

Digital-divide as a Challenge to Libraries and Librarians in Nigerian Universities: A Case Study of Abubakar Tafawa Balewa University, Bauchi

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ABSTRACT

Digital-Divide is a barrier posing a challenge to libraries and librarians in the Nigerian Universities. It is characterized by inability and lack of essential access to digital information and infrastructure, differences in opportunities and inequality of access to available digital facilities. A sample of 20 professional librarians from Abubakar Tafawa Balewa University library, Bauchi was used for this study and the design for the study was a survey. The instrument for data collection was interview, observation and structured questionnaire. Data collected for the study were analyzed using percentage and frequency count. The result shows that, computers, Internet connectivity and other related ICT facilities were available in the library but not utilized. Meanwhile, only 15% of the professional librarians attended ICT related training in library applications. It was observed that the library is still operating on manual library system and services. Thus, this study recommends among others that workshops and on the job training on the use and application of modern technology in library systems and services should be organized at intervals for the university librarians. Personal computers should be disbursed to Librarians working in the University Libraries at a subsidized rate and be motivated to use them. The university regulatory body should also mandate the universities to utilize the virtual library driver shared to them.

Keywords: *Digital-divide, ICT, Internet, libraries and Professionals software*

INTRODUCTION

Apparently, digital technology is making library systems and services real as well as a prime means of reaching diverse group of information users without being physically present at the library building. Thus, libraries across the globe are expected to serve as an avenue for exchange of knowledge and skills both in learning, research and development. Victoria (2004) confirms that digital information technologies are replacing printed world and in the process are transforming the libraries. Therefore, libraries have to change its mode of operation to meet up with the trend in the world's information handling. Hence, Sambo (2004) contends that, in developing the love for reading and lifelong learning the importance of library becomes obvious. All level of learning from primary to tertiary depends on the library as a center of learning or research. Kandi (2004) opined that a library represents system or structure that houses any documented knowledge be it small or large. Hence, Adamu (2008) says that university libraries as agencies of scholarship and research have the responsibility of making available and adequate information resources to meet the bibliographic and information requirements of lecturers, researchers, and students. He further stated that University library is the heart of the university. Today, access to digital information resources in the Nigerian universities is facing a crucial problem. The strongest

argument against digital divide is often seen as the inability and lack of access to digital infrastructure and facilities in the Nigerian universities to enrich their libraries and promote global sharing of academic and research materials via the wave. Kniru (2010) confirms this situation when he says that, in Nigeria, academic libraries have not quite reached the status of providing access to digital resources and information owing to some challenges which militate against access provision in academic libraries. Most academic libraries operate the traditional library services of providing print resources and as a result, users were not getting maximum benefit of the library services as they were restricted to only the resources of their libraries. Digital divide is the inequality of access to information technology or the differences in opportunities to available ICT facilities to people who have access to modern information technology and those who do not.

Korupp and Szydlik (2005) have categorized digital divide into two levels, where the first level deals with the problems of access to computers and the internet, while the second level is on the user profiles of new technologies. The implication of digital divide in the University libraries can therefore be regarded as a situation characterized by inability and lack of essential access to digital information and poorly developed information infrastructure and lack of technological know how. Adebimpe (2005) opines that the challenges of information workers in this contemporary world are computer appreciation, operation and application. In other words, they have to know the worth of using computer, how to operate and how to apply it in daily library routines for optimum attainment of information needs of university community, as ICT has change the scope and services of libraries particularly the university libraries. Thus, ones ability to use computer in the digital age is seen as one of the basic skills required to live a meaningful, enlightened, and productive life therefore, any knowledge and skill acquired by librarians to use ICT facilities in the university libraries can make difference.

The Trends of Digital Divide

Suffice, to say here that "Digital Divide" is a phenomenon which creates gap between people who possess regular access to technology, (such as computers and their related functions like ability to get to the internet) and those who do not have access. The situation requires digital literacy and being able to use other ICT facilities and infrastructure effectively, to meet the information need of the university people. Chaudhary (2008) asserts that with the existence of competitive alternatives, libraries would be pressured to deliver quality customer service. This demand includes the expectation that librarians must lead us into new and exciting world of electronic database searching. Gbaje and Ukachi (2011) confirmed that the information technology savvy patrons prefer digital resources and services in the digital work environment to paper based. The implication therefore is that technologically handicapped librarians have a very hard time to provide the services needed particularly in the university environment. No doubt, Okoli (2010) admitted that librarians of today must be conversant with computer technology as a means of answering reference questions. Going by his opinion, it is evident that, inability to acquire basic knowledge of Information Technology (IT) shall inhibit one from operating computer, internet access and

facilities which will reveal his inadequacy to use and operate in the digital environment due to the radical changes in the nature of information production, selection, dissemination and consumption. To be relevant in librarianship, Sambo (2004) urges librarians of the 21st century to re-orient themselves and their thinking in a new direction, if they are to remain relevant in the world dominated by information and communication technology (ICT) and world coping with the knowledge explosion and Nigerian society that must be dragged by it figurative ears, kicking and screaming into the 21st century. This calls for the librarians to keep themselves abreast with ICT knowledge and skills, as well as the ability to formulate and analyze information needs, identify and appraise sources, locate and retrieve, organize and store information with the aid of digital facilities and infrastructure.

The ICT challenges in Library systems and services

Obviously, digital facilities demand machine searching, offer relatively mature set of tools of information service delivery in learning and research. In line with this, Chaudhary (2008) stresses that the proliferation of electronic catalogs, databases and dial-in access has shifted customer expectations and behaviour. Virtually, most users of information in the university librarians are seeing the benefit of the new electronic searching and prefer it to hard-copy searching. In some cases, information users suffer from the “digital divide syndrome” or “information anxiety/overload” where they are tired without being able to get to the information they need. Henrietta (2005) observed similar instances, saying that the hugeness of the amount of electronic information available on the web, information users are generally overwhelmed. This is more in Nigeria where a good number of web users are unable to efficiently/effectively use it.

Therefore, libraries and librarians should shape their systems and services to reflect with the emerging challenges of ICT in the global arena in order to met the information needs of the user community. Hence, helping customers to deal with electronic databases requires new kinds of instruction in library use and information searching. Thus, librarians have to go further, however, to design more hospitable social and intellectual settings to encourage end-users to make full use of electronic searching opportunities (Chaudhary, 2008). Digital divide as a challenging phenomenon demands librarians to device means and manner of interpreting, synthesizing and critically evaluating information from the multiple sources and carriers to meet the information needs of university community in the digital age. Digital divide can also be described as a phenomenon that pose a gap between individuals and communities from enjoying the numerous uses, benefits and advantages and to effectively use ICT related facilities in their daily library routines. Nkanu and Okon (2010) submitted that digital divide is a phenomenon that limits the numerous uses, benefits and advantages that ICT brings to Nigerian libraries that are ICT compliant, this shows clearly the distinction between libraries without walls and those with walls, and the degree of effectiveness and efficiency, when ICT is used in the provision of information services and performance of library tasks. Librarians should be aware that we now live in a digital and information age where education provides the life skills that would enable our citizens to key into the growing and evolving world and become participants in the globe rather

than mere spectators (Ahule, 2010). To that effect, all over the world people are now using information and communication technology to transform knowledge production and the ranking of universities globally and in Africa is based on this (Albert, 2010). On a similarly vein, Oyelude (2004) opines that the job of providing materials for library users is a challenging one. Therefore, an academic librarian must stay constantly abreast of new publications and ensure that the user gets them. It is a desiring fact to say that, universities with and those without access to information and communication technology facilities and infrastructure are at the ebb of digital divide. As the 21st century information systems and sources is dynamic, it requires librarians expertise to use and offer effective library services to the target group. Nkanu and Okon (2010) confess that Nigerian libraries with and those without access to information technology is actually narrowing, as the information Age continues to expand the horizon through which information services are provided in libraries. This is one of the many challenges confronting Nigerian libraries and librarians as information technology sweeps the world.. Okoli (2010) observes that the basic requirement of a librarian is training on computer technology. As such, Ikpaahindi (1999) cited in Okoli (2010) stated that the fundamental skills required to operate in the library that makes desirable impacts includes

- (i) Knowledge of computer
- (ii) How it functions
- (iii) Imputing and retrieval of information from it
- (iv) Knowledge of keyboard and how to surf the web with ease.

As Reitz (2004) put it in an oft-quoted statement:

A term digital divide was coined by the former secretary of commerce for telecommunication and communication, Larry Irving, Jr., who described it as the gap in access to information resources and services between those with the means to purchase the computer hardware and software necessary to connect to the internet, low-income families and communities that can not afford network access.

Mishra (2008) posited that there are various problems which create barriers to people owning and using ICTs. This problem amongst others, include illiteracy, cultural barriers, lack of computer skills and technological know how, lack of access to computers and computer networks, no internet access, lack of significant usage opportunities, background to increasing information equality and structural information equality. Whereas, Gunick, Robb, Takeychi and Kotler (2010) argued that the term digital divide typically refers to the gap, usually falling across income and ethnic-minority line, between children who have access to technologies, such as internet, and those who do not. This confirms the views of OECD (2001), who reported that digital divide is the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities. Hence, Nkanu and Okon (2010) described the concept as the widening imbalances of access to ICTs in Nigerian libraries and postulated some of its characteristics in the following:-

- (i) There is a gap that exists between traditional and modern methods of processing, storing, analyzing, retrieving, providing and using information in Nigerian libraries.
- (ii) There is inequitable access to ICTs and other Internet-related technologies associated with the provision and use of information services in Nigerian libraries.
- (iii) There are imbalances of access to ICT among Nigerian libraries. And, these imbalances have implications for equitable access to quality information service delivery in Nigerian libraries.
- (iv) Digital divide is a phenomenon that limits the numerous uses, benefits and advantages that ICT brings to Nigerian libraries that are ICT compliant. This shows clearly the distinction between libraries without walls and those with walls, and the degree of effectiveness and efficiency, when ICT is used in the provision of information services and performance of library tasks.
- (v) That, digital library (e-library) is a library that stored information electronically and made accessible to users through electronic systems and networks, but having no single physical location. It is therefore analogous to a library as a store house of information, but has an existence in virtual reality. Or is a bookless space, facilitating the provision of information resources predominantly by electronic means, including the web, e-mail, fax, and electronic transfer scanned documents across the Internet. In this kind of space, the wireless access to the library network and the internet provides all the software needed.

It is very crucial for professional of noble information profession to be knowledgeable in computer usage in information work (Omekwu, 2004). Digital resources provide opportunities for electronic-based information resources. The problem of this study was instigated by the fact that the digital facilities and integration opportunities are missing in the library of the Abubakar Tafawa Balewa University, Bauchi despite the availability of computers and internet connectivity. In this respect, the ETF intervention and library management efforts in provision and support for ICT integration in the services of this library is enormous and quite useful. But almost all the systems and services of the library are however manually operated.

METHOD

This study adopted a survey research design. The study's population covers all the librarians in the University library of the Abubakar Tafawa Balewa University, Bauchi. Questionnaires were used as the main research instrument for the study supplemented by interview and observations where necessary. A total number of twenty (20) copies of the questionnaire were administered to the actual number of the professional librarians working in the Abubakar Tafawa Balewa University Library, Bauchi out of which eighteen copies 18 (90%) of the questionnaire were completed, and returned. Data collected were analyzed using percentage and frequency count. Environmental scanning of ICT related facilities available in the library were recorded such as computers, Internet facilities, Networking system, CD-ROMs and other non-print resources.

RESULTS AND DISCUSSION

A total number of 18 copies of the questionnaire were returned out of 20 representing an impressive high return rate of 90 % of the professional librarians from the Abubakar Tafawa Balewa University library, Bauchi. Meanwhile, the result of other interviews conducted by the researcher yielded a very reflective understanding of the librarians' non- use and inability to fully use ICT facilities to accomplish or offer library services to the university community.

Availability of library software at the ATBU library Bauchi: It was gathered that none of the available computers in the library was integrated with any of the library software used across the globe. By the way, Information seekers want instant individual access to information without mediation. They are expecting to find the resources they want in digital form and accessible electronically and beginning to demand a “one-stop shopping” in an integrated information environment Ubogu (2000) quoted in Oyelude 2004). Chaudhary (2008) also stressed that the proliferation of electronic catalogs and databases and dial-in access shifts customer expectations and behavior, virtually, staff and students are seeing the continence of the new electronic searching and prefer it to hard-copy searching. No doubt, Gbaje and Ukachi (2011) posited that, the information technology savvy patrons prefer digital resources and services in the digital work environment. Surprisingly, neither local nor remote database was observed to be functional in this library.

Utilization of Digital resources in ATBU Library Bauchi: The study observed that some of the available digital resources including the accompanied CDs & CD-ROMS were at the low ebb due to none usage which can be attributed to lack of adequate knowledge and skill by the librarians to put them to use for the benefit of the university community. This situation confirmed the study of Victoria (2004) and Amaechi (2010) who reported that indifferent attitude of staff is the major limitation to effective management of CD-ROMs as well as lack of skilled and qualified staff. The implication here is that none active interaction with digital information resources by librarians in the Nigerian Universities would distance them from participating and enjoying the benefit of ICT in the global world. Hence, the job of providing materials for library users is a challenging one. An academic library must stay constantly abreast of new publications and ensure that the user get them. Thus, in the age of new information and communication technologies, libraries are not left out. Information for libraries is coming more and more in electronic format (e-books, CD-ROMs, e.t.c.). The job of academic libraries does not now end in getting and arranging the library materials but the user have to be taught how to use the library resources. Jones (2005) puts it in an oft-quoted statement saying that:

A really excellent librarian will not only have the basic computer skills, but will know how to update those skills as needs rapidly change during the course of a career. A really excellent librarian will not only know how to use technology, but will have a vision of how technology is likely to change... The best librarians will know where the balance should fall between solid, old-fashioned librarianship in which libraries are organized, stored, housed for information dissemination and whiz-

bang electronic librarianship where vendors own everything and we just help people get to it (p19).

This study reveals that computer and internet services are never used in carrying out the general library routines and the automation of postgraduate and other related research result conducted by the students of Abubakar Tafawa Balewa University. But 66.66% of the librarians indicated that they frequently use the Internet and E-mail facilities to communicate with others. While, only 11% of the staff respondents indicated that they occasionally carryout some of their library routines through the use of computer and internet facilities in the library. Sixty seven per cent (67%) out of the total number of the professional librarians have never undertake or offer any library services for the accomplishment of his daily routines via computer neither internet. Similarly, 78% stated that they had never automate any of the students' research report in the library neither are they trained on how to undertake such task. Gbaje and Ukachi (2011) affirmed that digitization projects in the library require skills and knowledge on how to digitize non-digital born documents using scanner and digital camera.

Table 1: Frequency of Internet Access and Use in Library services in ATBU

Variables	Frequently		Occasionally		Rarely		Never		No Response	
General library routines	-	-	02	11.11	02	11.11	12	66.66	02	11.11
Automation of Students theses and projects	-	-	03	30	14	77.77	1	5.55	-	-
Internet/E-mail Communication with others	12	66.66	04	22.22	02	11.11	-	-	2	11.11

Source: Survey, 2011

Frequency of staff development on ICT in library application: The study revealed that only 15% of the respondents ever attended ICT training in library application long ago, while, the remaining 75% did not. Based on the findings on the issue of non ICT compliant in the University libraries, effort should be made to offer on the job training for the librarians' skilled manpower development in the digital age in order to meet with the challenging needs for ICT application in modern library systems and services. Gbaje and Ukachi (2011) in argued that the evaluation of information technology requires that staff skills and competences must continually be upgraded and maintained to make the best use of these technologies. In consequence, Gbaje and Ukachi (2011) admitted that library technologies are ever-changing and working knowledge of them is necessary for effective information service delivery in the digital work environment. Therefore, Libraries and librarians must be strengthening and positioned to accommodate the global information (Okoli, 2005). These Librarians will be computer experts and information brokers who will be involved in structuring and engaged in publishing as well as in teaching resources in that direction (Aniogbolu, Ubogu and Ejitagha, 2011). Ananobi (2004) in a study conducted on Computer Literacy Status of Librarians in Imo State, Nigeria has grouped hindrances to computer literacy into three (3) as follows:

Personal problems: which he described the problems as inherent in librarians that included the fear for being unable to succeed in the training, lack of funds and lack of time to undergo the training programme.

Institutional Problems: These factors said to be attributed to lack of motivation and encouragement to engage the librarians in ICT training and application in library system and services.

Attendance at seminars and workshops are most times not sponsored and computer facilities are not available in library operations. Moreover, libraries do not have adequate funds to acquire and maintain computing facilities which would have compelled librarians to be computer literate (Ananobi 2004, pp 38-40).

Library School Problems: Ananobi (2004) revealed that the library school level curriculum is still reflecting more of manual or print library systems where most library schools have not yet introduced computer education in the. In such a situation, lack of ICT skills by the graduates of these schools will affects their performance the workplace. Hamza (1987) cited in Abelega (1999) has already stated that, the curriculum of the university have not kept pace with the important needs of the undergraduates to make them effective in their work life. Hence, this study revealed that professional librarians in the university library of the Abubakar Tafawa Balewa University, Bauchi possessed basic computer literacy skills with little skills in using internet even though they have their internet free access password to access the facilities via ATBU Marshal, the entire library was fully networked but No section was found to be using Digital facilities in daily library routines. This situation can attribute to their inadequate skills and knowledge of using the available ICT facilities to offer services to their users. Ajala et al (2010) confirmed that:

Internet access in the university environment provides the library with a means of delivering to its user's e-resources and ability to connect to sites which are beyond the scope of library collections. Internet is changing ways in which people seek information in an increasingly competitive environment the challenge is for the managers of library and information services not to be directed at the survival of library and information services alone but to seek an appropriate manner in dissemination information (p. 32).

CONCLUSION AND RECOMMENDATIONS

In conclusion, efficiency and effectiveness of any organization depends largely on the quality of its human resources. Therefore, librarians and management of University Libraries needs to be ICT compliant, Gbaje and Ukachi (2011) admitted that training is one of the key areas to be emphases if an organization is to survive in our challenging world. Therefore, the implication here is how librarians will optimize the integration and use of ICT infrastructures to offer the needed services in the digital age. To achieve these, librarians must be supported to improve their ICT skills and knowledge to use modern multimedia facilities; internet and software packages among others. Hence, there are sequences of changes in Information work in the digital world today and the changes are exponential in content, system and services of libraries more especially in the universities that offer multi-disciplinary courses. Nigerian university libraries should be part of these new and emerging technologies if they are to remain relevant and enhance their status in the digital age.

Nevertheless, the use of Internet, www, FTP, USERNET, TELNET, Twitter, YouTube, facebook, bogging, Microblogging E-mail has revolutionized access to information for libraries, among others can be regarded as the backbones to globalization.

An ideal librarian is one who is competitive and assertive, who is cooperative and willing to compromise, one who is intellectually committed, who is equipped with technical and managerial competencies, who is enthusiastic to the needs of new technology at the same time not being emotionally attached to any one system (Chaudhary, 2008, p67).

- (i) Workshops/Seminar and on the job training on ICT application in library operations should be sponsored or organized at interval. Gbaje and Ukachi (2011) stated that training is the corner stone of any effort to retool library staff to meet the challenges and opportunities of a digital work environment. Such training should cover staff orientation; general computer literacy; training in application software; CD-ROM and On-line searching; Internet literacy; Networking; Trouble shooting; and Systems administration.
- (ii) Self exposure to ICT facilities should developed by Librarians if they want to be Relevant in the profession.
The Librarian will need to be more conversant with the use of ICT, so that she will not be intimidated by a user who seems to know a little bit more than the average user today. There are some of them around, these days (Asamoah-Hassan, N.d)
- (iii) University managements should collaborate with the computer science and information technology department in digitizing the services of its library and well the training of subject experts in library systems and services to update their knowledge and skills.
- (iv) Professional librarian should be supported financially to own PCs. doing this could reduce the problem of non affective use and application of computer and Internet facilities in their library schedule. Obviously, Tiene (2012) has identified poverty as part of the factor sresponsible for the existence of digital divide and other things in the following:

Poverty is certainly a fundamental factor in the digital divide, and with sufficient funding, other impediments, like weak infrastructure, can be addressed. Underdeveloped telecommunications infrastructures limit ICT access, and their expansion and improvement will open up opportunities for the information-deprived. But other issues may interfere with the upgrading of infrastructure and the effective introduction of ICT. An inefficient and corrupt bureaucracy can slow progress and divert much needed funds (p 13).

In a similar vein, Luster, B (n.d) Posits that the digital divide epidemic could be put to an end if everyone possessed computer and necessary digital devices. He then urged that short of that, funding of libraries is imperative in order to provide the needed materials to the public for free. Encouraging access to online information is

said to be an empowering tool both economically and politically as asserted by Kappelman (2000) in Luster (n.d)

- (v) Procurement of state-of-the-art ICT facilities in the library and user education would predictably put an end to the menace of digital divide among the librarians in the University. Thus, computers with the various application software should be made available in libraries and information centres Anunobi (2004). Hence, Equality of access, skills and aspirations are essential to ensure that the gap between information rich and poor does not extend to gaps in access to electronically based participatory mechanisms (DfES 2001).
- (vi) There should be a drastic review of library school curriculum in Nigeria and it should not only accommodate the traditional print operation but also should strike a balance between information technology operation and traditional operations.
- (vii) NUC should mandate the universities to utilize the virtual library driver shared to them as reported by Annune (2005) saying that "NUC has been in the vanguard for the use of ICT in school system. It has successfully pioneered the virtual library system, and spread the drive for this to be part of every university library in the country.
- (viii) Holistic approach and quality assurance on the proper utilization of the virtual library driver in the Nigerian University library will address and promotes what Tiene (2012) identifies as:
One of the most unfortunate by-products of the digital divide is its negative impact on educational efforts throughout the developing world. Digital technologies provide exciting new opportunities for students in the industrialised world to obtain large amounts of current information on almost any topic, to communicate their thoughts in dynamic new ways, and to work more efficiently than ever before possible. Without access to the benefits of ICT, students in less developed countries may fall even further behind their peers in other nations (p 124).
- (ix) the management of the Abubakar Tafawa Balewa university, Bauchi should as a matter of urgency accomplish its mission of training its library staff for optimum utilization of the available ICT facilities in the library for efficiency and productivity as revealed by Ibrahim (2008) in an oft quoted statement. The cataloguing system and library process was appraised with subject experts at the university library. The library module is now up in the portal of user manuals and training will also be conducted for the library staff.
- (x) Hence, Aina, Ogunipe and Adebawale (2010) affirmed that the ever increasing demands for information availability; academic libraries must know how to subscribe electronic resources such as e-books, full-text journal and on-line bibliography databases in addition to the print.

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