

## **Effectiveness of Physical Academic Libraries in a Digitally-Evolved World**

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### **Abstract**

This paper aims at establishing the effectiveness of physical academic libraries in a digitally-evolved world. It tends to explore the priorities of academic libraries in line with the changing global environment. Data was gathered through desk research and content analysis approach. Data generated from analysis of literature were augmented by brainstorming and interaction with professional colleagues from different academic libraries within the south-east geo-political zone of Nigeria. The paper described the physical library and nature of academic libraries with reference to the digital world, explain the attributes of the digitally-evolved world and need for transforming physical academic libraries in line with changing global space, highlight the constraints to the effectiveness of academic libraries in a digital world, discuss the keys to effective services delivery in physical academic libraries as it relates to the digital world and outline the prospects for the physical academic libraries in a digital world. The implications for librarians in the digital world were described. The paper concludes that most libraries are still at the analogue stage and that despite the overwhelming influence of Information and Communication Technologies (ICTs) on the services provided by libraries, the physical space of the academics libraries is still relevant.

**Keywords: Academic Libraries, Digital World, ICTs**

## **Introduction**

The world is coming under the overwhelming influence of technological development. Every sector of the global world has received a touch of the wind of technological development that is sweeping fast across the globe. There is no discipline that can claim ignorance of the overwhelming influence of technological development. The library profession is no exemption.

Academic libraries are designed to serve their parent institutions by meeting the learning, teaching and research needs through the provision of the services that can lead to an increase in the productivity of students, teachers and researchers (Gani & Magoi, 2014). The traditional mission of academic libraries has been to select, collect and preserve information and to facilitate access to and use of this information (Wawrzaszek, & Wedaman, 2008). This mission to them has largely been applied in a print centric world, where the book is the primary container of data and information before the heralding of the Internet which has become the thrust of today's business world.

The Internet has caused and still is causing major changes in the way society is organized and people interact (Anglada, 2014). The Internet has made a significant shift in the environment in which libraries find themselves and is making our professional assumptions seem as foreign as a medieval manuscript in chains (Ross & Sennyey, 2008). The paradigm shift in information resources from print to electronic and services, from manual to electronics, calls for critical examination of the concepts, principles and features of library as space and place (Ugwuanyi, Okwu & Ezeji, 2011). Libraries today include more than just the books, maps and charts they contained in the 18<sup>th</sup> century and with the rise of new technologies and the invention of new media by which to deliver content, libraries have adapted to contain more types of material (Rodenius & Cotler, n.d.).

The advent of the World Wide Web (WWW) in the 1990's and the rapid development of Information and Communication Technologies (ICTs) have revolutionized the role of various institutions and the digital age, which is an age that is characterized by efficient and effective conversion, storage, diffusion, and dissemination of data to users, is posing new challenges to the libraries (A.I-Suqri & Afzal, 2007).

The question that is pertinent here is how libraries can survive and remain relevant in a technological driven world, what is the future of the physical library in the face of these constant changes. Where is the position of the physical academic libraries in this global space and what is required of academic libraries and librarians to their place in the academic community.

## **Objective of the Study**

The objective of the paper is to appraise the effectiveness of physical academic libraries in a digitally-evolved world. The study specifically will:

- i. describe the physical library and nature of academic libraries with reference to the digital world
- ii. explain the attributes of the digitally-evolved world and need for transforming physical academic libraries in line with the changing global space
- iii. highlights the constraints to the effectiveness of academic libraries in a digital world
- iv. discuss the keys to effective services delivery in physical academic libraries as it relates to the digital world
- v. outline the prospects for the physical academic libraries in a digital world
- vi. describe the implications for librarians in the digital world

### **Methodology/Approach:**

To generate data for this study, the researcher adopted the desk research approach in which extensive review of literatures relating to the subject matter was carried. The works reviewed includes books, journals and online resources. Also, ideas emanating from brainstorming with professional colleagues were also utilized for the study. The paper therefore adopted content analysis, in which various literatures relating to the subject were used to draw inferences.

### **Justification for the Study**

In contemporary society where every sector of the global economy is being transformed by the domineering influence of technological development, it is very important to examine the state of the library as a profession, especially in the academic libraries that are at the forefront of promoting teaching, learning and research that foster new knowledge. The paradigm shift in the library profession is not in doubt, what is in doubt is the preparedness of library and information professionals to adapt and move along with the shift. For instance, how ready are academic libraries in Nigeria? How effective are the physical academic libraries in meeting the needs of the digital clients. It is pertinent to know that it takes a digital-compliant library as an institution to meet the needs of digital patrons already face-to-face with alternative information sources.

The crux of the matter is that if physical academic libraries are not repositioned to occupy their place in the academic domain, they are likely to lose their relevance and be relegated to the background. This paradigm shift from the analogue mode of operation to the digital mode necessitates the need to x-ray the effectiveness of physical academic libraries in today's digitally-evolved world. It is against this backdrop that the researchers decided to appraise the effectiveness of physical academic libraries in the digitally-evolved world.

### **The Physical Library**

The physical library is the obvious location where the students, lecturers and researchers interact with the resources available freely. However, the library as a building has been transformed to the library as an environment of electronic services established on a computer or a network of cooperation servers (Dendrin, 2005). Libraries must actively embrace the changes in the information environment to stay relevant in the 2.0 world (Wawrzaszek & Wedaman, 2008). The physical library is without doubt undergoing a radical change in relation to content, function and appearance. According to Natriello (2006), as the physical library becomes less important as a storage facility, it is likely to become more important as a venue for instruction as scholars and their students come to require more and more expertise in locating what they need amidst large and more complicated content collections.

Libraries are no longer islands of information but one among many nodes through which information flows to the users (Ross & Sennyey, 2008). The notion of the physical library as sole custodian of information resources is fast giving way by reason of the penetrating influence of information technologies. According Zurinski, Osborne, Anthonie-Ney and Mckenny (2013:75).

Since the advent of the digital age, people have predicted the demise of libraries as physical locations. Libraries took those predictions seriously and began developing a "virtual" presence.

Libraries have had web sites since the internet took off in the mid-1990s. These early web pages were mostly informational, showcasing open hours.

The import of the above assertion is that the technological factor in the global world has not come to put librarians and information practitioners out of place, rather it has come to reposition them if they are willing to accept and adapt to these changes. The acceptance and adaptation of these technological factors would help the profession to carve a niche for them in the information sector. This accounts for the migration of traditional libraries to digital libraries, hybrid libraries and virtual libraries with all its virtual services. Yemi-peters (2011:65) analyzing the contemporary digital world environment has this to say:

Today, the changing technological advancement in our environment requires everything to be advanced. To move with this trend, every field is supposed to accept this fact and implement new emerging technologies. As a growing organization, libraries and librarians are not left out in this emerging technology.

Similarly, Ezeala, Alabi and Nduka (2011:84), acknowledge that:

There is an on-going change in library and information science practice since the inception ICT innovation all over the world. This innovation in the information world started from the developed countries and today has reached the developing country like Nigeria. Like every other novel thing that comes along with it competence and challenges that must be surmounted before it becomes part of the societal practice.

The creation of the information technology presents libraries with critical challenges (McCarthy, 1998).

### **Nature of Academic Libraries in the Digital World**

A good academic library should provide multi-functional environment within the library space and this will help the individual to identify an environment that will help him achieve his set goals (Ugwuanyi, Okwor & Ezeji, 2011). There is no doubt that academic libraries are now being extended out to the field where its patrons are. They are no longer confining their services to the physical place of existence, libraries are already adapting to the various intellectual and technological trends during the shift from print to digital reading (Durant & Horava, 2015).

The objective of academic libraries whether physical or digital is primarily to ensure that clientele has access to information resources that meets their information need. However, with the growing popularity of e-resources, the traditional libraries are gradually migrating from print document to e-resources. Adams and Blandford (2002:392) x-ray the academic libraries from the past and present day scenario pointed out that: "In the past academic libraries were totally bound by their physical parameters, library users initiated the interactions by going to the library. They physically walked around the library and search or browsed for their information, or asked a librarian for help". Nevertheless, libraries of today are redesigning services and information

products to add value to their services and to satisfy the changing information in needs of the user community (Trivedi, 2010). As noted by Wawrzaszek and Wedaman (2008), there remains a place of incredible value for academic libraries in higher education, but libraries will need to reinvent themselves to occupy this place. However, they contend that the traditional library model built on the strength of local collections and on call assistance is no longer sustainable or effective.

Ugwuanyi, Okwor, & Ezeji (2011:97) posit that “academic library since its emergence in the medieval age has ever remained a central structural edifice imbued with the prosperity to satisfy the educational and research goals of their academic institution. However, libraries today continue to serve the ideals of free and open access to ideas and information and intellectual freedom (Zurinski et al, 2013). As aptly captured by Jilovsky & Genon (2008:1) “many libraries, and in particularly those associated with education and research services, are transforming from physical places associated with fixed points of service and physical collections, to multi-faceted providers of remote services providing digital in virtual spaces. The experience of a library is no longer confined to that which is geographically local and resources from many different cultures can be viewed and studied with minimal editorial control (Whether from librarians or other) (Blanford, Rimmer & Warwick, n.d).

The traditional role of libraries as repositories of the printed material has been changed, and in the current times, libraries are witnessing a transformation from traditional libraries to hybrid libraries (providing access to both digital as well as print materials) in most cases and to digital libraries (provision of access to data that is in digital form) in few cases (Al-Suqri & Afzal, 2007:43).

From all indication, there is no doubt that the prominent role of academic library is fast changing in the digital and these changes are feasible and undeniable.

### **Attributes of the Digitally-Evolved World and Need for Transforming Physical Academic Library in Line with the Changing World**

The digitally evolved society is characterized by the technological innovations associated with the internet. The libraries in the digitally-evolved world will require more space even though print will not go away entirely. The digital age is also characterized by efficient graphic user interface, digital imagining efficient transfer and storage of texts. Ross and Sennyey (2008:147) talking about the library and the digital environment asserted that:

Thus, the shift to a digital environment brings the very identity of the librarian under question. Librarianship was built upon ethos of service, but service can no longer be delivered effectively without the application of technology. Libraries must create a more compelling web presence that attracts users.

They recognized the librarianship as a service-oriented profession that must align with the changes associated with technology in order to attract users who are already swimming in the ocean of globalization. Academic libraries therefore, need to respond to the growing and diversifying information needs of the end-users. They are local gateway to the world: knowledge and information (Singh & Kaur, 2009). The libraries of the future as opined by Tredinnick (2009) may no longer represent the spiritual home of active researchers, epitomizing the romantic ideal of a lonely and dusty pursuits of knowledge, but the world, nevertheless, underpin

scholarly knowledge for each new generation of student, academic researcher. Ezeala, Alabi & Nduka (2011:84) looking at Nigerian libraries in the context of paradigm shift stated that:

Nigerian libraries are confronted by users, rapidly shifting behaviours and expectations from this change. There are demands for customized and personalized information environments, and individual participations and control. This demand therefore necessitates that the ugly and ineffective service paradigms that libraries sustain will not work. Our users have too many viable alternatives and will not tolerate rampant information- discovery failure.

As noted by Achonna and Yaya (2008:24) “as the world continues to shrink into a global village, it becomes imperative for every nation, organization and individual to wake with challenges of keeping abreast with the global communication technology of the internet”. In which case, librarians and libraries as institution must also wake up to the realities of challenges besetting them in the face of this global transformation.

### **Ways in which physical Libraries are changing in the Digital Age**

There is sentimentalism to the imagery of libraries as sacrosanct sanctuaries of learning, shielded from the vaporous way of the advanced age. In any case, as innovation advances into each part of present day life, libraries are encountering a move from being housed entirely in physical spaces and are moving onto the web. This move is making a personality emergency for libraries. It likewise implies mind blowing potential outcomes for learning results over the globe with computerized documents interfacing understudies, instructors, and analysts improving the sharing of data. Investigate the five ways that libraries and the way we are getting to books – is advancing. Maybe it will facilitate the feeling of misfortune at the lessening chances to experience the sweet possess an aroma similar to a physical book.

- **Expanded access through information sharing;** Digital Libraries give vigorous connection amongst information and users hence democratizing the worldwide scattering of data. The United Nations Educational, Scientific and Cultural Organization's (UNESCO) "Data for All Program" (IFAP) embodies the present day significance of open data by giving access to more than 25,000 titles and is furnished with on-line associations with an overall system of libraries. IFAP begun in 2000 and works with governments overall who vow to tackle the new chances of the digital age keeping in mind the end goal to make measure up to social orders through better access to information. This is an effective goal. Information sharing has the ability to reinforce instructive equity over the world.
- **Libraries are becoming technology hubs;** As the Internet turns into the principle vehicle for individuals to get information, the custom of a building loaded down with books is less applicable to our cutting edge lives. Subsequently, libraries are changing themselves into technological spaces. When taking a gander at innovation use in libraries, the Pew Research Internet Project found that benefactors are progressively considering libraries group spaces that enable access to innovation and as a wellspring of digital literacy for different socioeconomic.

- **Libraries are being shaped by budget cuts;** libraries have kept on battling, especially since the 2008 worldwide global financial crisis. Much of the time, local governments have downsized the opening of new branches and library administrations. Alternately, amid the retreat, more individuals than any other time in recent memory depended on libraries for excitement, business openings, and as an asset for web get to. Budgetary imperatives keep on plaguing libraries and farthest point their capacity to develop and adjust, even as libraries see expanded utilization from general public.

The quantity of e-book clients is developing, yet not to the degree to have supplanted print books. While the rate of grown-ups who are perusing e-Books is developing, at the same time, print book perusing is likewise investing energy and get to data. Amid the money related emergency, the library saw a bigger and more different support utilizing its space and administrations.

Printed books still dominate reading, despite the growth of e-books; the quantity of e-book utilizes as a part of developing, yet not to the degree that electronic books have supplanted printed renditions. While the rate of grown-ups who are perusing e-books is developing, at the same time, print book perusing is additionally developing as are grown-ups tuning in to book recordings. The prevalence of e-books is rising, yet print remains the establishment of many individuals' perusing propensities. This pattern is relied upon to change as-peruse proprietorship extends, however the relationship with a genuine book isn't required to vanish totally.

Technological expansion and the changing way people access data has profoundly affected the structure of libraries – physically and also reasonably. In spite of the modernization of libraries and their adaption to the computerized age, these open spaces still hold a basic part inside group. Libraries are doing admirably in changing with the requirements of neighborhood groups, proceeding to be guides of data sharing, learning, and amusement even in the midst of tight monetary circumstances.

### **Constraints to Effectiveness of Physical Academic Libraries in Digital World**

A critical look at physical academic libraries in developing countries reveals the following as constraints to the effectiveness of physical academic libraries in the digital world.

**1. Lack of internet facilities:** as noted by Nwokedi & Amkpa (2011), many Nigerian universities do not have internet connection while existing connections are expensive and slow. They further identified some infrastructural impediments to internet connectivity peculiar to Nigeria to include: power failure, equipment failures, regulatory restriction of communication technologies, expensive or unreachable communication technologies, lack of skilled manpower and lack of foreign exchange with which to pay for connectivity

**2. Funding:** part of the major determining factor of the effectiveness of physical academic libraries is funding, and investment in technologies in order for the library to be repositioned for efficient service delivery requires fund. As buttressed by Ali and John-Okeke (2011), the cost of purchasing servers, subscription and the computer systems is a major challenge to libraries and librarians in Nigeria considering the poor funding of libraries.

Constraints

**3. Low bandwidth:** the effectiveness of the physical libraries in the digitally-evolved world is being hampered by the low bandwidth syndrome, with low bandwidth users find it difficult to

appreciate the physical libraries in as much as they could not assist them in times of their information need. The force of the digital world is strong internet connectivity and librarians cannot afford to shy away from this, as it stands as the thrust upon which digital library service thrives.

**4. Lack of ICT skills:** Ali and John-Okeke (2011) contends that personnel are a key determinant factor with respect to any project embarked upon or planned to be executed in the area of information technology. They noted that most libraries do not have the require manpower for computerization, whereas, the reliability of any system depends largely on the capacity of the operator of the system who provides the day-to-day expertise and attention.

**5. Lack of innovation and creative skills:** most librarians working in the physical academic libraries lacks innovations and creative abilities to maximally explore the potential inherent in the application of technologies to library service

### **Keys to Effectiveness of the Physical Academic Libraries in the Digital World**

There are many strategies and keys through which the potentials of the physical library can be unlocked in the digital oriented world. Some of which are:

a. ***In-depth Understanding of the changing roles of libraries in digital environment:*** Library and information practitioners must have an in-depth knowledge and understanding of the changing roles of libraries in the digitally-evolved world. As noted by Troll (2002), “Academic libraries cannot prepared effectively for the future or position themselves on campus until they understand their changing roles in the current learning and research environment, which is radically different from the environment of decade ago”.

b. ***Redefinition of the library’s role:*** According to Law (2009); there is no universal panacea and the emphases will vary from institution to institution, however the concerns that will be at the core of any redefinition of the library’s role include: Building e-research collections and contributing to a virtual research environment of born digital material both nationally and internationally; Managing institution born digital assets; Training/information fluency/information literacy; and Policy and standards advice to institution. Defining a role in the new information environment will require libraries to examine existing practice and priorities and determine how their activities add value to the mission of the institution (Wawrzaszek & Wedaman 2008).

c. ***Creation of Space:*** In the face of constant changing facet of library services. Creation and expansion of physical space has become a necessity as against the theory of fading physical libraries. One of the impacts of the digital revolution on libraries has been to bring about changes in the utilization of physical space (Jilovsky & Geroni, 2008). As digital equipments are incorporated into the provision of information services in the physical academic libraries, space is required for these technologies to be installed and maximally deploy to library service delivery.

### **Prospects of the Physical Academic Libraries in the Digital World**

The arrival of electronic information products doesn’t mean an end to libraries as institutions although a new kind of library services is certainly evolving. However, in spite of the numerous constraints associated with physical academic libraries presence and effectiveness in the digital space, the truth is that it is not all that bleak, there are potentials that can be harnessed, which include:



i. **The Internet:** An x-ray of the development of today reveals the possibilities of the physical library have been replenished by many internet-founded offers (Rasmussen & Jochumsen, 2009). The internet no doubt is the major force driving the technological wind, academic libraries therefore can utilize its potential to enhance its services offered to clientele.

ii. **Social media platforms:** with the plethora of social media available, the potentials are high for the physical academic libraries. Social media are online platforms for communication and interactions via internet enabled devices. They can be maximally deployed to the provision of library and information services. Social networking sites allow library to offer the community's activities to a much broader audience, (Zunriski et al, 2013).

iii. **Networking and resources sharing:** Libraries through networking can optimally meet the information needs of their patrons through sustainable resource sharing programmes. Resources sharing and document delivery services (DDS) makes the effectiveness of physical libraries potentially viable and realistic in the digital evolved world. Academic libraries can explore this medium to make their presence felt and known in the digital environment.

iv. **Provision of access and support services:** As predicted by Bazillon (2001), libraries may one day find themselves out of the business of lending goods (printed volumes) and in the business of providing access, advice, education and tangible support to researchers. In which case, librarians will not be confined to their primary roles as gatekeepers to locally held print collections. These points to the need for academic libraries to develop and provide access and support services to their users.

v. **Viable resources sharing programmes:** resources sharing, a form of library cooperation by which several libraries working together provides access to information resources beyond the scope of individual library provisions (Uloacha, 2011). It can be made more viable and effective in the physical academic libraries by maximizing the potentials of internet networking.

vi. **IT related workshops/ conference:** The availability of IT-related workshops offers a viable platform for training and grooming of librarians for efficient service delivery in the digital age. For instance, IT Section of the Nigerian Library Association (NLA), on a yearly basis organizes IT Specialized Workshops where NLA members are imbued with the skills necessary in the provision of library services.

vii.

### **Implications for Librarians in Digital World**

There are many implications for librarians and libraries

**1. Training and re-training:** One of the implications of the digitally-evolved world on the physical library is training and re-training of the library personnel. As libraries prepare to migrate from the analogue to the digital environment, there is need to develop great expertise. Since most of the expertise required to function effectively are not usually imparted in library schools, training and re-training becomes an inevitable factor in ensuring the efficiency of physical academic libraries.

**2. Restructuring of mode of service delivery:** To ensure that the physical academic libraries occupy its place in the academic environment, there is an urgent need to restructure its mode of service delivery. Though most services will be retained, the mode with which it is delivered to the clients must be altered to align with the realities of the digital world.

**3. Adequate and improved funding of academic libraries:** The physical libraries cannot be effective in the digital space without adequate funding. Procuring of technological facilities, training of manpower and the maintenance of facilities for sustainably requires adequate fund.

As noted by Zurinski et al (2013), with libraries just barely keeping up with rising costs, it can be difficult to find the budget and time to experiment with all the new technologies and initiatives that arise (Zurinski, 2010).

**4. Alternative Source of Funding:** In face of global economic downturn, library administrators cannot afford to continue relying on the meager fund allocated to it. It is high time, libraries start exploring alternative means of funding academic library services. In which case as the global world is swimming in the ocean of technological development, thereby forcing business and organization to change their service approach, libraries can look inwards and also restructure its free-based services to fee-based services. The truth is that users may be willing to pay for services offered to them provided such services helps them in solving their information problems.

**5. Investment in IT:** Modern libraries according to Bamigboye, Owolabi& George (2011) need to invest in information technology for them to benefit from immense resources online.

**6. Facilitators of digital contents and its use:** According to Yemi- Peters (2011:66), libraries are moving beyond the traditional roles of collection maintenance and custodial duties to never functions of translating accessing and marketing resources beyond the walls of the physical library collection. He further advanced that, as the World Wide Web and other electronic tools allows for all facets of our world, librarians must teach individuals how to obtain, and read many new types of resources. Funding Nigerian libraries as pointed out by Ali and John-Okeke (2011), must be adequately funded in order to meet the demands of globalization.

## Conclusion

The emergence of digital library has not come to replace the physical library in its entirety but to transform it to align with expectations of contemporary users who are enmeshed in the web of digital-oriented activities. The digitally-evolved world require librarians to think out of the box by mapping out strategies on how best to meet the need of the ever changing clientele information structure. The physical libraries must be restructured in such a way that it can conveniently attract the users back to the library environment and also retain them. It is therefore imperative that contemporary librarians in academic libraries should rethink of how to assist and facilitate users' access to an array of information sources in the digital domain.

Academic libraries therefore are expected to become part of the cyber infrastructure that is developing to support, teaching, learning and research. Though, the physical library environment are still relevant in the contemporary digital world, there is need for practitioners in academic libraries to align with the space of development.

The future of the physical library is tied to the library and information professionals' ability to embrace changes that are associated with technology. Librarians must be creative and innovative in order to remain relevant in the scheme of things. As pointed by Durant and Horava (2013) "there is no turning back because the digital age is here". Academic libraries must continue to alter our collections, physical spaces selection practice and internal procedures to accommodate it and the evolving needs of our patrons.

Though, there are impediments to the effectiveness of the physical academic libraries in the digitally-evolved world, there are still opportunities that need to be harnessed and explore by the administrators and managers of academic libraries.

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