RESEARCH PAPER

THE RELEVANCE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN LIBRARIES SERVICES AND LIBRARIANSHIP PROFESSION IN THE 21TH CENTURY

¹Osawele R.E. and ²Uzairue L.I.

[1]Ambrose Alli University Library, [2]Medical Laboratory Science, Ambrose Alli University, Ekpoma, Edo State, Nigeria.
Corresponding author: uzairue.leonard@gmail.com

ABSTRACT

Available evidence shows that information and Communication Technology (ICT) has further transformed information into a global phenomenon. In fact, the knowledge explosion following ubiquitous ICT tools, have equipped information and library science with immediate access to practically limitless resources, as well as quick storage, retrieval and sharing tools. This paper therefore, examines the importance of ICT in librarianship as a profession, and the evolving new roles, skills, and challenges, while making vital recommendations.

Keys words: Information Communication Technology, Librarian, Librarianship, and Library Profession.

_____

INTRODUCTION

Historically, the word "*Library*", derived from the Latin word "*liber*" meaning "*books*" (also known in Greek and Roman languages as "*bibliotheca*") is a group collection of books and\or other materials organized and maintained for use in consultation, reading, study, and research (Wikipedia.2012). Defining a library also, Onohwakpor (2006), states that it is a knowledge store that is indispensable to the success of any functional education. He further asserts that education without the services of a library is half-baked and can only produce narrow minded individuals who would not be productive to their communities.

On the other hand, a librarian is the professionally trained individual responsible for the care of a library and its contents including the selection, processing and organization of materials and the delivery of information, instructions, and loan services, to meet the needs of its users (Reitz, 2005). In an online environment, the role of a librarian is to manage and mediate access to information that may exist only in electronic format (Reitz, 2005). Therefore, librarianship, like any other profession that requires a lot of training (Wehmeier, 1999), is devoted to applying theory and technology to the creation, selection, organization, management, preservation, dissemination and utilization of collections of information in all formats (Reitz, 2005).

Of greater interest however, is the fact that the National Policy on Education has identified the library as one of the most important aspect of educational support service (Federal Ministry of Education, 2008). They are used as the media for disseminating information and enhancing literature search, as well as a tool for the development of intellectual compatibilities and promotion of cultural and social integration. Dr. C. A. Schwartz described the situation faced by academic libraries as a "*historical discontinuity",* and explained that "*Information Technology* is advancing more rapidly than *Libraries* are prepared to assimilate. Indeed, the acceleration of computer networking

has shown no respect for the traditional organizations or institutional arrangements in higher education as a whole". He further cautions that "ill planned radical change would prove costly and unwieldy" (Ayodele (2002).

The increasing need for education, coupled with limitations on access to information centers, as well as economic problems, lack of experienced experts, and the costs of education, brought about the development of new delivery methods for instruction; because there is a growing need for methods that are economical, qualitatively high, and suitable for use by large populations. Some authorities opine that though the ability to read and write depicts 'literacy', an illiterate is not however, one who cannot read or write alone, but one who cannot teach or learn with Information Communication Technology (ICT)" in the 21st century. Ayodele (2002) defined ICT as an electronic based technology used generally used to retrieve, store, process, and package information, as well as provide access to knowledge. According to Abels et al. (2003), Information Technology is rapidly changing the whole world and creating new challenges and opportunities.

Also, Information Service (LIS) profession remains one of the most challenging professions in the knowledge society, combining expertise in information management with ICT competencies (Tennant, 1998). Indeed, ICT has tremendous impact on library operations, resources, services, staff, and users. LIS Professionals are confronting the challenging and dynamic technological environment demanding the extensive and effective utilization of ICT in order to survive and meet the changing complex information needs of user communities. Like 'change' is the law of nature, ICT has become a driving force for change in the library. Indeed, such changes are inevitable for the survival and success of any library in this changing technological world. LIS Professionals must develop expert technological competencies required to make best use of the opportunities ICT offers in order to provide a gateway access to wide range/variety of information resources and services (Venkata, 2006).

The Concept of Information and Communication Technology (ICT)

Dike (2005) described ICT as an enabling technology (both hardware and software) that is necessary for the delivery of voice/audio, data (high speed and low speed) video, fax and internet services, from point A to point B using wired or wireless media protocols (IP) and non IP networks. To Nwachukwu (2007), ICT is the application of computers and other technologies towards the acquisition, organization, storage, retrieval, and dissemination of information.

Iwu (2003) however, gave 5 categories of ICTs: 1) *Sensing technologies* that include equipment used to gather data and translate them into forms that can be understood by the computer (e.g. sensors, scanners, keyboard, mouse, electronic pen, touch or digital boards, barcode sensors or readers, voice recognition system, etc); 2) *Communication technologies* that enable information to be transferred from source to user and also tries to overcome natural barriers to information transfer like speed and distance (e.g. facsimile machines (fax), telecommunication system, telephone, electronic mail, teleconferencing, electronic bulletin boards, etc); 3) *Display Technologies* involving output devices that form the interface between sensing/communication/analyzing technologies and human user (e.g. computer screen, printers, television, etc); 4) *Analysis technologies* involving technologies that help in the investigation or query of data, analysis, and in-depth query for answers associated with simple to complex phenomena in research procedures; and 5) *Storage Technologies* involving technologies that facilitate the efficient and effective storage of information in a form that can be easily accessed. These include magnetic tapes, disks, optical disks cassettes, etc.

The role of ICT in facilitating Library Operations

The development and availability of information and communication technologies (ICTs) in libraries have today, not only increased and broadened the impact of information resources, but also placed more emphasis on effective and efficient services. Their applications in libraries, commonly known as library automation, have indeed continued to ease and promote quick and timely access to, and transfer of information resources that are found dispensed round the globe. According to Afolabi and Abidoye (2012), some of the ICT facilities or resources that can be used for effective library operations and services include the computer, video conferencing, internet facility, electronic mail (E-mail), computer networking, and the expert system.

Amongst all, the computer has been considered as the backbone, nucleus, or hub of ICT application. In virtually all ICT applications, the computer is interfaced with other devices in order to function effectively. Functional applications of the computer in the library include ordering/acquisition, circulation, library data base, documentation and administration, desktop publishing, budgeting, cataloguing/classification, serial management, and inter library interactions. Interestingly, the internet facility makes it possible for thousands of dissimilar physical networks that

are not connected to one another, to connect and operate as a single communication system using diverse hardware technologies; for example, it provides platforms for video conferencing and electronic mailing.

The Role of ICT in Effective Library Services

Nwankwo (2006) opines that ICTs application to library works and services could be seen as the best way to assist researchers solve problems associated with literature search. This is due to the fact that the application of ICT to library operations greatly helps in providing efficient referencing and information services, as well as the utilization of network operations such as cataloguing, authority control, inter library loans and cooperation and participation in international bibliographic project.

Dike (2000) also claimed that instant access to information from a multiplicity of sources is one of the major roles of ICT application to library services. Not only can it help in locating the materials where the required information can be found also in sorting out what information is relevant from a mass of irrelevant information. Indeed, the use of ICT has impacted on library services as identified by Igbeka (2008), Adebisi (2009), and Uwaifo (2010). In fact, the Online Public Access Catalogue (OPAC) is a great relief to users of the library catalogue in the sense that different users can search for the same information at the same time using different terminals which is impossible through the traditional card catalogue. Also, the users can search the online library catalogue through ISSN, ISBN, and combination of title and author etc. Overdue notices are generated and sent to users through their e-mails.

In the area of reference services, chat technologies, ask a Librarian, Electronic-mail, fax, telephone, Compact Disc-Read Only Memory (CD-ROM), are used to answer users queries by the Reference Librarian in the technological age. Students and researchers can search and read through a single CD-ROM containing the 30 volumes of Encyclopaedia Britannica/Americana in the library and printout needed pages. It may also be noted that current and relevant information can now be accessed and downloaded by users through the internet. It is of interest to note that some higher institution libraries in Nigeria are connected to the internet and subscribe online journals/databases of various disciplines frequently searched by students and staff. Afolabi and Abidoye, 2012 acknowledges that it is a plus to those libraries especially in the area of providing current and relevant information to their users.

ICT and the Librarianship Profession

Cochrane (1992) states that the difficulties associated with the existing traditional methods to cope effectively with ever increasing volume in the library, need for easy integration of various activities in the library, efficiency in the management and provision library services, as well as the need to train the librarian for the 21st century information challenge, were the major reasons for the introduction of ICT in libraries.

In this light, Zhou (2005) emphasized the need for librarians to aquire requisite knowledge in ICT and states that the librarian's responsibilities in this new order includes: 1) to select, acquire, preserve, organize and manage digital collection; 2) to design the technical architecture of digital library; 3) to plan, implement, and support digital services such as information navigation, consultation and transmit services; 4) to establish friendly user interface over network; 5) to set up relative standards and policies for the digital library; 6) to design, maintain and transmit add-valued information products; 7) to protect digital intellectual property in network environment; and 8) to insure information security.

Zhou (2005), further added that digital library services includes: 1) analyzing and processing different kinds of information resources; 2) activating and finding potential value hidden in any information; 3) providing added-value information products and services at right time and right and place; 4) finding the right users for information and provide personalized and tailored services. One can therefore imagine the functional status a library without an efficient ICT trained librarian.

CONCLUSION

Essential tools for changing the face of the librarianship profession in the 21th century include ICTs application and a thorough review of the statutory roles of the library and its profession. This is very necessary and if librarianship as a profession, must measure up to the challenges of the 21th century, the library profession must embrace the new opportunities offered by ICTs. However, ICTs application requires skills that must be developed during training and

the level of training offered in some parts of the world is not adequate to face the emerging challenges. Therefore, it is suggested that the following recommendations be considered.

1. Theoretical training should be balanced with practical application of theoretical knowledge acquired.
2. There should be a review of the curriculum of the librarianship profession, to include more of ICTs related courses that are practical oriented.
3. The librarianship profession should explore the full benefits offers by ICTs in the 21 century; the librarian must develop software's that would fit into the running of the operation of the library, since some of the soft wares developed by other professionals are in adequate.
4. Retraining the present day librarian to be ICTs proficient, is very necessary to bridge the gap created by developments in ICTs
5. The present four years period of training is not adequate for the 21st century librarian. A five years period is therefore recommended, to include a year period of intensive practical exposure in areas like operations of the library software and development.

Specifically, the training of librarians in Nigeria needs radical restructuring to produce librarians suited to deliver efficient services expected of digitalized libraries. As such the following are recommended:
1. Increase in training duration from four academic years (eight-semester) to five and half (eleven semesters) is recommended. This should be broken down into four-year (eight-semester) period of theoretical training and one and a half year (three semesters) of on-the-job training in varied work environments in order to acquire real skills and competences.
2. The eighteen months (18 months) on the job training is to be spent as suggested by Stella (2006) i.e. a) three months each in an academic organization, a private sector organization, a telecommunications organization, a military organization, and a government organization; b) the last three months should be spent in the organization in which the student wants to specialize

ACKNOWLEDGEMENT

REFERENCES

Abels, E., Jones, R., Latham, J., Magnoni, D. and Marshall, J.G. (2003). Competencies for Information Professionals of the 21st Century. Available at: http://www.sla.org/PDFs/Competencies2003_revised.pdf (Retrieved on 24th January, 2013).

Afolabi and Abidoye (2012). The integration of information and communication technology in library operations towards effective library services. A paper presented at 1st International Technology, Education and Environment Conference.

Ayodele, J.F. (2002). "Assessment Policy in the first twelve years of formal education in Botswana and Nigeria. Practical Assessment and Research", retrieved on April 2nd 2008 from

Cochrane, P.A. (1992). Information Technology in libraries and Ranganathan's Five Laws of library science. *Libri 42* (3): 235-241.

Dike, V. (2005). More than Computers Information Technology in Library and Information ServiceEducation, Ibadan: NALISE 50-59.

Federal Ministry of Education (2009). The Development of Education National Report of Nigeria. Inclusive Education; the way of the future. Report for the forty-eight session of the International Conference on Education. Geneva, Zwitzerland. 25 – 28 November, 2008.

Igbeka (2008), Adebisi (2009), and Uwaifor (2010): Enumerated the Impact of Information and Communication Technology (ICT) in Library Operations and Services: from pp. 2-8

Iwu, R. (2003). The Integration of Information and Communication Technology in Library Operations for Effective Library Services Journal of Educational Media and Technology (JEMT) Vol. 14 No1.

Nwachukwu, N.V. (2007) Application of Information and Communication Technologies (ICTs) to Library Services: An Essential Resources for Educational Research. Nigeria Library Link A Journal of Library and Information Science Vol. 5 No 2, pp 31-42.

Nwankwo, A.N. (2006). The Need for ICT Education for Effective Library Work and Services, paper presented at the 2006 Department of Library and Information Science Seminar, 5th – 10th February.

Onohwakpor, J.E. (2006). The Role of Library in the Sustenance Functional Library and Community Development. *International Journal of Research in Education* 3(1) 60-64.

Reitz J.M. (2005). Dictionary for Library and Information Science, libraries unlimited, London, pp402-404.

Stella E. I. (2006): Human Capital for Nigerian Libraries in the 21st Century.Library Philosophy and Practice Vol. 8, No. 2

Tennant, R (1998). Strategies for building 21st century libraries and librarians. In Robots of Know boats: the wider automation agenda. Proceedings of the Victorian Association for Library Automation 9th Biennial Conference, January 28-30 1998, VALA, p.503-507.

Venkata, R. (2006). the changing role of librarian in a challenging dynamic web environment. A paper presented 4th international convention caliber-2006, Gulbarga, 2-4 February, 2006.

Wehmeier, S. (1999): Oxford wordpower Dictionary, Oxford university press, pp490-491.

Wikipedia (2012). Library in the 21th century,   http:// www.wikipedia .org/ library/o9087654aa.

Zhou, Q. (2005). The Development of Digital Libraries in the Shaping of librarians, The Electronic Library.Vol. 23. 4 pp 433-441.

AUTHOR(S) CONTRIBUTION