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Service Paradox in Contemporary Nigerian Academic Libraries- Finding a Meeting Ground Between "Digital Natives" and "Digital Immigrants

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Abstract
This study identifies two categories of contemporary academic library users as "digital natives" and "digital immigrants". It went further to note the information seeking behavior and source preferences of each category of users and then attempt to find a meeting ground for effective academic library services to both digital natives and digital immigrants, without any group being at a disadvantage unwittingly or otherwise, in this era of ICT. The meeting grounds include: making the academic library an information ecosystem, provision of digital literacy, building a digitally inclusive user community and adoption of embedded library service. This would enable academic library to create a convergence service zone for all categories of users, regardless of the rung they occupy in the ICT knowledge ladder. The study notes that though the Web is a great and desirable source of information, it is a poor substitute to full service academic library. A combination of the two is crucial for effective information access and use in academic libraries.
Key words: *Academic library, Digital immigrants, Digital natives, Meeting ground, Service Paradox,*

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Introduction

Libraries all over the world are known for equitable provision of information resources in all available formats to all persons, regardless of age, sex, nationality, religious or political background. The human society is dynamic. Libraries and library services therefore are evolving. This evolution is predicated on a number of factors, like human innovations, emergence and development of Information and Communication Technologies (ICT), including social media technologies, sophistication of library users, etc. These developments are perhaps more influential in academic libraries.

Academic library is the generic term used to refer to all libraries established in institutions of higher learning, such as universities, polytechnics and colleges. They are established to complement the institutions' role of teaching, learning and research by providing relevant resources and services to students, faculty members and researchers. Academic libraries are as old as academic institutions and have also evolved with them to the contemporary time.

Contemporary society is defined as a setting characterized by technological innovation and increasing human interconnection and globalization, (Pricopie, 2020, para. 1). Technology innovation and the diverse and changing ways individuals access information has radically impacted the structure; both physically and conceptually of academic libraries. New generations of users have

emerged in libraries with opposing characteristics. This characterization has lead to dichotomization of users in contemporary academic libraries as "digital natives" and "digital immigrants". Academic libraries are therefore betwixt in paradoxical services to these two divides.

Paradox may be described as a person or thing that combines seemingly contradictory features or qualities. According to the *Cambridge Academic Content Dictionary* (2020), the word paradox is defined as a statement or situation that may be true but seems impossible or difficult to understand because it contains two opposite facts or characteristics. Contemporary academic libraries are caught in a dilemma of two contradictory service demands of the digital natives and digital immigrants. In the Laws of Library Science propounded in 1931 by Ranganathan and enunciated in Zabel (2011, para. 9), every book or information material in the library has its user and every user is entitled to his/her book or information material. In the context of this work, every digital native and every digital immigrant is entitled to his/her book. Bridging this service divide with maximum satisfaction is the focus of this work.

Contemporary Academic Library Services

Given the complexity of higher academic institutions, in terms of the nature and number of courses offered, their libraries acquire resources and provide services that are relevant to meet those needs. Consequently, academic libraries provide varieties of resources in form of print, non print and electronic formats. The print materials include books, general reference sources, journals, magazines and newspapers. Non print materials include e-textbooks, e-journals, resources in CD-ROM, (Eze & Uzoigwe, 2013, p. 435). Other non print resources include; microforms, films, music and sound recordings, photographs, etc. Electronic resources include televisions, video recorders, audio recorders, computers and other ICT resources. Academic libraries also provide myriad of services to satisfy her teeming patrons. Eze and Uzoigwe noted that the services include user education for staff and students, reference services, internet services, bibliography services and reprography services. Other services include circulation service, serials service, virtual reference service, inter-library loan service, readers' advisory service, current awareness service, indexing and abstracting service, compilation of reading list, audio-visual service, electronic library service, etc.

The emergence and development of ICT has impacted greatly on the operation of academic libraries. There is a clear cut paradigm shift from manual method of carrying out information services, powered by analog data to electronic method of accessing and retrieving information, powered by electronic gadgets.

Schonfeld (2018, para. 6) draw the framework of academic library service to include the following nine key areas:

- Convene Campus Community: provide spaces and facilitate programmes that would integrate the community broadly or specific sub-population to generate engagement, outreach, and inclusion.
- Enable Academic Success: support instruction, facilitate learning, improve information literacy, and/or maximize retention, progression, graduation, and later life success.
- Facilitate Information Access: enable discovery and usage of information resources of any format or ownership, provide for preservation of general collections.
- Foster Scholarship and Creation: deliver expertise, assistance, tools, and services that support research and creative work.
- Include and Support Off-Campus Users: provide equitable access for part-time students, distance & online learners, and other principally off-campus/non-campus/remote users
- Preserve and Promote Unique Collections: ensure the long-term stewardship of rare materials & special collections and maximize their usage.

- Provide Study Space: provide physical spaces for academic collaboration, quiet study, and technology-enhanced instruction and/or learning.
- Showcase Scholarly Expertise: promote research excellence and subject matter expertise of scholars and other affiliates; includes repository activities for open access preprint materials.
- Transform Scholarly Publishing: drive towards modernized formats, revamped business models, and reduced market concentration.

Concepts of "Digital Native" and "Digital Immigrants"

The terms "digital natives" and "digital immigrant" were invented by Marc Prensky. He defined "digital natives" as individuals who were born during or after the digital area, immersed in technology. They have always had the internet, laptops, cell phones, facebook and other social media technologies, play stations, digital cameras, and any other number of digital technologies that allows them to instantly capture or communicate with their world (Cunningham, 2012, para. 12). According to Prensky, the digital era began in 1980. As such, based on Prensky's definition, the adults aged 40 and above are categorized as "digital immigrants". These are people who are not born into the digital world but have, at some later point in their lives become fascinated by and adopted many or most aspects of the new technology (Prensky 2001, para. 6). Prensky noted that our students today are all "native speakers" of the digital language in computers, video games and the Internet. He gave the characteristics of the digital natives as:

- ⇨ Used to receiving information really fast
- ⇨ Like to parallel process and multi-task
- ⇨ Prefer their graphics before their text
- ⇨ Prefer constant connecting
- ⇨ Function best when networked
- ⇨ Prefer games to serious work
- ⇨ Used to download music, phones in their pockets, a library on their laptops
- ⇨ Been networked most or all of their lives
- ⇨ Have little patience for lectures, step- by- step logic and "tell-test" instruction
- ⇨ Going to the internet first for information
- ⇨ Prefer to socialize online and weak in face-to-face communication
- ⇨ Use texting and instant message short-hand such as: "cu" for "see you", "coz" for because, "tnx" for thanks, etc.
- ⇨ Prefer immediacy and have short attention spans.

Contrariwise, the digital immigrants have the following characteristics:

- ☞ Prefer to talk on the phone or in person
- ☞ Value 'proper' English when texting
- ☞ Prefer formal communication channels, such as emails, phone or face-to-face communication
- ☞ Prefer print outs rather than soft copies
- ☞ Turns to the Internet as secondary source of information rather than primary
- ☞ Focus on one thing at a time and cannot multi-task
- ☞ Reading the manual for a program rather than assuming that the program itself will teach them to use it.

No doubt, today's older folks were 'socialized' differently from their children and are now forced to learn a new language.

However, it is important to observe here that a broad categorization on the basis of mere age can be misleading. Technological development and knowledge is not tied to age, neither is the spate of development the same across countries of the world. In Nigeria for instance, access to internet and

use of android phones became widespread only about a decade ago, up till today, cellular network have not reached every nook and cranny of the country. Hence, according to Agu (2018, para. 3), Internet usage level in Nigeria in the year, 2012 was less than 16% at the same period when mobile subscription is about 80%. Consequently, Odufuwa (2012, para. 13) noted that due to the growth in mobile phone usage, the mobile handset has become the primary medium for accessing the Internet in Nigeria, with about 58.1% of web traffic originating from handsets and other mobile devices. He attributed the reasons to; low penetration of computers, poor electricity supply, and the proprietary or limited nature of terrestrial networks. Ogunsola and Abojade (2005, p. 10) also observed that many Nigerian academic libraries started computerizing some of their activities in the past 5 to 10 years. ICT revolution in Nigeria is indeed a recent phenomenon. To assume therefore, that all young adults are born into and are technology savvy is over simplification. Factors like location, education, socio-economic background, etc. intervene. Furthermore, not all young adults of 40 years and below have more skill in use of ICT than their older counterparts. The empirical evidence to support this is lacking (Kennedy, 2006, p. 9). Watson (2013, p. 13) also disagreed with Prensky's global approach of classifying all students as digital natives. He noted that the use of technologies by students differ between countries and institutions. Be that as it may, it is agreeable that there are far more ICT enthusiasts in the younger generation than in the older. The younger folks who are ICT illiterates are also more inclined to learn and use them. For instance, Luan, Aziz, Yunus, Sidek, Bakar, Miseran and Atan (2005) noted that younger age have been found to be associated with more positive attitudes towards ICT. Although, older adults in the United States for instance are increasingly using technology, research indicate that they typically have more difficulty than do younger people in learning to use and operate current technologies such as computers, the internet, videocassette recorders, automatic teller machines and telephone menu systems (Czaja and Charness, 2006). Recent survey suggest that computer users above the age of 65 have less confidence in their ability to use computers and have fewer computer skills than do younger people. Interestingly, librarians in Nigerian universities are allowed by law to remain in service up to the age of 65, and 70 years for professors.

Westerman and Davies (2019) review the literature relating to the effects of ageing on the acquisition and application of new technology skills. Experiential, physiological and cognitive factors are identified that place older adults at a disadvantage, relative to younger adults, when using new technologies. However, some investigators have reported an unclear pattern of results with respect to age difference in the accuracy with which new technology tasks are performed. For example, following a lengthy training period on word processing task, Hartley, Hartley and Johnson (2004) found no difference in the comparative error rates of younger and older adults. All these have implications on contemporary academic library services as information needs and search behaviours of their patrons are at variance.

Information Seeking Behaviour and Source Preferences of "Digital Natives"

Several Studies have focused on a key change occurring in library use among the generation of the so called digital natives. An OCLC report, cited in Robinson (2008, p. 14) noted that 89% of its College student sampled commenced their search for information with a search engine higher than the general population sampled, and overwhelmingly preferred to all other forms of electronic access. Only 2% of students sampled listed library website as the source used to commence their information search. Consequently, majority of these students were turning to search engines rather than library resources as the first point in their inquiries.

Lippincott (2005, p. 147) refers to the digital natives as "Net generation". He argued that an apparent disconnect exist between the culture of library organizations and that of the Net generation students. He added further that while the information seeking behaviour of this generation have

altered substantially, the information provision practices of libraries have not been keeping pace, in the way in which they provide information and in the systems and Services which deliver it. Robinson (2008) put the argument more succinctly:

> Information and content on the open Web is far easier and more convenient to find and access than are information and content in physical or virtual libraries. The information consumer types a term into a search box, clicks a button and sees results immediately. The information consumer is satisfied (para. 10).

With their Internet usage preferences, the digital natives are demonstrating the inherent dilemma in information service provision today between conveniences of access on the one hand and quality of content on the other. Castor (2006, p. 16) describe the digital natives as a generation of students which has learned to seek out information through the Internet rather than through the intermediary of a physical or electronic library service.

Ajiboye and Tella (2007, p. 42), in a study to determine the major sources of obtaining academic information by undergraduate university students of Botswana reported that overwhelming majority of the respondents (54.4%) consult the Internet. Next to it is their lecture notes and handouts with the school library rated the third source of information. However Baro, Onyenania and Osheni (2010, p. 111), noted that majority of undergraduate students (82.4%) in the field of humanities use the library as the major source of meeting their information needs. The position is corroborated by Shehu, Idakwo and Ochepa (2019, para. 8).

Connaway, Radford and Williams (as cited in Greenberg, 2016, p. 8) referring to the digital natives also as the Net generation, millennials, or the digital generation noted that they tend to be results-oriented and practical when looking for information and that they feel at home in virtual environments and expect easy access to full-text documents. Greenberg added that they become impatient with complex searching that yields citations of abstracts and are working for full gratification of their information requests on the spot. He further noted that the Net generation is used to turning to the web for help, so Google and Wikipedia have become familiar and trusted resources for information queries for them and that Net generation students comprise the largest cohort of today's academic library users and pose a special challenge for information service development. Search engine results influence what information the digital natives consume. To most of them, research of any sort means "Google search", (Palfrey & Gasser, 2013, as cited in Greenberg, 2010, p. 8). Consequently in their academic information searches, students turn first to their easiest, time saving, familiar and most accessible option, i.e. Internet search engines, rather than to the library's qualified academic sources (Greenberg & Bar-Ilan, 2015, p. 142; Lee, Paik, & Joo, 2012, p. 34). Digital natives may have the least training with traditional library resources but their strength lies in the adoption of technology, online resources, and virtual communications, which are all key elements of contemporary academic library.

Information Seeking Behaviour and Source Preferences of "Digital Immigrants"

Many digital immigrant users are also technologically savvy and exploit the ICT for their information need. Sujana, et al. (2018, p. 60) noted that while the digital immigrants admit widely that they consult the internet first for books and electronic journals and the library second, the digital native generation have no library as an option in their information source preferences at all.

The digital immigrants generally, are users whose introduction to libraries precedes library computerization. They live by a more or less hierarchical information model and think of information as organized and structured taxonomies of sources. They understand the difference between government documents and rare books, reference sources and regular texts. They also expect to find these materials in their appropriate, separately structured locations in the library. These people were

educated in a world dominated by the physicality of libraries, with the mental map of their physical layout and organizational peculiarities.

Meeting Grounds for Service to Digital Natives and Digital Immigrants

The concept of meeting ground in this context is a convergence zone where the interests of both the so called digital natives and digital immigrants meet and interlock. It denotes blending of individual library users who speak different technology tongues, rather than segregating them based on their technology skills or lack of it. Here, all individuals, including those with low level of technology competence experience technology in ways that suit their various needs. This ground can be created by a mix of the following factors:

Making the Academic Library an Information Ecosystem

An Information ecosystem is a system of people, values, resources, and technologies in a particular local environment (Nardi and O' Day, 1999, 58). An academic library becomes an information ecosystem when it effectively combines:

- People – students, lecturers, library staff and the members of the academic community
- Values- equitable access and intellectual freedom are promoted
- Resources- collection, curation, organization, access and use of manual and digital content.
- Technologies – a digital collection, a library on line presence and any technologies in the library space.

Building a Digitally Inclusive user Community

According to Digital Inclusion Map (2020, para. 1), "digital inclusion is social inclusion in the 21st century that ensures individuals and disadvantaged groups have access to, and skills to use, Information and Communication Technologies (ICT) and are therefore able to participate in and benefit from today's growing knowledge and information society". Library services and technological innovations should be accessible and affordable to all because of the implications they have for sustained educational, research and economic development. Digital inclusion encompasses not only access to the Internet but also the availability of hardware and software as well as relevant content and services. Building of digitally inclusive user community therefore are strategies pursued to foster social inclusion of those who have been sidelined from the mainstream information society due to lack of access to digital technologies and the skills to use them (Beyene, 2017, para. 4). Libraries, particularly academic libraries have been working to close the gap by providing access to computers, the Internets, digital literacy programme. Digital immigrant users and digitally competent people who for one reason or another have been digitally excluded use these resources to enhance their skills and support their education, research and career purposes. In doing do, academic libraries would have provided a meeting ground for users of all generations to apply technology productively. Digital inclusion strategies for disadvantaged academic library users could include, though not limited to, access computers, free wifi hotspots, low cost options for school/office computer purchasing, partnering with broadband providers to offer low cost broadband (WebJucnction, 2020, para. 11).

According to Information Policy and Access Center (n.d, para. 11), digital inclusion has three broad facets: access, adoption, and application. They added that in order to achieve these goals, libraries promote digital inclusion in four significant ways:

- By providing free access to public access technologies (hardware, software, high-speed Internet connectivity) in their communities.

- By providing access to a range of digital content to their communities.
- By providing digital literacy services that assist individuals navigate, understand, evaluate, and create digital content using a range of information and communications technologies.
- By providing programs and services around key community need areas such as health and wellness, education, employment and workforce development, and civic engagement.

Digital inclusion will be facilitated by digital literacy and provision of technology and technology training.

Provision of Digital Literacy

Digital literacy is the ability to use information and communication technologies to find, understand, evaluate, create, and communicate digital information (Alleman, 2018, para. 1). Digital literacy is critical for upgrading the skill levels of digital immigrants and the so called digital natives who lack the requisite technological skills, including the use of new technology devices. The training can be done on face-to-face basis, including practical sessions, individually or in group, one-on-one training, online tutorials or referral to existing sites for tutorials. Such sites include Digitallearning.org, GCF LearnFree.org, digitalliteracy.gov, Code.org, Adobe TV Lynda.com, etc.

The Face-to-face approach is most ideal to teach digital immigrants of all ages and skill levels because it allows for immediate response when questions or points of confusion arise. In addition, Instructors can quickly and easily adapt their curriculum based on feedback, observations, and inputs from participants. Gabbay and Shoham (2019, para. 4) agreed that the academic library can assist faculty members, majority of whom are in the digital immigrant generation to develop information literacy which is especially important in an era of information overload and can help in learning and organizing material. They added that with respect to researchers, specifically, a more precise term for information literacy in the current era is research literacy, and even more so, electronic research literacy which requires various new skills, such as the ability to collect, sort and preserve materials to organize and develop electronic collections, and to learn and use information- obtaining tools.

Adoption of Embedded Library Service

According to Talwar (2014, p. 30), embedded library service is the practice of moving a librarian out of the traditional library setting, whether physically or virtually. This is done with the aim of placing him or her in a setting that enables close coordination and collaboration with researchers or teaching faculty. Embedded librarians are trained to understand the information landscape and it is their professional duty to keep informed about its development and adjust accordingly. The embedded librarians becomes just as engaged in the work of the team as any other team member, They communicate with their clientele by means of mobile phone, e-mail, social network such as Face book, Twitter, WhatsApp, etc. Abbas (2017) provided the constituents of embedded librarianship as:

- Developing relationships with users
- Understanding and catering for users' information needs
- Sharing users' needs (i.e. goals)
- Providing adequate information for realization or achievement of users' needs
- Becoming an integral part of information seekers' group

Whichever category an academic or a faculty staff belongs, embedded library service would provide a catalytic basis for effective library service.

Conclusion

Academic libraries in Nigeria are the most advanced and complex in terms of resources, services and patronage. However, given the fundamental impact of information and communication technology

on all sectors including the library, a dichotomization arose among academic library users as digital natives and digital immigrants. Coping with this dissimilitude has remained a challenge to academic libraries. For the digital immigrants, there is no alternative to re-skilling. Fortunately, immigrants have the potential to learn and be fluent in the new language. On the other hand, overdependence on the Internet, with its inherent poor organization and lack of quality control could be the albatross of the digital natives. As Herring (2018, p. 76) noted, the Web is great, but it is a woefully poor substitute for a full-service library. Libraries are icons of our cultural intellect, totems to the totality of knowledge. If we make them obsolete, we have signed the death warrant to our collective national conscience.

This paper has attempted to provide measures through which a convergence zone can be realized for all categories of library users, regardless of the rung they occupy in the ICT knowledge ladder. From here, academic libraries would provide equitable services to all.

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