

Full Length Research

ICT competencies in the 21st century library profession: a departure from the past

¹ VICTORIA O. ITSEKOR AND ²UGWUNNA, IKECHUKWU S.

¹COVENANT UNIVERSITY, OTA. E-mail: victoria.itsekor@covenantuniversity.edu.ng

²NRCRI, UMUDIKE ABIA STATE, NIGERIA. E-mail: Ikechukwu.ugwunna@nrcri.org. 08064828755

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This paper examined the different challenges posed by ICT competencies/literacy to librarians in the 21st century. It established that librarians possess digital skills and competencies; that ICT facilities are in libraries; librarians access the internet and provide digital information resources services; it also revealed that different libraries are on the path to digitization; librarians agreed that there are challenges and that they are working to mitigate them. The study concluded by encouraging those librarians not yet on the ICT competence track to join the train. Descriptive survey method was used with a randomly selected sample of one hundred (100) librarians from a target population of over five hundred (500) librarians. Ninety-two percent of the librarians say that ICT facilities are available in their working environment, however 81 or 93% of the librarians complained of problems of ICT including poor bandwidth, lack of fund for expansion of network by service providers and epileptic power supply among other challenges.

Keywords: ICT Competencies Digital Literacy, Digitization and Open Access

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INTRODUCTION

In the ancient world which marked the earliest beginning of libraries, library buildings were awe-inspiring and had such architectural designs that mystified libraries to an on-looker. Books with their distinctive ancient aroma were like objects of art and reverence. A look inside a library building greeted library patrons with fear; books were like little gods and were hardly touched as books were often chained on the walls.

The above scenario has gone with the ages as we today live in a world where libraries and books are synonymous with everyday living. We feel and touch the great books of yester-years. We are familiar with libraries and their interiors and they no longer evoke that feeling of fear. Libraries have evolved from that physical environment we all know as a place of teaching, learning,

research and recreation to a virtual space with no visible library walls, no boundaries in today's library world.

As a result, libraries in addition to housing books, documents and other printed materials are now places where people go to accomplish various tasks such as e-mail services, accessing on-line journal or data base, photocopies and scanning services and even to acquire training for software applications (Lippincott, 2006).

ICT and digital transformation of the library profession has changed the face of librarianship and librarians from mere information custodian to the worker who is expected to electronically or digitally create, process, store, manipulate and disseminate huge volumes of digital information. Itsekor and James (2012) asserted that Libraries all over the world have been faced with the

evolving technological advancement, globalization, and digitization of information. These have led to library automation, digital and virtual libraries, virtual conference, web-cast, pod-cast, community and online learning, Web 2.0 and Library 2.0. This revolution entail the application of digital technology in information work and other computer-based applications, (Eze and Ugoigwe, 2012).

Libraries in Nigeria and all over the world face the daunting challenge of developing the library, the infrastructure and up-grading their staff skills to meet newer user expectations. Library users are getting used to acquiring information devoid of the traditional library domain of old. Libraries and librarians contribute in the development of human capacities for national and international progressive societies. Libraries like we know are therefore, established to provide information for the clientele and they are often time funded from the tax payers money in the case of government libraries and from corporate funds in the case of privately funded libraries in organizations.

Librarians are usually professionally trained workforce who obtained requisite qualifications in library and information science from institutions from within and outside Nigeria. Librarians do specialize in specific areas, yet they perform duties that cut across different boundaries. Librarians in the course of these duties provide such age- long services like cataloguing and classification, reference, location of materials for library patrons and the general acquisition of print and non-print materials.

Librarians are expected to be able to determine their users need and strive to provide information resources and services that best address these needs (Shaughnessy, 2006). The library world today in the face of digitization means that older ways of doing things are giving way to new and better ways of accomplishing tasks. This development has come to bear on service delivery which consequently requires repositioning for staff to be more relevant in their new work environment.

Review of previous works: 21st Century library: the millennium libraries

In the present setting, librarians must be seen as being able to address this crucial professional responsibility by recognizing the implications of these changes which affect their work schedule and services too. These changes and their attendant challenges have brought about the question of what will become of librarians, professors, publishers and book jobbers. Therefore, librarians must be worried about the possible extinction of the profession in the future. Itsekor and James (2012) were of the opinion that this is why librarians must endeavour to equip themselves with technological skills that will be useful for their jobs.

As we gradually move towards digitization and digital literacy, the academic must rethink its libraries without affecting the career of too many librarians. This is the candid advice from Campbell, (2006) who lamented the wave of digitization and computerization of library services. Recent studies have shown that some librarians show apathy resulting from these professional challenges which technological or digital revolution has unleashed on the library as an institution and on librarians as professionals. This apathy may lead to a large turnover of librarians and to stave this, Ruan and Xiong, (2008) advocated for young people to be attracted into the profession and those already into librarianship need to be retained. It is therefore important that issues surrounding the future of libraries and librarians do not evoke a feeling of apathy, piognant and hostile responses. Librarianship is in transformation into the digital era.

The Concept of Digitization

The world has continued to witness a rapid growth in information transformation and transmission or dissemination. This is a product of ICT and the realization that information has become an important ingredient for national transformation and development. To ensure effective information management, the acquisition, accessibility, cost, utilization and storage must be considered.

Digitization involves a process whereby library print-based resources are converted into a form that can be easily accessed and used on the basis of the application of information technologies. It enables analog records to be converted into a form – digitized such that computer or computers can transmit these records in a digital format that is in bytes represented by binary digits 0 and 1. Okocha and Akanwa, (2009) gave a detailed step by step approach or model to digitization for librarians and other information professionals.

Digital Literacy and Competencies

Digital literacy and competencies will shape the future of libraries and librarians who deliver information services in libraries in Nigeria and globally. Digital literacy or competencies implies the ability of the librarians in this wise to perform effective information task in a digital/computer-based work environment. Itsekor and James (2012) further noted that it creates a platform where information users are able to access information on the internet at the instance they need it and these have consequently change the information seeking behavior of users. There is an integration of the traditional librarian's responsibility with the evolving digital technologies. Itsekor and James (2012) quoting Madu

(2008) stated that today's librarian and information handler who must provide information services to his clientele in this "globalised world" powered by the advances made in information technology, faces a challenging task. This information society is often referred to as the digital, web, internet or computer society according to Kanczak and Szolysik (2006).

These evolving technologies are impacting on the career of librarians and as a result, digital literacy and competencies becomes imperative. It is important for librarians to be digitally literate to enable them use the web and be better placed to help spread ideas across networks to achieve their goals. Librarians cannot contend with information exclusion which the lack of digital literacy portends in their present work environment. This is obvious going by the submission of Belshaw (20012) that only those who are digitally literate can use digital tools to work across network to achieve a goal.

To Slater (2003), technology has been integrated into the librarian training to include such watershed as icon, Internet, digitization and electronic records. Examination, experimentation and observation is changing the face of librarianship. Card catalog (the icon of librarianship) is fast disappearing as librarians embrace digitization, adapt and adopt its products. The library world is changing rapidly, that today, the employer specifies the required and preferred skills for library positions which includes ICT skills, (Kasperek, 2003). It is a revolutionary time for the profession and to understand this phenomenon is crucial to the continued existence and relevance of the library profession.

Furthermore, Hjeltnes (2008) enumerated certain definitions as digital literacy which includes the ability to use digital technology, an understanding and use of information in multiple formats and being able to effectively perform tasks in a digital environment. To Hall (2003), 21st librarians should be able to manage and control information environment by employing sophisticated technical skills and tools. Obasi (2012) listed networking, understanding digital concept, using digital equipment and knowledge of arrays of information available and appreciating the benefits of ICT and Open Access as digital literacy definition.

The Berlin Declaration (2003) and Bethesda (2003), emphasize knowledge dissemination as an important process of completing the information cycle. Open access guarantees barrier-free access to information by all persons across all nations. It is a new development aimed at supporting equal participation in information accessibility and utilization by all people of the earth. Access to information is critical to for the success of any effort at improving the quality of life of citizens of any nation.

Although Open access involve both print and electronic resources, the accuracy and speed of electronic

information over rides whatever disadvantages we might hold against it. It allows for mass participation in information consortia thereby providing penetrable dissemination of information. Scholarly societies, government agencies, private bodies and the academia all support open access. It facilitates information collaboration, electronic information and its use is prevalent in today's information work. Open access allows for free access to information across the globe. Developing countries like Nigeria can benefit from the great potential offered by Open access. According to Canada (2009) and Christian (2008) Open access will assist developing countries break the barrier of journal subscription which limits their access to information as scholars from these countries can now conduct and publish their research works.

It is ICT competency and literacy that will enable the librarian to tap into the benefits derivable from Open access. The librarian must, therefore, be in a position to utilize the opportunities offered by this initiative to enhance information retrieval, dissemination and utilization. This will help promote resource sharing and capacity building with little or no hindrance. Wide spread acquisition of the required skills and technical know-how must be put in place and effort made to increase wider internet availability and penetration. The present situation where internet facilities are more in cities and none in most rural areas is an impediment to information dissemination, and an issue of Open access. Sory, (2008) pointed this out that except this is checked, the whole idea of digital literacy and the emerging new library environment with its attendant challenges will put librarians and libraries at a disadvantage considering that many Nigerians who live in rural communities.

Challenges of Digital Competency and Utilization

A World Bank report in 2004 indicated that internet use depend on financial situation of different countries while Sheikh and Bray (2011) identified weak information system development in developing countries as alarming. Ehikhamenor (2003) raised issues of cost, ease of use and accessibility as impediments to digital information. Even where all these factors are positive, acquiring the necessary skills is needed by the librarian and the information user too. To address all these require that urgent necessary leadership and policy framework be put in place. It is not a secret, therefore, that in Nigeria and other sub-saharam African countries, developments in ICT and the newer technologies come with some individual and institutional problems (Bass and Heeks, 2011). Slater (2003) has cautioned librarians to embrace the new technology so that it does not become their eclipse. However, Ochogwu (2007) believes that the assertiveness of librarians will no doubt position them to

fit into the unfolding new information and communication technology scenario. It will take an extra effort on the part of librarians to deal with the inevitable changes and challenges brought by ICT in their work environment.

Benefits of Digital Literacy

In the words of Poulsen (2010), with digital literacy, the librarian like anybody else can teach, assess basic computer concepts and skills and as a result, develop new social and economic opportunities. Librarians will benefit through collaboration and sharing of ideas on their work because of the universality of librarianship. Then through openness digital literacy will unleash peering, sharing, global acting, rapid accumulation and dissemination of information are made possible.

Again, Fox (2012) believes that an improved digital literacy will benefit the low income, educationally poor and the unemployed who will reap from the great opportunities offered by the web. Digital literacy will empower librarians to be able to locate, organize, understand, evaluate and analyze as well as disseminate information with digital technology, thereby bringing about an improved information service delivery.

Research Objectives

As a result of the changing and challenging work roles of librarians in this 21st century brought about by the revolution in ICT and its application in information services delivery, this research seeks to know whether:

- * Librarians possess digital skills/competencies
- * ICT facilities are available in librarians work environment
- * Librarians access digital/internet resource
- * Librarians provide digital information services
- * There are challenges facing librarians working in ICT work environment
- * Efforts are being made to deal with identified challenges

METHODOLOGY

Descriptive survey method was used with a randomly selected sample of one hundred (100) librarians from a target population of over five hundred (500) librarians who attended the induction ceremony of the Librarian's Registration Council of Nigeria held at the NUC Auditorium, Aguiyi Ironsi Street, Maitama, Abuja in 4th June, 2013.

Structured questionnaire titled; the challenges of ICT competencies/literacy in the 21st century library profession: a departure from the past was personally

distributed to librarians as they entered the auditorium and thereafter collected before the induction ceremony ended. The questionnaire was validated for consistency by a senior colleague. Percentages were used for data analysis with 50% as the bench mark.

FINDINGS

A combined frequency and percentage table (Table 1, Figure 1) is presented in the data above. From research question 1, 20 respondents strongly agreed that librarians have digital skills, 47 agree, 14 strongly disagree while 6 disagreed. Availability of ICT facilities saw, 30,50,5 and 2 respondents strongly agree, agree, strongly disagree and disagree respectively. Research objective question 3 shows that 25, 55, 3 and 4 respondents respectively strongly agree, agree, strongly disagree and disagree as shown in the chart above. For question number 4, a total of 42, 40, 1 and 5 respondents strongly agree, agree, strongly disagree and disagree. Question number 5 saw 46, 35, 2 and 4 respondents strongly agree, agree, strongly disagree and disagree respectively. For question number six, 32, 47, 5 and 3 respondents strongly agree, agree, strongly disagree and disagree respectively on efforts at addressing identified challenges of ICT.

DISCUSSION

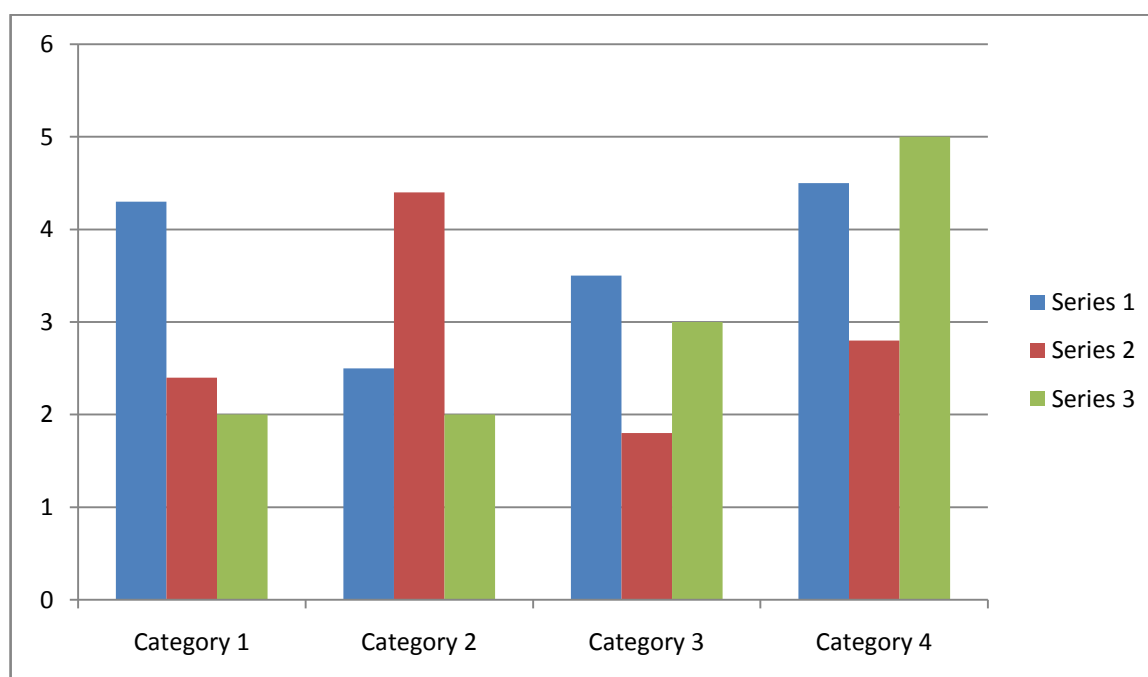
That librarians possess digital competencies is obvious as 67 or 77% of them agree that they are digitally competent. The 20 respondents or 23% that did not agree are likely to come from libraries that have not complied with the new wave of ICT blowing across the library world. Again, they may not have noticed the self ICT skill acquisition programmes being embraced by many librarians to up-date their knowledge in ICT.

Ninety-two percent of the librarians say that ICT facilities are available in their working environment and this supports the gradual penetration of ICT deployment and digitization in many Nigerian libraries especially the university and research libraries, Bozimo (2006) and Okocha (2009). Like their counterparts who do not believe that many librarians today have ICT competencies, are likely to be part of those from ICT-lacking areas, may be from some remote parts of Nigeria, where catching-up with ICT is still far-fetched, World Bank (2004) and (Sheikh and Bray,2011). Those 80 librarians or 92% who access resources from the internet no doubt are the ICT compliant librarians and this has expanded their information resource horizon. Those 7 or 8% remaining must work to catch-up with the new trend in information resource base complemented by ICT. And of course, with the ability to access digital resources, the 82 or 94% of the librarians no doubt will be able to render

Table 1. Research objectives

KEYS: SA = Strongly Agree, A = Agree, SD = Strongly Disagree, D = Disagree
% = Percentage, F = Frequency

		SA		A		SD		D	
		F	%	F	%	F	%	F	%
Librarians Competences									
1	Librarians possess digital skills/competence	20	23	47	54	14	16	6	7
2	ICT facilities are available in librarians working environment	30	34	50	58	5	6	2	2
3	Librarians have access to digital/internet services	25	29	55	63	3	3	4	5
4	Librarians provide digital information services	42	48	40	46	1	1	5	5
5	There are challenges working in ICT environment	46	53	35	40	2	2	4	5
6	Efforts being made to reduce or deal with identified challenges	32	37	47	54	5	6	3	3

**Figure 1.** Chart on responses

digital information services. The remaining 5 who cannot or who don't agree need to equally brace up to this challenge, as the 21st century library work has become an ICT/computer competence/skill-based, (Slater, 2003). There are challenges pointed out by 81 or 93% of the librarians who spoke from experience, if one remembers that ICT problems include poor bandwidth, lack of fund for expansion of network by service providers and epileptic power supply among other challenges, (Nok, 2006).

This observation is in tandem with Sheikh and Brag

(2011) who among other challenges saw weak information system while a World Bank report identified finance as a major challenge to internet development in developing countries. Bass and Heeks (2011) and Eikhamenor (2003) agree that there are problems facing wider internet penetration and coverage.

It is good to know though that 91% of the respondents say there are efforts at abating some of these challenges. For instance, in the area of electricity, some libraries have solar panels, while others have generating sets provided for them to reduce erratic power supply from the

electricity corporation. Like we all know, everything good comes in no easy way. These eight respondents who do not see any effort at abating the challenges posed by ICT are not speaking the truth as some evidences abound in some libraries on effort to improve and sustain issues of ICT in library environment, if one considers the case of National Root Crops Research Institute, Umudike and its effort at digitization, Okocha and Akanwa (2009) and Bozimo (2006).

RECOMMENDATION

1. Effort must be intensified to ensure that every librarian in ICT literate
2. ICT facilities must also be adequately provided in all libraries
3. The issue of internet facility needs to be squarely addressed to enable every one benefit from the huge potential it has.
4. Challenges that militate against ICT provision and utilization need to be addressed urgently so that libraries can serve their users better.

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