and work motivation of academic library staff in south-west, Nigeria. *Library Philosophy and Practice*. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2029&context=libphilprac>.
- Igun, S. E. & Adogbeji, O. B. (2007). Study habits of post-graduate students' in selected Nigerian universities. *Library Philosophy and Practice*. Retrieved from <https://www.webpages.uidaho.edu/~mbolin/igun-adogbeji.pdf>.
- Lawal, O., Basse, B. & Ani, E. (2008). Resource Sharing among Nigerian University Law Libraries: A State of the Art. *African Journal of Library and Information Science* 18 (1), 91-100.
- Narasappa, K. C. & Kumar, P. D. (2016). ICT skills for LIS professionals in the digital environment. *International Journal of Research in Library Science*, 2(2), 55-58. Retrieved from <http://www.ijrils.in/wp-content/uploads/2016/08/ICT-slikks-for-LIS-professional-in-the-Digital-Enviroment.pdf>
- Nworgu, B. G. (2015). Educational Research: Basic issues and methodology (3rd ed.) Nsukka: University trust publishers.
- Okiy, R. B. (2010), Globalization and ICT in Academic libraries in Nigeria: The way forward library philosophy and practice 1-11. Accessed from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1519&context=libphilprac>
- Okiy, R. B. (2003). Information for rural development: challenges for Nigerian rural Public Libraries. *Library review*. 52 (3) 126 – 131
- Singh, S. P. (2004). Collection management in the electronic environment. *Library Finance*. 17(2), 55-56
- Seena, S. T. & Sudhier-Pillai, K. G. (2014). A Study of ICT skills among library professionals in the Kerela University Library System. *Annals of Library and Information Studies*, 61, 132-141. Retrieved from www.op.niscair.res.in/index.php/ALIS/article/download/4913/109
- Ssekakubo, G, Suleman, H. & Marsden, G. (2011). Issues of adoption: Have e-learning management systems fulfilled their potentials in developing countries? Available at <http://www.saICSIT.acza/afuniv.html>.
- Ukachi, N. B. (2011). Awareness and Utilization of Open Source software in Nigerian Libraries: The way forward. NLA 49th National Conference and Annual General meetings Awka, proceeding pp 132-146
- Tarus, J. K, Gichoya, D and Muumbo, A. (2015). Challenges of Implementing E-learning in Kenya: A case study of Kenyan Punic universities. *International review of Research in Open and Distributed Learning* 16 (1) 120-141.
- Tyson, L. (2007). *Convergence or collision? When IT and library skills meet*. Retrieved from <http://conferences.alia.org.au/online2007/presentation/30jan.B3.convergence.or.collision.pdf>