# EFFECTS OF INFORMATION TECHNOLOGY ON LIBRARIANS IN NIGERIAN LIBRARIES.

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*Abstract - Libraries play a crucial role in addressing users ' data requirements. The librarians and libraries therefore need to apply ICT in their daily library operations, taking into account the significance and roles that it plays in the dissemination of data. Effective application of ICT in library activities helps the librarians to carry out their duties and services effectively and efficiently. In contemporary librarianship, this article evaluated the need for ICT implementation. It describes the library impacts of ICT and ICT profits. It went on to see ICT as a revolutionary trend rather than as an instrument. This paper went further to assess the application of ICT in libraries as a window of opportunity, the factors that affect information technology in modern librarianship.*

**Keywords:** Effects, Information technology, librarians, Library, Nigerian

## Introduction:

University libraries have been the major access points for information/knowledge by staff/students towards quality teaching, learning, and research. Without the use of library technology and information service delivery, the role of university libraries in this regard cannot be understood. Information Communication Technology (ICT) is a term used to describe the various technologies that are used in the processing of information including coding, creation, storage, retrieval, manipulation, dissemination and transmission (Zulu, 2011). Grace, Kenny, and Qiang (2004) described ICT as tools that facilitate the production, transmission, and processing of information. In a broader context, ICT encompasses an array of networks, hardware, and applications of communication and information creation, management, processing, storage, and dissemination. The use of library and data service technology has experienced different stages of growth. Automated cataloging, circulation and acquisition systems have resulted in enhanced library operations management and enhanced facilities.

Today, beyond their traditional printed materials, ICT provides libraries with strong fresh instruments to satisfy the data requirements of their customers. University libraries can reach beyond their walls with internet connectivity to provide customers with resources in their libraries. As shown in library 2.0 model, social media is becoming progressively component of libraries and are instruments for improving library facilities and resources (Tiemo & Edewor, 2011). Many libraries use Twitter efficiently to communicate services such as opening times, fresh arrivals, etc., while others have created apps that allow users to search Facebook catalogs (Baro & Asaba, 2010). There is no doubt that the implementation of ICTs has given one of the greatest

developments in library history and is unprecedentedly altering library shape and librarian role (Lewis, 2007). In an ever-changing technological setting, librarians in academic libraries operate.

As Al-Qallaf (2006) stated "today, librarians are providing access to eclectic e-collections, creating and maintaining digital material, supporting e-learning, providing e-reference in real time, negotiating contracts and licensing arrangements, and struggling with electronic information economics." Thus, the explosive development of ICT and library use has had an effect on librarians and raises severe questions about how they need to adapt in a worldwide interconnected globe to new duties and operations. Accordingly, it is of paramount importance for university libraries to tackle related problems linked to the use of ICT in job procedures, activities and facilities; such as librarians reacting to technological modifications; their perceptions, views and views about the consequences of technology in libraries and the capacity to deal with new innovations in a good way. This research tries to explore the impact of technology on librarians operating in academic libraries with specific reference to Delta State, Nigeria, against this backdrop. Knowing their perception of the effect of technology in the workplace setting (libraries) with particular regard to efficiency, accountability, and perception of learning fresh technology, as well as knowing the sources of technical stress and how they rate such sources. Technology has significantly improved the delivery of library and information services. It is an understatement that technology has undergone a different level of development. Today, through the use of information communication technology (ICT), the library objective of offering data services and access to information resources is significantly enhanced. Jones (1989) surveyed academic personnel perceptions and views at three U.S. university libraries. The questionnaire was her main instrument of data collection. Specific areas addressed were personal reactions to new technologies, staff training, and management issues. The results revealed that majority of the participants had a positive perception toward technology. Other respondents in her study also indicated some level of stress occasioned by technology which is often referred to as technostress. Technostress is not a new concept. Over the years several writers had defined technostress in different ways. According to Weil and Rosen (1997), technostress is any negative impact on attitudes, thoughts, behavior or body physiology that is caused by technology. This could happen as a result of prolonged use.

In Davis-Mills (1998) opinion, technostress is a condition resulting from having to adapt to the introduction and operation of new technology, particularly when the equipment or support is inadequate. Brod (1984) gave a common and concise definition of technostress as" a contemporary adaptation disease triggered by an inability to deal with new technologies in a good way'.'' Technostress is seen as an issue of technology adaptation. Consequently, the failure to adapt to modifications connected with technology implementation could be a cause of stress. However, Brod's classification of technostress as occurs as a result of technology use in the workplace. There are quite a number of existing empirical literature on technostress in academic libraries. Kupersmith (2005) reported major causes of technostress to include: information overload, networking problems, computer hardware, and ergonomics. Ennis (2005) highlighted the following as causes of technostress in libraries: the pace of technological change, lack of proper training of the librarians and users, increased workload, lack of standardization of hardware and software as well as changing the role of librarians. Similarly, Ofua and Tiemo (2011) investigated the effect and measures of technostress among librarians in University libraries in Nigeria. The writers discovered that technostress is a significant phenomenon among the surveyed academic libraries and proposed periodic personnel training on technology and positive attitude growth as measures to avoid technostress. Isiakpona and Oyeronke (2011) conducted a survey in the Covenant University Library, Nigeria,

to determine the sources of technostress among library employees. It was found that techno stress hampers librarians' duties on a daily basis. Sitting positions, slow internet network among others were found to be causes of technostress. Therefore, this research responds to the need to explore the impact of technology on librarians operating in Delta State academic libraries. It is an effort to contribute further to the current technostress literature. The study will further help to determine the perceptions, beliefs, and opinions of librarians regarding the introduction of technology in academic libraries. Findings from this study will help library management in planning and developing strategies for managing and supporting operations in a techno-environment.

### ICT applications in libraries

There are nowadays several ICT technologies for the library's multiple housekeeping, management and administrative tasks. Different electronic and digital media, computer-aided electronic machinery, networks and the Internet have played a major part in retrieving and disseminating data, and ICT plays a crucial role in modernizing libraries, including:

### Library Automation

Library Automation is the notion of decreasing human involvement in all library facilities so that any customer can do so.Major automation fields can be categorized into two organizations of all library databases and all library housekeeping activities. Library Networking Library Networking implies that a group of libraries and data centers are interconnected for some common pattern or design for data exchange and interaction with a perspective to enhancing efficiency

### Library Management

Library Management involves the following tasks which will definitely be shaped by the use of these rapid ICT innovations.

### Digital Library

A digital library is an integrated digital computing, storage and communication equipment with the content and software required to reproduce, emulate and extend the services offered by standard libraries based on paper and other materials to collect, catalog, find and disseminate data. A full-service digital library must perform all of the vital functions of traditional libraries and must also take advantage of the well-known benefit of digital storage, search and interaction. It offers access to portion or all of its collection, such as plain text, pictures, graphics, audio and video materials and other electronically converted library products, through the internet and ICT's "Url" (Uniform Resource Locator).

### EFFECTS ON LIBRARIES AND LIBRARIANS

The computer has brought fresh effect to library use and data use. In libraries, information technology has assisted library professionals to provide value-added quality information service and give more remote access to the internationally available information resources. Highly advanced information technology today to enable the storage in a very compact space of enormous quantities of data or information. IT promises to quickly retrieve stored data and revolutionize our notion of the tasks of a traditional library and a contemporary data center. Recent technological

innovations have altered the mode of library activities and services dramatically. Modern ICT affects multiple elements of libraries and the data profession. Advances in ICT and the extensive use of ICT result in the replacement of digital data sources and digital media and become the dominant type of storage and retrieval of data. ICT also survives and makes Library Science's real guidelines ' every reader his / her book / information' and every book his / her reader. Save the reader's time," Library is a increasing body.' With its tremendous sources of data, fast transmission speed and simple access, ICT ensures customer satisfaction with complicated demand, breaks down the range obstacle and shortens the time needed and provides the correct reader with the correct data at the correct moment. It also improves and resolves the collection development requirement of the library. It's really a great instrument for data centers in the Library.

### ICT Library Vs Traditional Library

The following points illustrate the potential distinctions between traditional libraries and ICT libraries:
• Traditional libraries are based on centralized control and comparatively few access places; ICT libraries can be distributed and omnipresent
• Traditional libraries support one way, loosely linked interaction; ICT libraries support two-way communication with tightly connected libraries.

• Traditional libraries are based on a one-way search system: a consumer in search of an item; ICT libraries support systematic search: the consumer in search of an item and the consumer in search of an item.
• Structured text queries are used in traditional libraries to assist intellectual access; complicated query interactions, navigation / browsing, and social filtering can be used in ICT libraries.

• The collection of a standard library can only be added by a librarian because of the discipline and search limitations on authorized information can be implemented automatically.

### FACTORS THAT AFFECT INFORMATION TECHNOLOGY IN MODERN LIBRARIANSHIP

Why hasn't the technology moved more rapidly? There are several obvious reasons:

1. Cost: The impact of cost upon libraries and publishers has recently received much publicity; we must not disregard the impact upon users who may now be asked to pay in order to access an online database or to search an optical disc file and print out abstracts.

2. Lack of standards: Until recently the hardware manufacturers used differing standards. Now the High Sierra standard seems to be making it easier for software publishers to deal with CD-ROM equipment, but standards remain to be developed in other areas such as telefacsimile.

3. Lack of perceived market. Publishers do not perceive a library market for new products based on new technologies. As an example, relatively few libraries and hardly does any individual own optical disc or CDROM drives for their PCs. The originators of Bibliophile sold the product with the drives, and this technique of selling hardware as well as software now has several imitators. It is still not a large market.

4. The content of the disc. Even a 5 inch CD-ROM contains more than 500 megabytes. That is a lot of information, and publishers are having some difficulty determining logical groupings of information to assemble on a disc.

5. Graphics and color are only now beginning to be widely available.

6. Users are not yet ready to move from the printed page exclusively to electronic data.

7. Articles solely in electronic form are not yet perceived as valid contributions in the publish-or-perish cycle; these may not receive the same stringent scholarly review, and electronic articles are not yet trusted by scholars.

8. Copyright: The 1976 copyright law did not address emerging information technologies, and the library and publishing communities are attempting, with only some degree of success, to effect a compromise between the interests of the two groups. The copyright issue will become even more intense as full-text documents become increasingly available in electronic form.

9.Lack of staff training: Due to the fact most library staff are not internet-friendly, the application and some units of the library.

## CONCLUSION

In conclusion, it must be noted that ICT has fulfilled its commitment in scholarly libraries; there is a large proportion of ICT use. The way data is stored and disseminated has altered tremendously. The traditional approaches to academic libraries and their services have been endangered.

The use of ICT has also resulted to speed on services for library activities such as cataloging and classification, procurement, storage processing, retrieval, and dissemination. Moreover, discussions on the status of ICT infrastructure installations in Nigeria in relation to library service delivery demands in this electronic age, several advantages derivable from ICT effect on compliant librarians in the delivery of library services, as well as issues inhibiting the simple application of academic library services were identified. It is clear that academic libraries and librarians in Nigeria will need to do much more for them to properly benefit their clientele from library facilities. The government's timid approach to financing and providing ICT infrastructure and equipment in Nigerian libraries at both federal and state levels should alter and be more supportive. In order to impact the advantages of library facilities on academic libraries and their customers in Nigeria, training and retraining librarians in the required ICT abilities is a requirement. Some academic libraries are now guided by ICT. This is the only way librarians can maintain a position of significance in the difficult globe of providing data services or become outdated.

Academic libraries in this age will therefore be more evaluated on their capacity to meet their current user information requirements and their capacity to connect their customers to global distributed electronic databases and not necessarily on their capacity to purchase or subscribe to paper format data products. This research is a statement that librarians in Nigeria's academic libraries appreciate the use of workplace technology. There is a general positive feedback that technologies make their work easier, with increasing speed of accomplishment and accuracy. This is in consonance with Ennis (2005). However, Librarians believed that technology had added

more responsibility to their jobs. There is great enthusiasm amongst librarians with technology as they looked forward to learning new technologies.

Inadequate staff, inadequate training and lack of equipment emerged as items causing librarian's stress in the workplace. As affirmed by the study, insufficient professional library staff in the workplace is a major source of stress. This will in no doubt affect overall work output. The dearth of technical staff is a cause of higher stress levels. The availability of qualified librarians (system specialist and troubleshooters) is crucial to effective library and information service delivery in academic libraries in recent times. Lack of equipment such as computers, scanners, printers, barcode readers etc is a major cause of stress; when these equipment are absent, efficient services are hampered thereby causing frustration and disenchantment among the workforce. Notwithstanding these inadequacies, technology has brought about great efficiency in library and information service delivery.

## Recommendations

The following recommendation will go a long way in improving library services with the use of technology.

1. Recruitment and retention of technical support staff in academic libraries. The availability of technical staff helps to maximize systems accessibility and efficiency

2. Provision of relevant equipment for library and information service delivery. Inadequate workstation and printers to meet patron needs cause discontentment for the users, thereby creating tension for librarians. Academic libraries must take practical measures to constantly provide and upgrade equipment and software.

3. Library management should design and implement strategies for training and retraining of librarians in order to keep them abreast with relevant skills and abilities necessary for effective and efficient library and information service delivery in Nigeria.

## References

1. Al-Qallaf C.L (2006). Librarians and technology in academic and research libraries in Kuwait: perceptions and effects. Libri, 56,168-179.

2. American Library Association (2006) Guidelines for University Library Services to Undergraduate Students, Chicago.

3. Baro, E.E & Asaba, J.O (2010). Internet connectivity in university libraries in Nigeria: the present state. Library Hitech News 27(9&10), 13-19.

4. Boston Library Consortium (1986) Managing Technological Change: Boston.

5. Brod, C. (1984). Technostress: the human cost of the computer revolution. Reading:

6. Addison Wesley. Busch, B.J., (1986) "Integration of Public and Technical Services Functions; Observations on Organizational Change" in Six Member Libraries of the Association of Research Libraries: Washington.

7. Chisenga, M., (1999) ICT in Libraries: An Overview and General Introduction of ICT in Libraries in Africa. Paper Presented at INSPECT Workshop in Johannesburg, SouthAfrica On 21-23 July 2004.

8. Davis-Mills, N (1998). Technostress and the organization: a managers guide to survival in the information age, 67th annual meeting of the Music Library Association, Boston. Available at http://web.mit.edu/ninadrn/www.mla.htm. accessed October 25th, 2014.

9. Devchoudhary G.B., (2009) ICT and Electronic Library: Management and Delivery within the Traditional Library.

10. Ennis, L.A (2005). The evolution of Technostress. Computers in libraries,25(8)10-12.

11. Govan, J.F., (1987) "Fluidity and Intangibility: The Stunning Impact of an Expanded Information Base"; Journal of Library Administration.

12. Grace J. Kenny C & Quiang Z (2004). Information and communication technologies and broad-based development: a partial review of the evidence. World Bank working paper, no.12

13. Ifidon, S.E., (2006) Modern Theory and Practice of Library Collection Development, Benin City: Justice Jeco Publishers.

14. Isiakpona, C & Onyeronke A. (2011). The Impact of Technostress on Libraries: a Survey of Covenant University Library. The Information Manager. 11(1&2) 56-61.

15. Jones D. E. (1989). Library Support Staff and Technology: Perceptions and Opinions. Library Trends 37 (4): 432- 456.

16. Kupersmith J. (2005). Library Technostress survey results. Available @ http://www.jkup. net/stress-survey. 2003.html. Accessed on October 25th, 2014.

17. Lewis D. L (2007). A Strategy for Academic Libraries in the First Quarter of the 21st Century. College and Research Libraries 68 (5) 418 – 434.

18. Martin K.S., (1989) Library Management and Emerging Technology: The Immovable force and the Irresistible Object.

19. Mohammed, H., (2004) The Relevance of Information and Communication Technology to Information Professionals of the Digital Age: Challenges for Library and Information Centres.

20. Mosuro (2000), Potential Impact of New Information Technologies on Libraries and the Library User, Library Automation for the Information Age: Concepts, Technologies, and Strategies.

21. Nebeolise, L.N., (2013) The Impact of Information and Communication Technology (ICT) Compliant Librarians On Library Services Delivery in Academic Library: The Case of National Open University of Nigeria (NOUN) Library in The International Journal of Engineering and Science (IJES) Vol II, Issue 8.

22. Nwalo K.I.N (2000) "Collaboration in the Provision and Utilization of IT Facilities for Library and Information Science Education in Nigeria". In Papers Presented at the 10th Biennial Conference of Nalise.

23. Ofua, O. J. & Tiemo A. P. (2011). TechnoStress: effects and measures among Librarians in University Libraries in Nigeria. International Journal of Digital Library Systems 2 (4) 24

24. Omekwu, C.O., (2004), Analysis of the Current Challenges in Accessing Legal Information.

25. ONUOHA, J. A. & OBIALOR, D. C. (2015). The Impact of Information Technology on Modern Librarianship: A Reflective Study. Information and Knowledge Management www.iiste.org ISSN 2224-5758 (Paper) ISSN 2224-896X (Online) Vol.5, No.11,

26. Osinulu L.F., & Amusa O.I., (2010) "Information Technology, Quality Assurance and Academic Library Management"; Library Philosophy and Practice (e-journal).

27. Palmini, C. C. (1994). The impact of computerization on library support staff: a study of support staff in academic libraries in Wisconsin. College and Research Libraries 55 (1): 119-127.

28. Poole, C. E. & Denny E. (2001). Technological change in the workplace: a statement survey of community college library and learning resources personnel. College and Research Libraries 62 (6): 503 – 515.

29. Saleem A., et al (2013) Application and Uses of Information Communication Technology (ICT) Vcc gg3 in Academic Libraries: An Overview.

30. Shaw, D. (1986). Staff opinions in library automation planning: a case study. Special Libraries (summer) 140 – 151.

31. Tiemo A. P. & Edewor, N (2011). ICT Readiness of Higher Institutions Libraries in Nigeria. International Journal of digital library systems, 2 (3) 29 – 37, July – September.

32. Ufuoma A. Omosor (2014) Effect of Technology on Librarians in Academic Libraries in Nigeria. Journal of Information and Knowledge Management, Vol. 5 No. 2. ISBN 2141-4297

33. Weil, M.M & Rosen, L.D (1997). Technostress: coping with technology @work @home @ play. New York: John Wiley.

34. Zulu, S.F.C (2011). Communication technology policy framework for Africa. In: Adomi E.E (ed) Framework for ICT policy: government, social and legal issues. Hershey P.A: IGI-Global.