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Globalization, Technological Advancement and the Traditional Library System: Implications for Information Utilization and Learning

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Abstract

Libraries are crucial part of teaching and learning in educational institutions. The emergence of technology and its incorporation into libraries have improved learning through a well strategized information management model. This has relegated series of antiquated routine practices of the traditional or conventional library. The innovative approaches to information resource utilization introduced by technology have significantly promulgated the relevance of libraries to education. This has also diversified the learning pattern of students and faculty and the management of scholarships within institutions of learning. The crux of this discourse revolves around answering questions like; how has globalization impacted library services? Can globalization mar or improve libraries? Has it changed the learning configuration and reading perspective of students with regards to patronizing the library as a vital information hub or knowledge repository? Since libraries (mostly academic, public and special) have become reference centers for learning, teaching, research and development processes, the contributions of technology and globalization in traditional libraries is reviewed. It proficiently looked at the current integration of modern technology into the library and how it has facilitated optimum learning experience in universities. The challenges that accompanied its emergence of technology and the extended learning services were discussed.

Keywords: Traditional libraries, technological advancement, use of libraries, globalization, information utilisation, learning, ICT, innovation

1. Introduction

1.1 Conceptualizing globalization

The definitions for the word 'globalization' is inexhaustible with no definite consensus as several authors have provided their uniquely diversified perspective based on their field of endeavor and understanding of its distinctive impact on human subsistence, survival and social co-existence in antiquity and contemporary times [1]. For some, globalization is simple the transfer and unhindered relocation of people,

resources, and services across the globe in a manner that it integrates and blends cultures effortlessly, open up trade and interaction between nations and economies. Tonca [2] also opined that concept of globalization is multi-faceted, cutting across different disciplines and that it deals with the integration of economic, technology, educational and cultural aspects of human endeavor. The physical presence of human is now been expanded beyond its limits through a technology-powered globalized world. Misra [3] averred that the globalization which is a cross border integration of people, businesses and capitals was made possible through the flow of information, technology and exchange of ideas. This makes today's type of education easy, where people obtain international degrees from institutions in other continents or countries from the comfort of their bed. Thus, this makes globalization a major tenet of human civilization in the past decades. Summarily, globalization is simply the interconnection of different parts of the world in a concept tagged as '*global-village*'.

1.2 Defining libraries, technology and its role in the globalized era

The library is a training and research center [4] and several technology based functions have been introduced to support this feat. Some of which include the library management system, e-books, mobile technology, artificial intelligence, virtual reality, the Internet [5] to mention but a few. Libraries are at the center of information utilization in higher education [6], hence are crucial components of any educational system. Library services which are a major tenet of the education sector have become increasingly applicable by virtue of the newly established electronic means of information resource processing which is complimenting the conventional methods of teaching. The basic function of libraries is to broaden the learning, literacy and reading abilities of students and researchers in educational institutions and have successfully moved from a collection institution to connecting educators and learners physically, remotely and effortlessly [7].

The constantly growing evolutionary trends with technology (advancements) in a digitized world (globalization era) is now making it possible for people to conveniently access books and other information resources for any educational course of choice through the library. Libraries - information hubs for researchers and academia have also been greatly hit by the force of technology and globalization. At several levels of interest, libraries have been greatly improved, making learning easier and fluent. Technology has further enhanced the freedom of information usage and research and learning collaborations across the globe. Libraries have aided all educational and research ventures of universities. They give priority in serving the information needs of students and staff and then industries and the general public [8]. Libraries provide a unique opportunity and learning platform for students and staff of tertiary education.

In a globalized world as ours, libraries have stood to become a reservoir for information resources for which information exchange for learning is efficiently managed. The education (service) sector is one which fosters national growth within the auspices of teaching, training, research and development. Libraries (especially in most academic institutions) have become a pavilion for the storage, and distribution of vital information. They support all forms of learning in educational institutions even with the advent of technology. Technology has reshaped the manner with which information is accessed, retrieved, utilized and managed for educational purpose. Technology driven services in libraries have made the following possible for effective learning according to [9];

1. Facilitate remote access to information resources in libraries.
2. Improve the velocity and conditions of access to scholarly information.

3. Provide a room for experimenting data recombination, flexibility and reformatting.
4. Enhance access to unlimited information and data from diverse sources.
5. Create a means of accessing information resources all day round.
6. Access regular updates on global library practices and policies.
7. Access updated information on any research or career field.
8. Connect experts from diverse fields of research.

This paper will deliberate on libraries in tertiary institutions which serve a vast majority of information seekers. The emergence of technology in libraries and its subsequent use for library services are discussed herein.

2. Technology, globalization and improved library services

Although, online stores like Amazon is chasing traditional book stores out of the market place, however, Ross [10] averred that only public libraries may end up like that. Academic libraries have had a better impact of the introduction of technology in modern human civilization. Technology has made services easy for library users e.g. the GPS navigation app that help students and other users locate an information resource in the library. The use of information and communication technology (ICT) in libraries has created a novel model for information seekers to strive whilst utilizing library resources, products and services for learning. In [11], it was clearly stated that information technology expanded the access to information which was earlier gotten from television, books, teachers and information professionals and usually in discrete forms or in bits. Timely delivery of information was almost unachievable before the emergence of technology. So many libraries, starting with the academic libraries which are domiciled in tertiary institutions (university, colleges, monotechnics and polytechnics) have enjoyed this innovation.

Public libraries were not left out in the intellectual transformation powered by technology as self-service, equitable access to public documents and effective assessment can be carried out effortlessly. Self-services like easy check-in and -out and return services using access control technologies, created a more flexible working environment. ICT has continually made impact on information storage, processing, acquisition and dissemination in the modern library in so many ways. Some of the important reforms introduced by the technology-powered globalization for information utilization were listed by [12] to include

1. The collaboration and information sharing among libraries in a network.
2. Easy retrieval of information resources by students and other users.
3. Reduction in time consumption and travel space when consulting library material.
4. Multiplication of information services rendered in libraries for researchers and patrons.

5. Provision of quick and timely access to learning resources.
6. Integration of the library (as an educational outfit) with other industry based organizations.
7. Provision of non-stop information services especially via remote sources.
8. Reducing the man hour and work load of library staff.

Across the globe, specific technology powered innovations have been recorded in different libraries. These innovations have improved and enriched learning through ease of information utilization. According to [13], some of the innovative technologies available in American libraries to support learning and other educational functions as opposed to the traditional library system without technology include mobile applications that help students on a library resources tour, robots for book delivery, GPS (Global Positioning System) to aid in locating materials inside the library and 3-D printing services for hi-tech and dimensional modeling during learning or teaching. Below gives detail of three core library services that have been improved upon by technology.

2.1 Institutional repositories

Libraries share experiences and integrate policies with international bodies, a feat made possible through globalization. There has been a change in the practice of librarianship from this integration or access to information resources. Two of such apparatus modified by the technology driven globalization are digitization and repository storage of library resources which have defined a futuristic function of the library. The digitization efforts will be discussed later in this text. Specifically looking at the University of Toronto Library, a huge online repository has been developed for students to access dissertations, thesis, digitized books and 5500 past questions (in PDF format). The repository through the library's information technology services, share its resources through the Dspace open source platform [14]. These services were never in the traditional libraries since this web based technology was not in existence. This has been replicated in several other libraries even in developing countries like Nigeria. For example, the University of Nsukka, Nsukka, and the University of Ibadan, Ibadan libraries host a large repository of information resources for students, researchers and faculty. With Internet powered smart device, one can access the materials in the institution's website for free.

2.2 Library solution/RFID technology

Radio Frequency Identification Device (RFID) technology which uses radio waves to identify library items through barcodes is a self-service software developed and adopted for libraries to track students use of library materials, payment of fines, and for the security of books when borrowed to students and other library patrons [6]. One of such development is "Dootrix" now in Suffolk Libraries in the United Kingdom. This technology helps libraries and users to effectively work during extended library-open hours in educational institutions and take inventory of readers, and returned books including library staff activities [13]. Most analogue techniques in libraries like classification and cataloging and book returns can be tracked and traced using special technology like the OPAC and RFID technologies.

In an interview with Mick Fortune, a Librarian with the British Library and Sirsi-Dynix Company, he mentioned that two of the things technology has introduced into libraries are the RFID as earlier mentioned and discussed briefly and the Near Field Communication (NFC) [15]. The NFC, a similar radio-frequency technology is an alternative to the RFID in terms of function, application and usage [16]. It allows smart devices to exchange information through a wireless model across small distances of 4–10 cm. It has inherent security codes for activities like ticketing, electronic passport, payment and access control. This has advanced the traditional library system in information utilization to a smart library. Library transactions are performed using student's phone by integrating the NFC technology. Using an application compatible with the library management system (LMS), NFC can be used within the library to scan, search, borrow, return and track information resource use history both for the library and the student. Books in the library are given a NFC tag which is programmed with every search item on the book. All transactions of borrowing or payments are automatically stored in the LMS.

2.3 Library management system

The new technological interface called 'Enterprise' and 'Symphony' was developed by Sirsi-Dynix Company for libraries for an integrated library system. It is currently available at the Louisiana Library Network of The Louisiana State University [17]. This interface allows students access online catalog across libraries in the network.

3. The traditional library and its technology supported innovations

Okiy [18] mentioned that globalization has been beneficial to libraries in countless ways. Some of which include a fascinating transformation of the traditional (conventional) library to a modernized multi-purposed civil and technology burdened library. Most of the procedures adopted in the traditional library were modified through the use of information technologies. **Table 1** gives a summary of these changes.

4. Technology transformed services and products in libraries

For students in tertiary institutions, technological transformations in the library have aided learning and research greatly. Vijayakumar and Vijayan [19] opined that technology has played a significant role in the automation of libraries, its management, networking and technical communication patterns. Automation has reduced the level of human intervention in the daily routine of libraries e.g. the use of OPAC allows a student on their own locate a book or material in the shelf without seeking permission or guidance from a library staff. In managing the library, the various means of efficient and prompt communication between library heads, subordinates and students has increased. Mobile phones, e-mailing and virtual conferencing makes such feat possible. Some are discussed herein;

4.1 Acquisition of library materials

Technology has improved the way students and other users of library acquire information resources for academic or personal need. The list of available books,

S/N	Library services	Traditional methods	Technology based methods
1	Information dissemination patterns	Listing, bibliographies, abstracting, and print copies hand distribution	E-mailing, electronic document delivery, computer conferencing, telefacsimile
2	Information retrieval	Checking Catalogs and indexes	Database management system (e.g. OPAC), online and offline information retrieval
3	Information Storage	Books in shelves, manuscripts, print media	Institutionalized repository, hard drives, Internet, Google drive, cloud drives, electronic publishing, magnetic storage,
4	Generate information	Hand typing using typewriter, hand writing	Word processing, text editing, character recognition, scanning, voice recognitions,
5	Information processing	Classification, cataloging and indexing	Electronic data processing, artificial intelligence,
6	Information resource destruction	Physical weeding or disposal	Magnetic erasing, recycling of medium, optical erasing, deleting to recycle bin.
7	Users enquiry for information	Physical presence	Call through dedicated contact number, e-mailing
8	Security of information resources and systems	Human presence	Close circuit television (CCTV), access control (e.g. turnstiles), RFID, library solutions
9	Student registration	Physical presence followed by manual filing.	Online registration from any remote source
10	Knowledge management	Face to face mentoring, meetings, forums, discussion, seminars, bulletin and memo writing	Social media, teleconferencing, video conferencing, telephony,
11	Marketing of information resources	Point of sales display, face to face marketing, book shelve display	Social media, Internet, microblogs

Table 1.
Modifications in traditional library services with technology intersection.

journal and other resources for every institution (department, faculty, school and college) can be gotten through e-mails (Yahoo, Hotmail, Google, Rocketmail) reducing the time consuming correspondence and paper wastage whilst improving access to information at the click of a button [20]. There is also provision for reminders, receipts and acknowledgment at the online acquisition platform. Subscription for hard and soft copies of academic journals can be done from the comfort of the home or office.

4.2 Cataloging and classification

Apart from acquisition services, the Internet and web based technology has aided correspondence with book sellers, publishers and authors, which was originally carried out through hardcopy mailing services. Other improvements include, reminders for scheduled meetings, ordering of library resources, access and download of bibliographic records and creation of online book stores like *Amazon*. Manuel classification of information resources was upgraded to networking of

resources now available online, creation of an online classification scheme, and use of search engines like Yahoo for Dewey Decimal Classification. Collection development has been enhanced using online subscription for print and e-forms for research journals, quick delivery for orders and online pay-per-use services. There are online catalogs like the WebOPAC, and WorldCat for easy search and retrieval of information. With these improvements, students and researchers (library patrons) can have unlimited access to e-books, e-journals, preprints, directories, films, patented documents, encyclopedias, magazines, newspapers and letters [21]. OPAC, which is the acronym for Online Public Access Catalog, is an online database for library materials stocked for its users to access from one library or another. In this platform, the library catalog is made available online. OPAC is a new technology that has helped library users to have remote and immediate access to teaching, research and learning materials. With a single keyword search on authors, title, date of publication or publisher can fast track retrieval of archived materials from an online database or catalog. This feature has enhanced access to information by students in the library, saving time and stress of rigorous physical search.

4.3 Reprographic technology

Four important technologies that have been engaged the libraries are printing, duplication, photocopy and facsimile. Due to the increase in the number of students and dependence on the limited information resources in the library, library materials frequently gets damaged in the form of wear and tear. The advent of reprographic technology has helped in the preservation and duplication of limited information resources for students and staff. The medium has also helped to generate revenue for the funding of libraries [22]. Manuscripts, textbooks, reports and graphic files can be reproduced. The xerography machine is a good example.

4.4 Internet and web technologies

The Internet is a vital substratum and facilitator for a series of technology driven services in libraries in this period of globalization. Since its invention in the late 1980s or early 1990, it has powered so many library services (cataloging, classification, information resource acquisition, circulation, reference services, document delivery, and dissemination of information and technical services) expanding it beyond the physical boundaries and four walls of the library in a bid of appreciate knowledge acquisition [21]. Information is stored in the Internet in different formats and can be transmitted in the speed of light from one platform to another, and from one location to another. The Internet aided the formation of information search and retrieval tools like Google, and Wikipedia at the blink of an eye.

4.5 Information retrieval system

Students who use information resources domiciled in libraries can now retrieved information remotely, through what is regarded of a digital/virtual library. The digital library is a collection of information resources and devices stored in a local or remote reserve and can be assessed through a computer network. Details of this library are further discussed.

4.6 e-Library

In America, 14% of students who do not have Internet access in their homes, can comfortably access the Internet at their school libraries, the Internet powered

section of libraries with computers is referred to as the e-library. Others get free WiFi to network to improve the learning performance [23]. This library provides e-journal and e-mailing services to student and faculty in their bid to get more information or data for research in higher education institution [6].

4.7 Digital/virtual libraries

Since the introduction of technology into the education sector, libraries have evolved from being traditional book collection houses to online store of information resources. The development of digital or virtual libraries has made it also possible for one to access the store of resources in a United State University library from a Nigeria library. The virtual libraries do not need a physical building but a remotely accessible store of e-books. In the University of Utah Marriot Library, a digital library was created for the collection of digital scholarship to enable students and faculty of the institution have open access dataset for research in a project called “*Digital Matter*” [24]. This newly developed digital library has hosted several workshops, conferences and reading programs at the University to enable the creation of a viable community of cross-disciplinary researchers in a synergistic manner. In 2016, the digital library started an amazingly robust program to make available digital newspaper repository for students, digital asset management system which now olds over 765,000 objects, 2.5 million files, 4 million newspapers and 20 million articles.

4.8 Digitization of print media

The digitization of paper-based information resources is another giant effort powered by technology in libraries across the globe, as some UK libraries have digitized all records from 1990 till date [25]. Through the use of a scanning machine and Optical Character Recognition (OCR), print media can be digitized and documented in electronic form for remote access in repositories. Libraries collect digitized information and can be made available to users from anywhere and at any time in the globe. Learning at higher education is made easy with this functionality in university libraries most importantly.

4.9 Library guide mobile apps

Since the purchase of smart mobile phones is on the rise, and on a frequent basis, mobile apps are been developed, to make learning through the library easier. Most libraries now engage the service of software developers to create mobile apps specific to their libraries that will meet the circulation functions of the library. Since, there is reported evidence of people spending more time on mobile phones, hence libraries have adopted the use of mobile applications (e.g. LibGuide) to guide users for remote access to information resources and contact to library personnel [26–28] Several mobile applications are currently been developed in different libraries (as revealed in [29, 30]). Fortune [15] mentioned the application called “*Solus*” which is operational in libraries in Australia and Britain is currently been used for their libraries. The University of Manchester has an android application to help students self-issue a material at the library without the participation of library staff. These mobile apps have been a source of encouragement for library users and have improved the access to information for their learning.

5. Extended library services powered by technology

The Library Consultant, Garland John in his online article listed diverse range of new technology powered services offered in libraries for the betterment of education in the western world. Most of which have been adopted and implemented in the developed countries to include coding clubs, digital storytelling, digital maker laboratories, and virtual reality. These technologies support learning, reading and research in different areas of endeavor.

5.1 Coding clubs

In this club domiciled in libraries, children and young adults are taught the rudiments and technicalities in using technology for coding in any format using *microbits*. The *microbits* are computers programmed with software to learn coding, do design thinking, for ideation and to solve human related problem. These *microbits* are currently in Plymouth Libraries, England and can be borrowed for free [31].

5.2 Digital storytelling

One of the vital information stored in libraries are written stories in microfilms, web pages or print media. The introduction of technology has made it possible for writers and coders to build new stories with an interactive design to immerse reader into a virtual reality of the depicted fiction. These writers and coders are also allowed to manipulate the narrative pattern and the systematic flow of the story line to make more meaningful realistic backdrop. Some of such libraries that have ventured into this line of thought are the Guildford Libraries in Surrey where a Gothic Story Jam was carried out to depict and embolden the interest of people on the creative art/fiction of Frankenstein and Emily Bronte [31].

5.3 Digital maker laboratories

Libraries especially in the United Kingdom have started offering 3D and 2D printing and help small business to develop prototypes for their products to enhance market visibility. The digital maker laboratories domiciled in libraries allow customers to learn cutting-edge technology for designs on print media, fashion and instructional materials [31].

5.4 Virtual reality (VR)

Libraries today enhance the learning performance of customers by incorporating virtual reality technology to encourage library patronage [32], learning and playing. Virtual (augmented and mixed) reality is an experience for which a physical user is made to enter a three dimensional virtual world using a headset, computer-powered imaging or mobile device [33]. Several virtual reality devices are now available in academic libraries, e.g. the Sony developed PlayStation VR, VIVE by HTC, Cardboard by Google, Oculus Rift by Facebook, and GearVR by Samsung [34]. These devices are used in teaching students information literacy, used for storytelling, virtual travel tours, gaming and the development of new skillset. The Ryerson University Library, Toronto currently uses the Oculus Rift. The University of Utah Library offers workshops once a week on the use of VR. VR is already been used for training medical students in University of New England and others on

different types of surgical procedure inside the library through a virtually seemingly real experience [35–38].

Library users can visit a new universe right in the comfort of their local libraries. Library guide or tours have been built into virtual reality for library users and increasingly used for workshops and training in educational institutions e.g. California State Library and the Wonder Laboratory inside the Fergusson Library of Stamford, Connecticut teaches students to code their own virtual reality games from the start point. Frost et al. [39] conducted a survey on the expanded use of virtual reality services in Harold B. Lee Libraries in Brigham Young University Idaho, United States with data showing overwhelming positive perception on the importance of virtual reality for learning inside the library. In their survey, they found that 81% love it for the sound fun, 9% personal learning, 5% for research, 2% do assignments with it, while 6% for other purposes and students and staff prepare using VR for experimentation.

5.5 Artificial intelligence (AI) in libraries

In September 2018, the University of Rhode hosted that first cross disciplinary AI facility (laboratory) in their main library and it was made open to all students and staff of the institution. The laboratory was hosted in the library to facilitate research into robotics, and ethics in technology. The Cambridge Public Library, Harvard metaLAB and Massachusetts Institute of Technology (MIT) Library also partnered to install an AI enabled “*Laughing Room*” where students play different laugh tracks once the algorithm perceives any statement to be comic. The MIT library is already on the plan to building a collection of information resources that is readable by robots through a voice prompt for students to easily locate and access scholarly articles. A text-to-text or text-to-speech software called Chatbot is been used at the University of Oklahoma Library to assist students to find subject specific databases [40].

5.6 Telephony in libraries

The Cumberland Public Library has a server called the Windows NT 2012 R2 server for the sharing of printers, documents and other files between libraries or with the public for any academic or research purpose. Their telephone system was upgraded to Voice-over Internet protocol (VOiP) technology and a Nook HD⁺ tablet to allow patrons access e-books if they do not have a smart device of their own [41].

5.7 Social media in libraries

A recent technology based change that have occurred in libraries is the use of social media (Twitter, Facebook, WhatsApp, Blogs, etc.) for easy and prompt communication with library users in academic environments [42]. This promotes immediate use of information when requested, induces participatory activities of students, create an atmosphere of openness and bridging the gap in decision making of library managements. Book and focal discussion groups using Blogs is made possible, and update on product and services can be noticed timely. Social media at libraries also helps in building the information literacy or train students on information seeking competence.

5.8 Libraries-ready-to-code initiative

In partnership with technology giants like Google, one of the achievements of the American public libraries is to build and promote 21st century skills in a

Libraries-Ready-to-Code Initiative [40]. This initiative with others at the United States has help to bridge the digital literacy divide among students (teens and young adults). For example, the Hinsdale Public Library has developed a system where teens, junior grades and new adult new books are delivered in boxes at residential address through subscription economy technology. Each month those who have subscribed to this service in the library pick up their books.

5.9 Support for entrepreneurial activities

Libraries have been part of enterprising network facilitating innovation and creativity among young one. The State Library of Victoria has become an information hub for innovators [23]. The Pattee and Paterno Library in recent times have started students with patentable ideas through the technology driven information services available at their disposal [43].

6. Challenges with the use of trending technology in libraries

Apart from the enormous benefits that came with the intersection of technology in libraries, there are several complimentary. These include the lack of technical know-how, frequent break down of technical infrastructure, cost of maintenance [12], poor electrical power supply in developing countries, cybercrime (e.g. computer systems hacking), digital rights management strangulating information dissemination, and forced placement of paraprofessional librarians on redundancy list. Fortune [15] mentioned that the lack of basic technical skills to utilize technology powered services is a major threat that accompanied the emergence of technology in libraries. Vijayakumar and Vijayan [19] opined that lack of funding, inadequate staff with ICT skills, high annual operational costs hinder the disadvantageous use of technology as well as its potentials in creating unemployment. Khan [9] listed poor funding technological infrastructure, inadequate electrical power supply in developing and under-developed countries, high cost of bandwidth and the recent digital and intellectual property rights issues pose threat to the effective use of technology in libraries. There is also the issue of library patrons privacy where data is breached, identity is revealed or stolen with trending technology. However, McAndrew [44] has suggested the use of a library virtual privacy network (VPN) to protect online users of library resources using an encrypted tunnel in the library user devices, although, this may come with paid charges. Okiy [18] highlighted that training and re-tooling of library staff and inclusively, the government has a role to play in funding libraries to appropriate the full specifications that comes with globalization of libraries through technological empowerment. She complained of poor communication infrastructure, low technical skill, and lack of collaboration between libraries, government and non-governmental agencies has a blockade to the sustainable use of technology in libraries. In [45], it is submitted that globalization has led to decline in budgeting for research libraries in Australia, hence, technology and globalization is known to be caused some form of unemployment, and under funding for librarians and information professional, although some authors do not agree with this fact. It is clear from several authors that these challenges are uniform and universal and needs urgent attention.

7. Conclusion and recommendation

Today, due to the effect of globalization, teaching curricula have been standardized, methods in practical courses optimized and unified and access to information available

in other organizations made possible. The libraries now serve as a repository for information resources in parent institution and others. Although, as perceived by some authors and information professionals, the emergence of technology is currently in the process of making libraries and librarians obsolete by cutting down on the relevance of human resources in the management and distribution of library resources. The availability of e-books, repositories, archives and digitized information has spurred creativity in the management of libraries, library services are still been shaped by innovative technology. These former traditional bookstores with dusty card files have been rebranded by the technology powered globe. Since the introduction of technology into library, learning with library resources have had a touch of dynamism, 'psychologically and environmentally friendly' for example the availability of free e-books and databases. Libraries across the globe have increasingly demanded for computers and smart devices to offer customer friendly services to users which are mostly students. Today libraries offer wireless Internet services in their digital library (popular known as e-library) section.

It is very true that technology and globalization has come to stay in the education sector, but as regards libraries and information collection centers, the role of librarians and libraries cannot be over emphasized. Technology in itself, undoubtedly has been of immense help to learning and libraries. The authenticity of information from technological platforms cannot be guaranteed as misinformation has become a leading problem in recent times. Access to technological device also poses a threat to education. With the speed at which technology is transforming libraries and information management in higher educations, developing countries are yet to imbibe this new culture of learning. The use of technology has brought about privacy concerns for both libraries and its main patrons (students). Efforts and collaborations to solve these issues need to be place for a smooth sailing of educational activities in institutions of learning where libraries are resident.

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Conflict of interest

The author declares no conflict of interest, the paper is single authored and all relevant sources have been acknowledged or given proper reference.

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