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THE COMPETENCIES OF INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS OF LIBRARY STAFF IN FEDERAL TERTIARY INSTITUTIONS IN ANAMBRA STATE, NIGERIA

A STUDY OF NNAMDI AZIKIWE UNIVERSITY LIBRARY AWKA ANAMBRA STATE, FEDERAL POLYTECHNIC LIBRARY OKO ANAMBRA STATE AND FEDERAL COLLEGE OF EDUCATION TECHNICAL LIBRARY UMUNZE ANAMBRA STATE, NIGERIA

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Abstract

This study investigated the Competencies of Information and Communication Technology (ICT) Skills of library staff in Federal Tertiary Institutions in Anambra State. The objective of the study was to find the competency of library staff's skills in using ICT facilities to do their job. Five research questions were formulated to guide the study on Areas of work staff use ICT, levels of competence, methods of acquiring competencies, constraints to competency acquisition and strategies to improve the situation. Data relevant to the study was collected using questionnaire design sampling technique. A total of 155 copies of questionnaire were distributed out of which 142 were rightly completed and returned. Data were analyzed using mean scores. Findings revealed that many library staff in Federal Tertiary Institutions libraries in Anambra State performs Microsoft Word based tasks like typing and printing of documents, they can provide online searches using internet and performs acquisition of information materials using online systems, but cannot perform effective professional library ICT digitization usage which involves professional library software related duties. Staff needs ICT competencies in the areas that can assist them handle professional related duties, like internet webpage design skills, mastery of library software and technical skills. Library staff acquired ICT training mainly through personal practice, on the job training, seminars, conferences and workshops, but preferred training through library schools. The major problems that hindered ICT competency acquisition among library staff are lack of funding, higher authority not willing to release their staff to go for

further training, lack of opportunities, lack of ICT training facilities and inadequate curriculum content for ICT in the library schools. Strategies to improve the ICT competencies of library staff are by provision of more ICT facilities in library schools, development of personal interest by staff to acquire ICT competencies, sponsorship and study grants, study leave to be granted to staff to go for ICT competency acquisition trainings, also the authority should be willing to release staff for studies and recruit more staff to reduce work load. Suggestions on areas for further studies on ICT competencies of library staff were also made.

Keywords: Information and Communication Technology, Competence, Libraries, ICT facilities,

Library staff.

INTRODUCTION

Information and Communication Technology (ICT) has brought tremendous transformation to academic libraries and information services. Such areas of transformation and development occasioned by ICTs in academic libraries include; computing technology, communication technology and mass storage technology. This has reshaped the way that libraries access, retrieve, store, manipulate and disseminate information to the users. In other words, students and staff (library users) now use ICT facilities available in the universities to source for reference material, online journal as well as send and receive e-mail from within and outside the country.

The use of Information and Communication Technology (ICT) facilities in performing library functions is becoming very useful in tertiary institutions of higher learning because it makes service delivery to users faster, efficient and effective. ICT provides speedy, accurate and precise information; it also has flexibility of usage by different users. With the presence of ICT facilities like the World Wide Web, and Internet connectivity, individuals can access information from unlimited sources. It also gives staff in tertiary institutions opportunity to work and satisfy the information needs of their users.

Ojiegbe, Ngozi (2010) and Ekoja ,(2007) posit that ICT devices or equipment which is used to acquire or impart information or knowledge are seemingly endless. They include

mobile phone, calculators, photocopiers, scanners, bar code readers, computer systems and computer related devices etc.

The benefits of ICT in libraries generally and tertiary institutions' libraries in particular are innumerable. Chisenga (2005) acknowledges that ICT applications improve service delivery in libraries and allied institutions responsible for information provision. Most library functions such as, acquisition, cataloguing and classification, reference services, previously handled manually are now performed electronically using ICTs. This has helped to reduce time spent on doing the jobs and with fewer mistakes. Ajayi (2011) describes a library transformed into a new information service unit, providing electronic cataloging, On-line Public Access Catalogue (OPAC), electronic acquisition and serials control, electronic inter-library loan and electronic circulation functions.

Edoka (2010) summarized some functions of the academic libraries where the application of ICTs is imperative for better accomplishment. They are as follows:

- a. to provide information materials required for the academic programme of the parent institution.
- b. to provide research information resources in consonance with the needs of faculty and research students.
- c. to provide information resources for recreation and for personal self development of users.
- d. to cooperate with other libraries at appropriate level for improved information services.
- e. to provide specialized information services to appropriate segments of the wide community.

Following Edoka's summary, the areas of library functions seem probably the aspects ICT resources can be employed to an advantage to improve the services of Tertiary Institutions' libraries. In recognition of the importance of ICT in tertiary institutions', library services with regards to the need for effective and efficient service, many Institutions of higher Learning with the assistance from the federal government have struggled to bring ICT facilities to their libraries. The Federal government of Nigeria through the National Universities Commission (NUC), The Educational Trust Fund (ETF), Tertiary Education Trust Fund (Tetfund) as well as individual Tertiary Institutions' efforts, has made ICT facilities available in some of the Tertiary Institutions' libraries which Prof. Festus Aghagbo Nwako University library of Nnamdi Azikiwe University Awka, Prof. Ben Nwabueze library of Federal College of Education Technical Umunze and Federal Polytechnic Oko Library are beneficiaries. Obviously, the provision of these facilities must have involved the expenditure of a huge amount of money.

Statement of the Problem

ICT is an indispensable tool for information service delivery in modern tertiary institutions' libraries essentially for its speed, accuracy and high precision. With the aid of ICT, Information is generated quickly with less mistakes and it ensures dissemination of precise and concrete information.

Though the ICT facilities have been provided, it is observed that they are not effectively utilized by staff in some academic libraries as most of the systems are redundant with dust all over it. Therefore, uncertainty exists about whether library staff possesses adequate competencies to operate ICT facilities effectively and efficiently. The overall ICT objectives in tertiary institutions' libraries can only be achieved if the library staff that use these facilities possess the right competencies. Where the needed ICT competencies are lacking in them, then academic libraries in Nigeria would probably be cut off from the rest of the world in terms of globalization. This would further cripple the tertiary institutions basic objectives of teaching, learning and research. To remedy this, there is an urgent need to investigate the ICT competencies of staff working in the Nigerian tertiary institutions libraries and how can these be improved, failing

which millions of money spent in acquiring the ICT equipment will be a waste. This in fact is what this study is poised to do.

Objectives of the Study

The objectives of the study are to:

- Identify the areas in which library staff uses ICT in the federal tertiary institutions in Anambra State.
- 2. Ascertain the level of ICT competencies of library staff in the federal tertiary institutions in Anambra State.
- Determine the methods used in acquiring ICT competencies by library staff in the federal tertiary institutions in Anambra State.
- 4. Identify constraints of acquiring ICT competencies by library staff in the federal tertiary institutions in Anambra State.
- Determine strategies for improving ICT competencies of library staff in the federal tertiary institutions in Anambra State.

Significance of the Study

It is expected that the findings of this study will be useful to practicing librarians by exposing them to know the type of ICT competencies they need to possess in order to perform optimally in the profession and develop their competencies in the area of ICTs. It will also assist Curriculum Developers in the department of Library and Information Science to provide useful information about the type of professional training required by modern information workers. This will help them to plan a rich academic course contents that will incorporate ICT competency training programmes.

The findings may motivate Tertiary Institutions Authority to provide the required quantity and quality of ICT facilities that will enhance teaching and learning of Library and Information Science. This will also give trainers and educators in the library school a re-direction on focused

areas of training and also help them to develop their own competencies on the areas of ICTs. And the library users will benefit from this because if the library staff are well trained, they will render better services to the library patrons.

It will also contribute to existing body of knowledge in the area of library and Information studies that will be beneficial to future workers/researchers in the field of library and information science.

Scope of the Study

This study covers Information and Communication Technology (ICT) competencies skills of library staff in the Tertiary Institutions in Anambra State situated in the South – East geo-political location of Nigeria.

Research Questions

The following research questions have been formulated to guide the study:-

- In what areas of work do library staff use ICT in the federal tertiary institutions in Anambra State
- 2. What is the level of ICT competencies possessed by Library staff in the federal tertiary institutions in Anambra State
- 3. What are the methods used in acquiring ICT competencies by library staff in the federal tertiary institutions in Anambra State
- 4. What are the constraints to acquiring ICT competencies by the staff in the federal tertiary institutions in Anambra State
- What are the strategies for improving ICT competencies of library staff in the federal tertiary institutions in Anambra State

UNESCO (2001) defines Information and Communication Technology (ICT) as the scientific, technological and engineering disciplines and management techniques used in information handling and processing. It is a concept which evolves from Information Technology

(IT) when the processing of information with electronic technology was integrated with telecommunication. Computer, Information Technology and Communication are inseparable when ICT is discussed. These three form the major components of ICT device in the world today. In this view, Gurari (2009) defines it as simply a combination of technology of computer hardware and software and telecommunication such as telephone systems, CD-Rom, fax machine, sound satellite communication systems etc.

The imperativeness of ICT in modern librarianship cannot be over emphasized. Ezeani and Ekere (2009) regard ICT as the highest medium by which the highest quality service in the library and information profession can be achieved and Nwalo (2000) opined that librarians are duty bound to apply ICT in the 21st century. Faulkner (2007); Ramana (2006) and Nwalo, (2009) are of the view that the use of ICT has tremendous impact on library operations, resources, services, and users. The use of ICT provides quality information handling, especially in academic libraries; it also builds strong and effective communication system.

Adebisi (2009) referring to Henderson (2005) enumerated some of the benefits ICT to library users. They are: Provision of speedy and easy to information, provision of remote access to users, provision of round-the-clock access to users, access to unlimited information from different sources and providing more current information. This has provided solution for the problem of delay in information access and use. It has made information sharing effective and efficient. With blinding speed the internet can link a lone researcher sitting on a computer screen to mountains of data all over the world which may otherwise be too expensive and too difficult to tap.

Ekwe (2006) sites some negative sides of ICT as: influence on the moral and overall psychological development of student; time consumption and wastage on watching programmes, films, worthless video CD"s etc., logging on pornography and social bad behavior. These can bring negative influences on the users most especially the young users.

Competencies

The UK Cultural Heritage National Training Organisation (CHNTO, 2004) refers competence to mean a test to the ability of an individual to do a job or work to nationally agreed standards. According to them, a key concept in the idea of competence is linked to ability to:

- i. Perform activities within an occupation or function,
- ii. Work consistently to agreed standards a person's performance must meet.
- iii. Specific criteria before he or she can be termed competent,
- iv. Transfer skills to a range of situations within, and even external to, the central occupational area.

According to Onasanya (2010), competence refers to specialized knowledge, skills, and attitudes which are necessary for effective performance in a position. It means the ability to carry out a given task effectively. perform tasks that reflect the scope of professional practices; however, he warns that those competencies only are not equal to formal professional qualification.

The point here is that Library and Information profession is now operating on a very competitive environment set by the fast growing Information and Communication Technology (ICT). Library staff are facing stiff competition from new entrants from other related professions trying to infiltrate into information market which hitherto is monopolized by librarians. Library profession is not the only profession seeking to claim jurisdiction. Historical claims of jurisdiction are of limited value in the face of such competition. The question then is "what must library profession do to survive?" Diamond and Dragich (2011), maintain that, real battle for professional recognition is waged in the market place and library staff needs to deliver in terms of value, skills and competencies.

ICT Work Related Areas by Library Staff

Prior to introduction of ICT to functions and operations of library and information services, academic library services were basically manual and the information sources were predominantly in print. The infusion of ICT in library profession is an improvement on what already existed and requires development of added competencies to incorporate the new trends. Biddiscombe (2001); Sharp (2001) and Makera (2001) are of the belief that library staff must first posses adequate competencies in the traditional functions of the library using the technological advances to enhance the already existing competencies. Information professionals and library staff must be flexible to adapt traditional skills to incorporate the requirements for new technological advances. The current competences possessed by librarians are categorized according to the main functions of information profession.

Methods of Acquiring ICT Competencies

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.

In their own view, Beckett and Hager (2002) and Babu (2007) outline some ways library staff can acquire and develop their ICT competencies. These methods are: through formal continuing education such as Masters programme, informal education (distance learning), education through colleagues, self study (learning by doing), training by suppliers, attending IT programmes, participation courses, workshops and conferences. Competency acquisition programmes can be internally, that is organized within the workplace, or externally, outside the workplace.

Research Design

The design of this study is a descriptive survey. The survey design is chosen because it is considered the most appropriate when studying a population.

Sample and Sampling Techniques

Prof. Festus Aghagbo Nwako University library of Nnamdi Azikiwe University Awka, Prof. Ben Nwabueze library of Federal College of Education Technical Umunze and Alex Ekwueme Library of Federal Polytechnic Oko were made by being three of renowned tertiary institutions of higher learning with a wide range of academic programmes.

The sample of the study is 155 staff. This included Professional and Para-professional, and Non - professional staff working in these libraries.

Instrument for Data Collection

The questionnaire was used to generate data for this study. The questionnaires were constructed by the researchers based on the research questions earlier formulated to guide the study.

RESULTS

Research Question One:

In what areas of work do library staff use ICT in the Tertiary Institutions in Anambra State

Table 1: Distribution of Mean score responses on areas of work library staff use ICT.

S/N	Items	VHE	HE	LE	VLE	Ν	X	∑fx	Decision
1.	Word								
	Processing i.e.								
	typing								
	/printing of								
	document	65	35	22	20	142	3.02	429	Accepted
2.	Provision of								
	online								
	documents i.e.								
	online								
	database	56	28	27	31	142	2.76	393	Accepted
3.	Online								
	searches i.e.								
	Internet								
	searches	50	32	28	32	142	2.70	384	Accepted
4.	Web Content								
	Creation,	15	18	24	85	142	1.73	247	Rejected

	HTML, CSS,								
	XML.								
5.	Cataloguing								
	i.e. MARC,								
	OPAC.	15	25	42	60	142	1.96	279	Rejected
6.	Circulation of								
	Information								
	Materials	14	24	28	76	142	1.83	260	Rejected
7.	Acquisition-								
	Books, Serial								
	and Non-								
	prints	34	40	42	26	142	2.57	366	Accepted
8.	Accounting								
	i.e. Excel	50	28	29	35	142	2.65	377	Accepted
9	Networking	35	41	42	26	142	2.62	373	Accepted
	Grand Mean						2.43		Rejected

The research question 1 was asked to get information on the areas of duties respondents can use ICT to perform their duties. Analyzed data in table

1 showed that respondents indicated that they can use ICT to perform library duties, 7 out of the 10 items with responses above 2.50; Word Processing recorded very high extent response with mean score of 3.02, followed by Provision of online documents i.e. online database 2.76 mean score responses. Online searches i.e. Internet searches response with mean score of 2.70, followed by Accounting i.e. Excel which recorded the response with high extent mean score of 2.65, followed by Acquisition of books, serial and non-prints with mean score of 2.57. Responses, on the other 3 items were below 2.50 mean score average which was considered negative. The other items: cataloguing i.e. MARC, OPAC; Circulation of Information Materials, Creation, and Web Content Creation, HTML, CSS, XML recorded very low extent responses of 1.96, 1.83, and 1.73 respectively.

Research Question Two:

What is the level of ICT Competencies possessed by Staff in the Tertiary Institutions' libraries in Anambra State?

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Table 2: Distribution of Mean score responses on level of ICT Competencies possessed by Staff.

The research question 2 was asked to get information from respondents on the level of competence they have on the listed packages. The analysis of data in Table 2 above showed that the respondents agreed to have considerable level of competencies on 4 out of the 9 items listed with mean rating of 2.50 and above. The item that dealt on respondents' level of competence in

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Basic Computing (word processing) recorded the highest mean response of 2.88, followed by Retrieving documents from storage devices which recorded mean responses of Storing and copying data into primary storage device (e.g. hard disk) which recorded mean responses of 2.80, while Storing and copying data into secondary storage devices followed with 2.76 mean response. The other 5 items on the list recorded low responses below the 2.50 mean rating. The respondents' competency level of Presentation (PowerPoint) skills recorded a low response of 2.12, this is followed by Graphic (CorelDraw) that recorded1.94; Digitization (Scanning and uploading) 1.85; Statistical (Excel, SPSS) skills recorded 1.82 and the use of Multimedia technology recorded 1.57.

Research Question Three:

What are the methods used in acquiring ICT competencies by Staff in Tertiary Institutions in Anambra State.

Table 3: Distribution of Mean score responses on the methods used in acquiring ICT

 competencies by Staff in Tertiary Institutions in Anambra State.

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S/N	Items	VHE	HE	LE	VLE	Ν	X	∑fx	Decision
19	Library School.	23	21	16	82	142	1.89	269	Rejected
20	Private Computer								
	training	90	33	11	8	142	3.44	489	Accepted
21	On the job Staff								
	training.	68	37	15	22	142	3.06	435	Accepted
22	Personal practice	87	31	10	14	142	3.34	475	Accepted
23	Learning through								
	tutorial packages.	15	25	44	58	142	1.97	281	Accepted
24	Additional								
	qualification in								
	computer sciences	14	24	32	72	142	1.85	264	Rejected
25	Workshops/Seminars/								
	conferences and								
	Talk-shows	75	27	16	24	142	3.07	437	Accepted
	Grand Mean		2.66		Accepted				
	The management on a	0		1 .	1	• .•	C		1

The research question 3 was posed to elicit information from respondents on various

methods through which they acquired the ICT skills they have. The analysis of data in Table 3

showed that respondents agreed to 4 out of 7 methods listed with rating above the 2.50 average mean score. The highest number of respondents (3.44) indicated that they acquired their ICT competence through private computer training, while Additional qualification in computer science recorded lowest rating of 1.85 mean score response.

Research Question Four:

What are the constraints to Acquisition of ICT Competencies by Staff in Tertiary Institutions in Anambra State

S/N	Items	SA	Α	D	SD	Ν	X	∑fx	Decision
26	Lack of fund.	105	25	5	7	142	3.60	512	Accepted
27	Lack of training opportunities.	56	50	14	22	142	2.98	424	Accepted
28	Inadequate curriculum content for ICT training in higher institutions.	52	44	21	25	142	2.86	407	Accepted
29	Higher authority not willing to send their library staff to upgrade					142			Accepted
	themselves.	98	27	9	8	142	3.51	499	Accepted
30	Limited opportunities.	30	20	22	70	142	2.07	294	Rejected
31	Work load.	26	28	34	54	142	2.18	310	Rejected
32	Lack of sufficient staff in the library	46	44	32	20	142	2.81	400	Accepted
33	Personal lack of interest	30	22	46	44	142	2.26	322	Rejected
34	Lack of training facilities	68	28	14	10	142	3.28	466	Accepted
	Grand Mean						2.84		Accepted

Table 4: Constraints to Acquisition of ICT Competencies.

The analysis on research question 4 revealed that the respondents agreed on 6 out of 9 of the items with mean responses of 2.50 and above. They include lack of fund with highest response of 3.60, this is closely followed by higher authority not willing to send their staff to upgrade themselves with 3.51, lack of training facilities, Lack of training opportunities, and Inadequate curriculum content for ICT equally ranked high with responses of 3.28, 2.98 and 2.86 respectively and lack of sufficient staff in the library (2.81). There was a level of disagreement that work load (2.18), lack of personal interest among the staff (2.26), Limited opportunities (2.07) are not constraints to competency acquisition.

Research Question Five:

What are the Strategies of improving ICT Competencies of Staff?

Table 5: Strategies of improving ICT Competencies of Staff.

S/N	Item Statement	SA	Α	D	SD	Ν	X	∑fx	Decision		
35	Sponsorship should be										
	granted to staff for ICT										
	trainings	100	25	9	8	142	3.52	501	Accepted		
36	Staff should be granted										
	study leave	68	37	22	15	142	3.11	442	Accepted		
37	Academic curriculum										
	should have more ICT										
	related programmes	78	33	15	16	142	3.21	457	Accepted		
38	More time should be										
	allocated for staff hand-				-						
	on-the-desk practice	13	23	26	80	142	1.78	253	Rejected		
39	More hands should be						1 1				
	recruited to reduce work			-							
	load for staff to attend										
	ICT training.	72	35	21	14	142	3.16	443	Accepted		
40	Library staff should										
	develop personal interest										
	in ICT	87	14	10	9	142	3.44	489	Accepted		
41	More ICT facilities										
	should be provided in the										
	academic libraries	92	15	8	5	142	3.61	513	Accepted		
	Grand Mean		Grand Mean								

The research question 5 was asked to elicit the opinion of respondents on the strategies to improve staff competencies in ICT. The analysis of data on Table 10 the respondents agreed on 6 out of 7 items with mean rating above 2.50 and above. The item dealing with More ICT facilities should be provided in the academic libraries recorded the highest mean response of 3.61, closely followed by Granting sponsorship to staff to attend ICT training with mean response of 3.52, item relating to library staff should develop personal interest in ICT came next with 3.44,

Academic curriculum should have more ICT related programmes has a response mean of 3.21. Other items as recruiting more hands to reduce work load also received and granting staff study leave and positive responses with mean rating of 3.16 and 3.11. However, allocating time for hands-on-desk –practice to staff was rejected by respondents with the lowest mean of 1.78.

Summary of Findings

The analysis of data showed that:

- Although most library staff knowledge of ICT, their knowledge is limited to performing Microsoft Work related works like typing and printing and carrying out online searches. Most of them lack required ICT competencies to carry out library duties like Scanning, Cataloguing, Acquisition, etc.
- ii. The levels of ICT competence among the library staff working in the University libraries are still very low. They have higher level of skill basic computing like word processing, storing, copying and retrieving data from primary and secondary devices, but possess low levels of skills in graphics, power-point, digitization, statistical and multimedia packages. The level of web and technical competencies are very low especially in technical skills like carrying out repairs, interface design etc.
- Many of the library staff acquired the competencies they possess through private computer training; personal practice and on-the-job training, though; majority would prefer to acquire training through library school.
- iv. To improve the situation, respondents agreed to the suggestions that, staff should first develop personal interests in ICTs, study leave and financial grants should be given to staff to attend ICT training, academic programmes should have more ICT contents, and more ICT facilities should be provided in the libraries.

Recommendations

Based on the findings of this study, the discussion that followed and various implications highlighted, the following recommendations have been made.

- The three Tertiary Institutions' libraries should dedicate a reasonable percentage of their annual library budget to training. This is because when fund is available more staff can be sponsored further studies, workshops and conference both locally and internationally.
- 2. The three Tertiary Institutions' libraries should create an internal committee on training that would be responsible for planning training programmes for the library staff. The committee would determine the areas staff need training based on their work schedule. Every staff should from time to time be given training on areas relevant the work he does.
- The library management must ensure that they organize interactive sessions for the staff at least on quarterly basis. Through such interactions, the less experienced staff can learn from the experienced staff.
- 4. The two Tertiary Institutions' libraries must make sure that every library staff have access to the use of the ICT facilities available in the library for practices. Time should be allotted to every staff to practice.

Conclusion

The findings of the study formed the basics for making the following conclusions: Most library staff working in Tertiary Institutions libraries possessed basic working knowledge in ICT but the professional skills are lacking. Library staff acquires training in ICT competencies mainly through self practice. Many would prefer to pass through library school to acquire ICT Competency training but the library schools do not possess adequate quantity and quality of facilities to carry it out. As strategy to improve the ICT competencies of library staff in the Tertiary Institutions libraries, the library and Information professional bodies like the Nigerian library Association and the Librarians Registration council should take up the mantle of leadership role to educate library heads and set standards for operations for libraries. Also the

National Library of Nigeria as the apex library in Nigeria should establish training centers where

practicing librarians can go for further training and updates in new trends in the profession.

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