

Technological Trends Capacity Building and Academic Librarians' Efficiency in Library Digitization: A Correlational Study.

Ubochi, Uchenna Elvis PhD, CLN.

Library department, Alvan Ikoku Federal University of Education Owerri,
elvisamss@yahoo.com

Ngozi Ojeabulu CLN

Federal University of Petroleum Resources, Effurun, Delta State

Okafor Okechukwu Peter

Federal College of Education (Technical) Umuze, Anambra State.

Enwegbara Concilia Ogechukwu

Michael Okpara University of Agriculture Umudike, Abia state.

ABSTRACT

This study investigated the Technological Trends Capacity building and librarians efficiency in library digitization among five federal universities in South East Nigeria. Three research questions were formulated to guide the study. Descriptive survey design was adopted for the study. The entire populations of 124 librarians in 5 federal universities in South East participated in the study. Questionnaire was used to collect data. Data obtained were analyzed using range of score and percentage. Pearson Correlation Coefficient was employed to test the relationship between ICT capacity building and librarians' task. The findings of the study showed that national conferences, workshop, seminars and interpersonal training\mentorship were most organized ICT capacity building for librarians while ICT training and international conferences were the less attended. Considering the low ICT tasks by the librarians under studied, and the significant relationship found, the study recommended that the university management and the library management should introduce regular ICT trainings for librarians. Furthermore, regular sponsorship is recommended of librarians to various ICT related capacity building programs especially, national and international. The study also recommended that librarians should be encouraged and sponsored for further studies. These will help improve their electronic services and tasks for better services to the current digital age users.

Keywords: ICT, Academic Library, Librarians, Library Digitization

Introduction

In recent years, Information and Communication Technology has not only brought about some profound changes in organizations, but it is also a contemporary issue of constant attention at the global world. As Information and Communication Technology revolution has taken lead in the world scheme of affairs today, no individual, group or organization is willing to be left behind. In education sector, the modus operandi has changed significantly, using interactive (Electro-Computer) interface and

more technological facilities in teaching and learning process. Academic libraries are also influenced with the ICT trends, leading to new methods of rendering services.

Current academic library services involve the use of Information and Communication Technology facilities, such as e-mail, computer telnet, Internet facilities, social media networks, multimedia, telecommunication network line, and software packages. Meanwhile, in discharging basics library functions such as cataloguing, and classification, indexing, abstracting, Current Awareness Services (CAS), acquisition processes, accessing and user education. The

situation is now gradually making traditional protocol less relevant, or undergoing transformation.

No library can now effectively satisfy clients demand with manual library processes in this modern age of information explosion especially in the universities where clients need precision, speed and versatility in making their bibliographic and information searches.

Consequently, Librarians are expected to provide users a range of information and communication technology facilities (software) necessary for retrieving information quickly from both immediate and remote databases, as well as creating a need for library cooperation and consortium initiatives (Okoy,2014). The present-day academic library services focuses more on digital, virtual or libraries without borders all of which have transformed academic libraries. The transition and the transformation are accompanied with sophistication in the changing pattern of the information needs and seeking behaviour of users towards preference for digital resources. As such, information and communication technology skills among librarians should be seen as an important pre-requisite that will help facilitate library computerization effects and functions in order to meet the demands of the ever-growing clients.

Therefore best practices in library services now relate to application of information and communication technologies in the daily routines and services to users. To accomplish this, librarians need to possess ICT competences that will enable them harness as well as manipulate computers and associated technologies. Igbinovia, (2016) noted that today's library has changed tremendously as human civilization makes possible with the availability of every information on just a click. This change which is necessitated by the influx, adoption and use of information and communication technologies (ICTs) both at the individual and organizational level have shifted the paradigm and this has great implication on the expectations from the library. With increased expectations from libraries by stakeholders there is need for library personnel to perform highly in their respective jobs. Equally, Arokyamary, Ramasesh, and Swamy

(2016) stated that ICTs have brought about a new age of globalization of knowledge and expertise. The Library and Information Science professionals are required to develop ICT skills in order to meet the requirements of the modern users requirement, and be able perform various tasks in other to cope with the changes in technological environment. The following basic skills of LIS professionals in the ICT dominant era are; Subscriptions and access to online journals, access and retrieval of web based information resources, CD-ROM browsing and search services, access to digital libraries and online databases, use of library automation software packages to discharge the library functions. Other important skills are; web designing, creation and maintenance of library website and library blogs, creation and maintenance of databases using RDBMS software, skills pertaining to hardware and networking. Knowledge and skills pertaining to operating systems, programming languages and other library application software are also very essential for these professionals. The skills can be categorized as: basic computer application skills, web designing, library automation skills, Internet use and search skills, networking, database management, library software application, and digitization skills (Arokyamary, Ramasesh, and Swamy, 2016).

Digitization as a concept can be seen as a method of preservation. Is now a global phenomenon as well as the new tread in managing library collection especially precious ones among academic libraries? Usman (2009) made a clear view saying, Digital library are being created today for diverse communities and in different fields; eg, education, health, science, culture, development, governance and so on. With the availability of several free digital library software packages at the recent time, the creation and sharing of information through the digital library collections has become an attractive and feasible proposition for library and information professionals around the world. Pandey (2014) opined that, digital library, institutional repositories, open archives etc are the present day buzzwords, which enable users for accessing digital information and knowledge resource for different purposes. In this regard, library has adopted many advance technologies to develop

its service quality. Pandey stated that digital materials may be of two types, one that produced in some analog format (printed books, manuscript etc.) and then converted to digital form. The other one is "born digital" means originally produced in machine readable digital form (e-book, e-journals, online database, digital photographs, websites, multimedia etc).

Leonardo et al (2007) came up with a comprehensive concept on the foundation for digital library system. This concept was tagged the "six core concept of foundation for digital libraries". All six concepts influence the Digital Library framework, as shown in the diagram below.

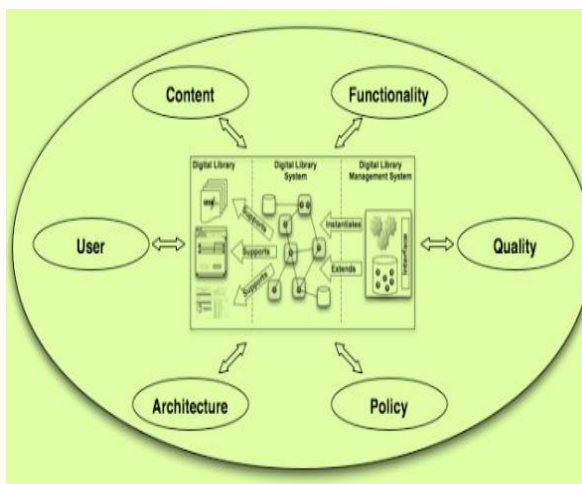


Figure 1: The Digital Library Universe: Main Concepts

In order to provide users with excellent services in information hall, university libraries in Nigeria need staffs that are vast in all facets of their work. This is because libraries perform unique roles in the society which are very important. This is why Kenenso (2007), stated that all categories of library personnel in all types of library have need to learn, often for a number of reasons. Indeed, technology is the primary driving force behind this rapid rate of transformation. The catch phrase, according to Zhang (2004) is "do more with less" has forced university libraries to place a high priority on the continual growth and development of their staff. Thus knowledge update is needed.

Finally, the unique impacts of library digitization to the librarians' task performance are so clear and greatly recognized. Smith and Hepworth (2012) has it that digitization of library materials impact greatly in librarians and some of the impacts are as follows; a, in the preservation of the age long documents which allows users to get older or unique documents without damage to the originals. b, digitization help librarians to facilitate clear access to document which will serve users better that is, to allow the users to access the library documents and information from different locations and also give access to more than one user at a time. c, digitization of library materials enhances better search and retrieval facilities for library materials and finally, it gives opportunities for the development of their technical infrastructure and staff skill capacity.

Growth and development cannot be acquired by librarians without a defined capacity building program designed for them. Obadan (2004), defined capacity building as those deliberate and incidental endeavors through investment in people, institutions and practices, to enhance human abilities and institutional capacities in the pursuit of development. An information and communication technology capacity building program is an activity aimed at bridging the information and communication technology skills gap and improving the effective management and handling of information and communication technology facilities existing in libraries today. Various training opportunities are available for staff of academic institutions. A few of such are: On-the-job training or in-service training, workshops, conferences and seminars, internship training, and outside courses and so on.

On the other hand, Edoke (2001) outlined some essential elements for capacity building in the digital era by stating that education and training of librarians in information and communication technology era should reflect international standard which should include universal bibliographic control, universal availability of publication, and trans-border transformation of information and globalization of information production. Staff

training/development cannot be overemphasized as the training serve to improve employee skill. Staff training/development is a major aspect of conditions of services in any establishment and in order to realize the goal of any organization, staff development is always pursued vigorously.

Academic libraries in Nigeria are at the forefront of computerization with many ICT facilities being acquired to facilitate information services in their various systems. The Internet which is the bedrock of electronic services is also available in many of the university libraries. However, research report still indicate that many of these facilities are not optimally utilized (Ebijuwa, 2016; Ogunben, Adeleke, and Opeke, 2014) and some libraries in the South East are yet to fully automate and digitize their services. Abubakar (2011) noted that despite efforts by academic libraries to adopt technologies for improved services, very little success has been recorded. A lot still needs to be done. Among reasons identified for this low and non use include lack of awareness of the services and inadequately skilled ICT manpower to support users (Nwachukwu, 2012).

In the need for effective task performance in the ICT driven information service era, the pertinent question is; how does information and communication technology capacity building relate with librarians' task such as cataloging, classification, indexing, abstracting, current awareness services (CAS), acquisition processes, bibliographic services, accessing and user education in this digital age? The answer may have implications for effective information and communication technology (ICT) diffusion; e-resources accessibility and utilization to support academic and research activities in Nigerian universities. It is therefore pertinent at this time to investigate the Information and Communication Technology Capacity building and librarians effective involvement in library digitization among five federal universities in South East Nigeria

Statement of the problem

Continue Manual operation of the academic libraries activities in 21st century has posed a big threat to service productivity in today's institutions. Academic Libraries in this part of country still practices traditional system librarianship. Ayoku and Okafor (2015) in a research report summarized the state of ICT task in academic libraries by stating that many of the librarians in their study do have knowledge and skills of email use and word processing tasks, but lack knowledge of search engines and directories.

Furthermore, the high rate of students' low patronage of electronic services in academic libraries is so alarming. This problem has generated to the production of poor quality students in our institutions today. Libraries stand as the heart of every academic institution and acts as a strong support to the academic activities. Students and even staff now use cyber café outside the academic environment for their research due to the poor skills of most librarians in information search task performance. (Ademodi, 2009).

Looking at the above concerned issues, it will be important to identify the problems that are associated to poor ICT task in these academic libraries in Nigeria.. Therefore, the concern of the study is to address the pertinent question: how does ICT capacity building relate with librarians' task in library digitization among academic libraries in South East Nigeria?

Purpose of the study

The major concern of this study is to assess the Information and Communication Technology Capacity building and librarians effective involvement in library digitization among five federal universities in South East Nigeria. Specifically, this study will:

1. Ascertain the librarians' mean ratings on information and communication technology capacity building in academic libraries of tertiary institutions in South-East.

2. Ascertain the librarians' mean ratings on task in library digitization in academic libraries of tertiary institutions in South-East.
3. Determine the relationship between ICT capacity building and Librarians' task in library digitization in academic libraries of tertiary institutions in South-East.

Research Question

The following research questions were formulated as guide to the study;

1. What are the librarians' mean ratings on information and communication technology capacity building in academic libraries in South-East?
2. What are the librarians' mean ratings on task in library digitization in academic libraries of tertiary institutions in South-East?
3. What is the relationship between ICT capacity building and Librarians' task in Library digitization in academic libraries of tertiary institutions in South-East?

Significance of the study

The findings of this study will be of immense benefit to library staff, students, librarians, researchers, library administrators and tertiary institutions management. Also, academic libraries and other libraries will find the result of this study useful.

Methodology

Correlation coefficients design was adopted in this study. Correlation design measure the degree of relationship between two sets of variables. This was supported by Nworgu (2006) who stated that this design seeks to establish what relationship exists between two or more variable. The population of this study was made up of 124 professional librarians drawn from the federal Universities libraries under study. They include twelve (12) Librarians from Federal University Ebonyi, twenty nine (29) librarians from Federal University of Technology Owerri, twenty-eight

librarians from Michael Okpara University of Agriculture Umudike (28), (15) librarians from Nnamdi Azikiwe University, and thirty (40) from University of Nigeria Nsukka library. The instrument for the data collection was Questionnaire. The items were administered to the respondents by the researcher and three research assistants. For data analysis, range of scores / percentage and Pearson Correlation coefficient was employed were employed.

Presentation of Results

Research Question 1;

What are the librarians' scores on information and communication technology capacity building in academic libraries in South East?

To answer the research question one, the scores were computed. The outcome of the computation was shown in Tables 1.

Table 1: Scores of librarians on Information and Technology Communication capacity building

Range of Scores N	%	Decision
8 - 15 21	16.9	Low
16 - 23 41	33.1	Moderate
24 - 32 62	50	High

Table1, shows the scores of librarians on information and communication technology capacity building. The result shows that 16.9% of librarians scored between 8-15, 16-23 (33.1%) and 24-32 (50%). This indicated that the librarians highly participated in the information and communication technology capacity building.

Research Question 2

What are the Librarians' Scores on task in library digitization?

To answer the research question two, the scores were computed. The outcome of the computation is shown in Tables 2;

Table 2: Librarians' scores using library digitization.

	Range of Scores	N %	decision
1	8 – 15 28	22.6	Low
2	16 – 23 41	33.1	Moderate
3	24 – 32 50	40.3	high

Table 2: shows the scores of librarians using library digitization. The result shows that 28 (22.6%) of librarians scored between 8-15, 41 librarians scored between 16-23 (33.1%) and finally, 50 librarians scored between 24-32

(40.3%). This indicated that majority of the librarians often undertake in library digitization and web activities

Research Question 3

What is the relationship between ICT capacity building and librarians' task in library digitization?

To answer the research question three, Pearson Product Moment Correlation was computed. Librarians' capacity building was correlated with library digitization tasks in the library. Result was shown in Table 3.

Table 3: Correlation Matrix of ICT Capacity building and librarians' use of library digitization.

ICT Capacity Building	1	.503**	.553**	.570**	.688**	.575**	.472**	.579**	.503**
Scanning And Uploading Of Library Materials	.503**	1	.387**	.433**	.541**	.549**	.380**	.409**	.507**
Licensing Of Ebooks	.553**	.387**	1	.675**	.581**	.461**	.506**	.351**	.424**
Database Licensing	.570**	.433**	.675**	1	.594**	.468**	.545**	.462**	.534**
Uploading Of Important Links	.688**	.541**	.581**	.594**	1	.590**	.373**	.604**	.615**
Tagging And Indexing Of Digital Resources	.575**	.549**	.461**	.468**	.590**	1	.545**	.547**	.602**
Designing Of Library Website	.472**	.380**	.506**	.545**	.373**	.545**	1	.541**	.599**
User Education	.579**	.409**	.351**	.462**	.604**	.547**	.541**	1	.652**
Digital Reference Services (Ask A Librarian)	.503**	.507**	.424**	.534**	.615**	.602**	.599**	.652**	1

Table 3: shows the correlation between ICT capacity building and librarians' task in library digitization and web services. The result shows that capacity building is positively and significantly correlated with all the variables of ICT library digitization tasks in the library. Based on the significant correlation between all the variables, the null hypothesis of no significant relation between capacity building and computer library digitization task was rejected. Higher capacity building of librarians was associated with higher library digitization task.

Discussion of Results

The librarians Scores on ICT Capacity Building

Research question one sought to find out librarians scores on ICT capacity building among federal universities in South East, Nigeria. The result showed that academic librarians of the federal universities highly participated in the information and communication technology capacity building (like NLA Conference, workshop/training, seminar and interpersonal training/mentorship). This finding with the findings of Irunebo, Osuigwe, Unegbu, and Aniebo (2012) and Abba & Dawha (2009) who confirmed in their various studies the various method of building capacity for academic

library staff as; In-service training, conferences, workshops, and other digital trainings which help to enhance the ability to evaluate and address crucial question related to new innovations, policy choices and modes of implementation among development options. And also, current information services which are based on the understanding of environment potentials and limits and being perceived by the clients\ users concerned. It was also discovered that capacity building like international conferences, massive open online courses, formal higher staff development recorded very low scores which simply means that librarians in this part of the country are not fully exposed to the international standard and current digital trend in librarianship. This situation most times maybe as a result of failure on the side of government and university authority towards sponsorship. Most of these international and online conferences require huge sum of money which an individual may not be able to afford.

Academic librarians' scores on task in library Digitization

Research question two; sought to find out the librarians scores on task in library Digitization. The result showed that the majority of the academic librarians of the federal university libraries in South East Nigeria often undertake in library digitization and web activities (scanning and uploading of library materials). This finding highly indicted that there is much need for training and retraining of librarians who are yet to face the new trend of technology in the library system. The outcome agreed with the opinion of Irunegebe, Unegbu, Osuigwe and Aniebo(2012) which stated that librarians who are trained in digitalized environment will be more technological ahead their peers. Regular training of librarians should be made a statutory program among these libraries so as to keep the library staff updated with the trend of information technology in the global market.

The relationship between ICT capacity building and Librarians' task in library Digitization

Research Question three: sought to find out the extent to which ICT capacity

building has affected the utilization of library digitization practices by librarians of the federal universities in South East. The result showed that there is a positive relationship between the ICT capacity building and the librarians' effective utilization of library digitization system in the course of their task. This went ahead to indicate that there is a significant relationship between the two practices which implies that an improvement in the capacity building for librarians of the above universities will result in an improved effective performance. Meaning for effective digitization task among academic librarians of the federal universities in South East of Nigeria, proper and efficient ICT capacity building will be needed on regular bases so as to keep the librarians updated with the current trend in the library digitization practices and system. This outcome agreed with the opinion of Irunegebo, Unegbu, Osuigwe, and Aniebo, (2012) which stated categorically that librarians who are trained in a digitalized environment where they interact with ICT facilities will be more technological ahead than peer's, trained on non-automated roof. Regular retraining should be made continuous process of developing surviving skills to the librarians so as to be able to handle adequate digitization of library services and operations. Also, in line with the suggestion of Ajidahun (2009), the trend at which information technology is moving in the global world, requires a continuous training and retraining of librarians who are information managers to compete with their counter parts around the globe.

Summary of Findings

From the analysis of data, the following findings were made:

1. Librarians of federal university libraries in South East Nigeria participated in the information and communication technology capacity building.
2. Majority of academic librarians of federal university libraries in South East Nigeria often undertake in library digitization and web activities.
3. There is a positive relationship between ICT capacity building and librarians' effective utilization of library digitization

system in the course of their task performance.

Conclusion

The findings of this study on relationship between information and communication technology capacity building and librarians' task in federal universities in South East Nigeria shows that there is a significant relationship between ICT capacity building and librarians tasks. It is important to note considering that the study found low ICT capacity tasks in the libraries studied. From the above findings, it can be concluded that if librarians are provided with well-organized and strategic ICT trainings, there will be increase in handling or performing of various ICT tasks. In the current information age where users information seeking behavior have shifted to use of electronic resources, it is important that all who are involved in providing and sponsoring librarians to training, (university management, library management, professional associations) develop good strategies that will target ICT capacity building for these librarians. This is highly needed in building librarians' skills and competencies for effective electronic information services in the library.

Recommendation

Based on the findings of this study, the following recommendations were made;

1. Library authorities and university management should make such trainings a regular activity for these librarians. The university authority should always release grants and sponsorship for librarians who are going for formal higher education and international conferences. This will help to empower these librarians with international best practices in librarianship. And also making them remain relevant in their traditional role as information providers. The institutions and library authorities should involve academic librarians in every ICT related staff development programs or capacity building exercises especially the ones that pertain to their areas of Interest.

2. Library authorities of these libraries should expose or introduce librarians to all aspect of library digitization system. This is the current

trend in librarianship and several libraries are embracing the system and library authorities should introduce trainings on all areas of digitization of libraries. Most of these trainings are done overseas (among developed countries), which with all need grants or sponsorship. School managements should ensure regular attendance to these trainings by their librarians through the help of TETFUND.

3. Finally, that since it has being revealed that there is a positive relationship with the training of librarians on library automation and their task using the above trained skills. An improvement in the selected training for librarians affects the librarians' task positively in information delivery. There should regular organization and sponsorship of various library automation related capacity building programs for librarians. Furthermore, library management should expose some librarians to library automation training so as to be able to handle services despite the distance and its financial implications.

References

- Abba, T. & Dawha, E.M.K. (2009), Assessment of personnel training needs in the Ibrahim Babangida Library, Federal University of Technology, Yola, Nigeria, *LibraryPhilosophy and Practice*, available at: <http://unllib.unl.edu/LPP/abba2.htm> (Accessed: January 24, 2014).
- Abubakar, Y.A.(2011).Obligations of college librarians toward achieving Education goal. *Bichi journal of education*, 1 (1), 64-68.
- Ademodi,D.T (2009) Computer skills among librarians in academic libraries in Ondo and Ekiti states. *Nigeria,library philosophy and practice*,p.1-7.
- Adeyoyin, S.O. (2005). Nigeria Universities and their attitude to the internet: info and comm. tech literacy among the staff of Nigeria university libraries. *Library review*, 54 (4) 257-266.
- Ajidahun, C. O. (2009). The training, development and education of library manpower in information technology in

- university library in Nigeria. *The World libraries Journal*, 17(1), pp 2-13.
- Arokyamary, J.R. & Ramasesh, C. P. and Swamy, D. (2016) ICT skills & core competencies of LIS professionals: a study. In: National Conference on Library and Information Services for all: Reaching the Unreached in the Digital Era (Special focus on information services for visually challenged), February 11-12, 2016, University of Mysore, Manasagangotri, Mysuru.
- Ayoku, O.A. & Okafor, V.N (2015). ICT skills acquisition and competencies of librarians: Implications for digital and electronic environment in nigeria universities libraries. The electronic library. Emerald group publishing limited.
- Edoka, B.E. (2001). Introduction to library science. Palma publishing.
- Igbinovia, M. O. (2016). "Emotional Self Awareness and Information Literacy Competence as Correlates of Task Performance of Academic Library Personnel". *Library Philosophy and Practice (e-journal).Paper* 1370.<http://digitalcommons.unl.edu/libphilprac/1370>
- Irunegbo, G. C., Unegbu, M. C., Osuigwe, N., & Aniebo, M. U. (2012). Harnessing the knowledge of 21st century librarians for effective library services. A paper presented at 2012 annual conference of Anambra NLA state chapter, Awka.
- Kenerso, L.A (2007) Library and information science text for Africa.Ibadan : world press Ltd.
- Leonardo Candela & et al. (2007) Setting the foundation of digital library. *The DELOS Manifesto. D-Lib Magazine*. 13 (3/4).
- Nwachukwu, V.N. (2012). Computer skill competencies among academic Librarian: an imperative for effective computerization of Nigeria University libraries. *Nigerian Library Links* 3 (1&2)97-106
- Nworgu, B.G. (2006). Educational Research; basic\issues\methodology. 2nd ed. Owerri: Wisdom publishers limited. P.70
- Obadan,O. (2004). Human capacity building. Xaiver press.
- Okoye, N. (2014) The use information and communication technology among librarians in selected Nigeria universities libraries communicate. *Journal of library and information science*, 10(2); 47-56.
- Pandy, R.N (2014). Computer and the library practices. London : Houston plc.
- Smith, S. & Hepworth, M. (2012). The design and implementation of an information literacy training course. From: http://www.ics.heacademic.ac.uk/italics/vol.51/webpages/hepworthandevans_finalversion.htm.
- Usman, M. (2009). The role of computer technologies in knowledge acquisition. *Journal of knowledge management practice*, 11 (3) Sept 2010.
- Zhang, M.O.(2004) Education of librarianship. New York: John Wiley and Sons.