

## ENGAGING ACADEMIC LIBRARIES FOR SUSTAINABLE DIGITAL AGE

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### ABSTRACT

*This study sought to ascertain the engaging academic libraries for a sustainable digital age. The study was guided by four research questions. This study adopted web-based survey research design using google form questionnaire as the instrument for data collection. The total population of this study was one hundred and thirteen (113) library staff from Federal Polytechnic Library Oko, Anambra State, and Federal Polytechnic Library Nekede, Imo State in southeast Nigeria. The population was small and manageable hence the researcher adopted census enumeration technique to study the entire population. Instrument for data collection was a web-based structured questionnaire designed on a four-point rating scale. A total of 113 copies of the questionnaire were distributed and the same number was returned. Data collected were analyzed using simple percentages and mean(x) scores. Findings of the study revealed that academic libraries have to engage in the digital age as the expectations are ubiquitous and unlimited as more innovative technology is unfolding. Based on the findings, the study recommends, that the expectations of digital age is unlimited, that academic libraries have to engaged in the digital age for sustainable digital resources, increase of library budget will enhance information access provider of the digital resources, also safeguard institution's repositories*

**Keywords:** Academic Libraries, Library Staff, Institutions, Digital Age, and Sustainability

### INTRODUCTION

An academic library is a library that is attached to higher education institutions to provide resources and services to support the teaching and learning, and research needs of students, faculty, and staff. It is an information center established in support of the mission of their parent institutions to generate knowledge, equip people with knowledge in order to serve the society and advance the well-being of mankind. According to Teffo, Motjolopane, and Masenya (2022), it is a big repository of information and knowledge from all fields of learning to disseminate and store information for the users and it serves to support the school's curriculum and research of the institution. Angeline and Rani (2019) stated that academic librarians work together with other members of their institutional communities to participate in, support, and achieve the educational mission of their institutions by teaching the

core competencies of information literacy, the abilities involved in identifying an information need, accessing needed information, evaluating, managing, and applying information, and understanding the legal, social and ethical aspects of information use.

Academic libraries have been actively reinventing the sustainable digital age to meet the needs of today's users. That is to say, libraries and librarians play an important role in providing access to information, organizing it, and helping users to find the information they need. Consequently, information services have become a key element for libraries. In view of this, information professionals are involved in the design and application of information technology initiatives in collaboration with computer and information scientists to design, organize, develop, and maintain digital library repositories. Interfaces, and networks (Sreenivasulu 2000).

Library and information science professionals constantly work to achieve greater human satisfaction and also help to achieve defined goals. The goal of the libraries is to assist users by satisfying their needs and requirements for management, access, storage, and manipulation of the variety of information stored in the collection of material that represents the "holdings" of the library (Leiner 1998). Librarians perform different library functions to provide better and prompt services to library users and also establish user needs in the present sustainable digital age.

Therefore, digital libraries give access to a large variety of multimedia and multi-type documents created by integrating content from many different heterogeneous sources that range from repositories of text, images, and audio-video to scientific data archives, and databases (Castelli, 2006). Engaging academic libraries for a sustainable digital age have a significant impact in the digital library databases resources for stimulating the research culture in higher education. The use of digital databases makes it possible to understand intellectual growth, research productivity, planning and identification of user information needs (Rafi, JianMing, and Ahmand 2019).

## **STATEMENT OF THE PROBLEM**

As libraries provide numerous types of information resources and services, the content of disseminating information and communication has to flourish in this dispensation of the digital age. Academic libraries have to be a frontier to sustain information resources and services in this digital age, that is to say, academic libraries supposed to spur the change, and not being reluctant to change, often reach technology for market saturation before users reacting to the new trend. However, in the increasingly digital age, as technology evolves globally, academic libraries have the pathways for innovation to serve faculty and students more effectively and often adopting digital technologies for services functions. The evolving digital needs of users have to be frequently fulfilled by new product and services offerings.

In order to offer added value to users, academic libraries must put user centricity at the core of any actions taken to capitalize on digital potential. Higher education institution structures are the backbone

of digital transformation and often pose the largest barrier to effectively implementing change. Studies reveal this to be the biggest shortcomings of academic libraries. Only with an agile and flexible structure will academic libraries be able to successfully transform and capitalize on the vast emerging digital opportunities. A shared awareness of the accelerating rate of digital change across all levels of academic libraries is lacking. To turn this around, library management must align institution management who are setting the strategic agenda, informational professionals who are carrying it out, and ultimately users whose needs are being served. As a result, libraries have been constantly facing the problems of space, escalation in the cost of books and journals. Budget shrinkage, inability to provide multiple copies and most important is retrieval efficiency of users being endangered for what information. Academic libraries need to play a central role in providing user-centered services and enhancing users' quality of experience through digital innovation in the era of digital transformation. In the process of digital transformation, the businesses are transformed whereby new emerging approaches, best business practices, are developed to support digital libraries innovations.

### **RESEARCH QUESTIONS**

This study was designed to provide answers to the following questions?

1. What are the expectations of the digital age?
2. What skills are required by library staff in the digital age?
3. What ways of engaging library staff in the digital age?
4. What are the challenges of engaging academic libraries for a sustainable digital age?

### **REVIEW OF RELATED LITERATURE**

Information and communication technology has transformed the way information is created, stored and exchanged and has become a driving force in the 21<sup>st</sup> century (Oguedoihu, 2021). Information and communication technology (ICT) has changed the world and has become one of the important tools for storing and retrieving information. Therefore, there is no doubt that the digital age has changed the way libraries operate. In the academic library, modernizing the collection and the space in which the library operates has been a constant chase to keep up with the changing goals and roles of the libraries (Wright 2020). Digital libraries are quickly becoming the norm at institutions, agencies, and other sectors in society, since they combine technology and information resources to allow remote access to educational content, breaking down the physical barriers. Academic libraries move forward and embrace the digital age for sustainable information resources and institutional repositories, so as to keep today's library activities abreast for users. Digital libraries are at the core of achieving higher education institution strategic priorities and critical pillars that include teaching and learning, research, and community engagement in an environment undergoing rapid digitalization (Teffo, Motjolopane, and Masenya 2022).

Digital library has a variety of potential meaning, ranging from a digitized collection of material that one might find in a traditional library through to the collection of all digital information along with

the services that make that information useful to all possible users (Leiner 1998). A digital library is a collection of documents- such as magazine articles, books, papers images, sound files and videos-organized in an electronic form and available on the internet or on a digital support, for example a CD ROM Disk. The digital library contains digital representation of the object found in it. Digital library (DL) is popularly viewed as an electronic version of a library. To some extent, it simply means computerization of traditional libraries. According to Mishra (2016) cited Larson (2012) defined DL as a global virtual library-the libraries of thousands of “networked electronic libraries”. Networked electronic libraries describe the collection of various library resources to the networks so that any user can access the resources anytime in anywhere. Sonker, and Mahawar (2017) opined that a digital library is a managed collection of information, with associated services, where the information is stored in digital formats and accessible over a network. A crucial part of this definition is that the information is managed. A digital library services is an assemblage of digital computing, storage, and communications machinery together with the software needed to reproduce, emulate, and extend the services provided by conventional libraries based on paper and other material means of collecting, storing, cataloguing, finding, and disseminating information (Kumar, Sonker, and Mahawar 2017). Digital libraries are much more than just the collection of material in its repositories. It provides a variety of services to all of its users (both humans, and machines, and producers, managers, and consumers of information). Its services are large and varied which includes; services to support management of collections, services to provide replicated are reliable storage, services to aid in query formulation and execution, services to assist in name resolution and location, etc. A digitally advanced library provides every possible requirement of its technically advanced users. A DL wider the area and scope of the library, it will enhance the library facility. The current volatility in the higher education institutions environment offers a platform for academic libraries to innovate and play a central role in providing user-centered services and enhancing students’ quality of experience. Such a transformation may include offering digital deposit services, digitization services, research data management, metadata creation, digital cataloguing and conserving, and counselling regarding digital copyrights and information alphabetizing (Teffo, Motjolojane and Masenya, 2022).

Thus; the expectations of the digital age in academic libraries are fast taking over the conventional library, and this process is taking shape very fast. With the internet they help to display information, more accurately, and effectively for any user or consumer of information. In so doing, knowledge of user expectations of DL services is largely based on anecdote and opinion. Fast and Campbell (2004) compared the perceptions and expectations of university students for searching the web and library database. Novotny (2004) examined the use of an online catalogue by “web-Savvy” student users. Xia (2003) examined perceptions and expectations of user communities and librarians in a New Zealand academic library. Griffiths and Brophy (2005) report two detailed studies of the relative use made by web search engines and academic resources by UK students, and the expectations and perceptions of these two forms of services. Bawden and Vilar (2006) example of thoughtful professional reflection

on this topic is given by Straw (2003) cited by Bawden and Vilar (2005). Bawden and Vilar (2006) stated that evidence from such studies suggests that typical expectations of digital library services include the following; Comprehensive ---include everything, Accessible---everything immediately available, Immediate gratification --- speed of response, Follow ability of data --- seamless, Ease of use --- single interface, Multiple formats --- text, image, sound. These capabilities are certainly not expected from “conventional” i.e. not wholly digital library services. Expectations of digital libraries are strongly coloured by experience with the ubiquitous digital information environment, the World Wide Web.

Fast and Campbell (2004) opined that web searching is shaping user expectations of what an information retrieval system looks like, how it behaves, and how to interact with it....digital libraries are now being used by users who have extensive experience on systems that require almost no training, and which produce immediate, if not completely satisfying, results. Bell (2004) observed that library users are now users who want fast, easy access to unlimited, full-text context using interfaces that require no critical thought or evaluation. More specifically, the influence is that of major search engines, most notably Google. Griffiths and Brophy (2005) stated that from a basis of detailed analyses of students’ searching behaviour, conclude that; Student’s use of SEs (Search Engines) now influences their perception and expectations of other electronic resources, And that; Student’s use of resources is now very coloured by their experience with SEs (Search Engines), which in turn may lead to expectations that may not be realistic for different types of services. Pagore (2022) observed that continuing professional’s development is an essential part of the modern library. That the work of library professional is also likely to change in the new digital environment, to manage the library effectively the librarian should have better knowledge of all digital services. Updating knowledge and continuous staff training on emerging technologies as essential to learn, improve and develop various kinds of professional skills, knowledge and competencies. However, the work of a librarian can never be pushed aside. They are essential in every library and educational institution. They are the reason why users and researchers etc can actually study at the institutions. Libraries are continuing to play a fundamental role in educating the users, but they are also serving an increasing range of other functions in digital libraries.

Mores, Jankowska and Marcum (2010) posited that there is growing concern that a variety of factors threaten the sustainability of academic libraries such as, developing and preserving print and digital collections, supplying and supporting rapidly changing technological and networking infrastructure, providing free services to the public, maintaining growing costs of library buildings and lowering libraries “ecological footprint”. Digital libraries give access to multiple contents with a potentially infinite number of resources and selections at hand. The main limit for traditional libraries is physical space, books consume a lot of it and users often have to walk around in search of a particular material. The emergence of internet and cloud storage, digital libraries overcomes this limitation, expanding user’s horizons in learning. They can access an enormous amount of knowledge and share contents

with others facilitating the expansion of education. Libraries acquire and secure ownership of digital content (typically through license), store the content on local servers, and make it accessible to a target community (Council on Library and Information Resources, 2022).

## **METHODOLOGY**

This study adopted web-based survey research design using google form questionnaire as the instrument for data collection which falls within the empirical research methodology. The total population of this study was one hundred and thirteen (113) library staff comprising fifty-four (54) library staff of Federal Polytechnic library Oko, Anambra State and fifty-nine (59) library staff of Federal Polytechnic library Nekede, Imo State, from the two selected academic libraries in southeast Nigeria. All (113) copies of questionnaires distributed were returned. The population was small and manageable; therefore, the researcher adopted the census enumeration technique to study the entire population. It has four clusters, section A is demographic variables of the respondents, and other sections have clusters in line with the research questions. Data collected were analyzed using simple percentage and mean(x) scores. A criterion mean of 2.50 was used to determine items that received positive or negative ratings. Result of the analysis was presented in the tables as shown below.

## **INTERPRETATION OF RESULTS**

**Table I** Respondent’s Demographic Information

<b>S/n</b>	<b>Variables</b>	<b>Professional Status</b>	<b>Frq.</b>	<b>Percentage</b>	
1.	<b>Professional</b>	Polytechnic Librarian	2	1.9%	
		Chief Librarian	14	13.6%	
		Principal Librarian	12	11.7%	
		Senior Librarian	10	9.7%	
		Librarian I	8	7.8%	
		Librarian II	6	5.8%	
		<b>Para-Professional</b>	PGD	9	8.7%
			HND	28	27.2%
ND	14		13.6%		
2.	<b>Name of Institutions</b>	Fed. Poly.Oko.	54	52.4%	
		Fed.Poly.Nekede.	49	47.6%	
3.	<b>Highest Qualifications</b>	<b>Professional Status</b>	<b>Frq.</b>	<b>Percentage</b>	
		Ph.D	10	9.7%	
		MLIS	22	21.4%	
		BLIS	20	19.4%	

	PGD	9	8.7%
	HND	28	27.2%
	ND	14	13.6%
4. <b>Year of Work Experience</b>	1-10	40	38.8%
	11-20	28	27.2%
	21-30	20	19.4%
	31 and above	15	14.6%

This shows the description demographic information of respondents from the two institutions studied. That 27.2% of the respondents were HND<sup>s</sup>. The highest qualification of academic libraries in both was HND with 27.2%, and from 1-10 recorded the highest year of work experience.

### Research Question 2 Expectations of the digital age

S/n	Question Items	Mean	Decision
1.	Offer mobile channels	3.27	Positive
2.	Enable self-service	3.54	Positive
3.	Don't be a time drain	3.50	Positive
4.	Educate	3.41	Positive
5.	Social grows up	4	Positive
6.	User adoption	3.55	Positive
7.	Analytics- removing guess work	3.55	Positive
8.	User experience bring art and science to service	3.8	Positive

Table 2 above shows that the expectations of the digital age are ubiquitous and unlimited as they have mean(x) scores above 2.50 mid-point. This implies that the digital age has no limits in academic libraries.

### Research Question 3 Skills required by library staff in the digital age

S/n	Question Items	Mean	Decision
1.	Computer literacy	3.82	Positive
2.	Web literacy	3.10	Positive
3.	Marketing skills	3.72	Positive
4.	Creating & managing space	3.57	Positive
5.	Reorganizing management	3.10	Positive
6.	Managing digital resources	3.51	Positive
7.	Knowledge research	3.35	Positive
8.	Digital information management	3.09	Positive
9.	Digital communication	2.64	Positive
10.	Customer services	3.61	Positive
11.	Collaboration	3.6	Positive

Analysis in Table 3 shows that library staff needed these skills in this digital age effectively to charge the users which where computer literacy, Web literacy, marketing skills, creating and managing space, reorganizing management, managing digital resources, knowledge research, digital information management, digital communication, customer services and collaboration have mean (x) scores of 3.82, 3.10, 3.72, 3.57, 3.10, 3.51, 3.35, 3.09, 2.64, 3.61, and 3.6 above 2.50 midpoint.

**Research Question 4** Ways of engaging library staff in the digital age

S/n	Question Items	Mean	Decision
1.	Information access provider	3.73	Positive
2.	Research assistant	3.64	Positive
3.	Training & development	3.84	Positive
4.	Planning	3.82	Positive
5.	Collaborative system designer	3.93	Positive
6.	Data mining	3.90	Positive
7.	Elicitation	3.6	Positive
8.	Enhance distributed learning environment	3.81	Positive
9.	Preserve unique collections	4	Positive
10.	Knowledge mining	3.94	Positive

Table 4 shows ways of engaging library staff in the digital age as they have mean(x) scores above 2.50 midpoint. This implies that library staff have to engage adequately for a sustainable digital age.

**Research question 5:** challenges of engaging academic libraries for sustainable digital age

S/n	Question Items	Mean	Decision
1.	Budget	4.21	Positive
2.	Communicating about in the library	3.78	Positive
3.	Declining patron requests for content	4.08	Positive
4.	Career advancement	3.54	Positive
5.	Staying current on policy changes	3.94	Positive
6.	Conveying the value of librarians to researchers	3.77	Positive
7.	Preservation and access	3.85	Positive
8.	Managing library operations	3.41	Positive
9.	Tracking staff performance	3.41	Positive
10.	The librarian’s role in the research cycle	3.92	Positive
11.	Keeping up with changing technical requirements	3.50	Positive
12.	Understanding research trends	3.95	Positive

Table 5 shows that the following challenges of engaging academic libraries for sustainable digital age were budget, communicating about in the library, declining patron requests for content, career advancement, staying current on policy changes, conveying the value of librarians to researchers,

preservation and access, managing library operations, tracking staff performance, librarian's role in the research cycle, keeping up with changing technical requirements, and understanding research trends with mean(x) scores of 4.21, 3.78, 4.08, 3.54, 3.94, 3.77, 3.85, 3.41, 3.41, 3.92, 3.50, 3.95 which were above 2.50 midpoint. This shows that these are major challenges of engaging academic libraries for a sustainable digital age.

### **DISCUSSION OF FINDINGS**

1. It was found that expectations of digital age are ubiquitous and unlimited in the academic libraries
2. The skills required by library staff in the digital age were also found that library staff needed many skills to charge users in the academic libraries.
3. The study also revealed that engaging library staff in the digital age is very important for sustainable digital resources.
4. The challenges of engaging academic libraries for a sustainable digital age were also found that adequate attention should be given to the digital age in order to safeguard institution repositories.

### **CONCLUSION**

The study concluded that the expectations of the digital age in the academic libraries are unlimited and that information explosion increases exponentially with the advance of technologies. The study revealed various skills library staff need to acquire and stay relevant in the educational sector and academic libraries, as digital libraries are fast taking over the conventional library, and this process is taking shape very fast. As libraries play vital roles in our society, the study also exposed the relevant ways library staff have to engage in the digital age for facilitating the expansion of education, and some challenges were found that academic libraries have to break the shortcomings and implement effective change in the library, the way ICT is being transformed. More so, engaging academic libraries for sustainability in the digital age has a great impact on library activities, as librarians play central roles in information management.

### **RECOMMENDATIONS**

1. As the expectations of the digital age are unlimited, academic libraries have to embrace it and move forward as innovation emerges.
2. Library staff have to upgrade in this digital age because the librarian work can never be pushed aside. They are essential in every library and educational institution.
3. It is important for librarians to engage in this digital age, so as to sustain academic repositories and better services to the users.
4. Increase of library budget will enhance effective information access providers which ought to be in academic libraries as librarians play a fundamental role in educating the users and exploring information at user's time.

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