Investigation into the Extent of Use of Digital Library by Students of Federal Polytechnic, Oko, Anambra State, Nigeria

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ABSTRACT

The study investigated the extent of use of digital library by students of Federal Polytechnic, Oko, Anambra state, Nigeria. Survey method was adopted for the study. Structured questionnaire was administered to the students drawn from various departments in the school. Federal Polytechnic, Oko has a total of 34 departments with 4,080 students. Using a confidence level of 95% and margin error of 5%, a total of two hundred and twenty (220) structured questionnaires with four-point Linkert scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) were administered to two hundred and twenty (220) students. Out of the 220 questionnaires administered, seventeen (17) were not properly filled and therefore treated as invalid while three (3) were decimated. A total of two hundred (200) were properly filled and therefore used.The results show that students are aware of the digital library and they can access resources from the digital library. The result also shows that challenges to the use of digital library by students include network problems and instability of electricity supply. The paper ends with a call for the management to evolve a local content curriculum that would encourage students to make use of the digital library.

Keywords: digital library, information and communication technology, internet and software.

INTRODUCTION

Library has grown from physical library to digital library since the introduction of internet in 1991. Digital library according to Trivedi & Patel (2010) [1] is "a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and accessible by computers. Jerbary and Deivasijamai (2003)[2] see digital library as a heterogeneous system in which information is available in hard copy on magnetic tape and disc, CD-ROMs and video discs and also from online sources. The introduction of more digital software system has also improved the way digital contents of a library can be deigned, accessed, stored and utilized.

[2] enumerated the features ofa digital library to include web based systems, archive, database, scanned image of documents, ability to have document printed, ability to download files to computer or have them saved on storage device, having electronic versions of paper documents, indexing of documents and microfilm of documents.

A digital library will have facilities to handle the functions that are handled by physical libraries such as managing loan of books and journals by identifying and sanctioning defaulters, cataloguing, indexing, and referencing. It will in addition have the facilities to handle modern digital contents such as videos, audios, text and electronic files. Links to emails and websites have to be clearly integrated so that users can easily access resources.

Transition from physical library to digital library involved conversion from paper to digital format. There are also hybrid libraries which consist of print and digital works or entirely digital Spencer (2015) [3]. Most Nigeria tertiary institutions have both physical and digital library as the form the basic requirements for accreditation. How students make use of these libraries is very essential because it helps to understand how they progress in learning. Libraries are established for the purpose of increasing knowledge. Students can use library to prepare notes and library broadens the minds of a student such that they can grasp a subject better.Library also enables students to develop literacy skills because they have access to books, journals, magazines, newspapers, newsletters and other periodicals that will keep them aware of the latest development around their society and world. Library also enables students to read works of other authors and see their contribution to knowledge. Digital library though relatively new form part of the resources students can access in the acquisition of knowledge. Digital library is also called electronic library, online library or virtual library. It involves design, storage and retrieval of academic documents in digital format.

Digital libraries are being built upon as the high-end information systems of the future (Fox, 2001) [4]. Sandip&Krishnamurty (2014) [5] opined that workflows of digital libraries are conducted in four steps of user interface, repository, handle system and search system. Components of digital library include digital formats and contents, network, interactiveness, multimedia and scability. A digital library will have retrieval support functions, reading support functions and storage support functions.

This study therefore investigated the extent students use the digital library in order to expand their learning.Digital library brought new challenges to the management of schools, librarians and students. The management of school provides the facilities and infrastructure in which the system runs. They have to provide physical spaces with adequate computer systems. They

20

IDOSR JOURNAL OF COMPUTER AND APPLIED SCIENCES 2(1):19- 31, 2017.

have to subscribe to online digital library platform to enable students access the library. The librarian has to update themselves with the knowledge of digital access. They have to aid and guide students in their research and references. The students also have to update themselves the new knowledge of digital access.

WHAT IS DIGITAL LIBRARY?

Defining the scope of what constitute a digital library is complex because of the range of what constitute a digital library. Some authors like Alhaji (2015) [6] see a digital library as a collection of digital documents or objects. Notably, digital document or objects can form a digital library, yet not every document or object is a part of a library. Library has standard components that defines it. A library is a place in which literacy, musical, artistic or reference materials (such as books, manuscripts, recording or films) are kept for use but not for sale, (Merriam - Webster dictionary). Digital library therefore is a replica of physical library with digital space where literary, musical, artistic or reference materials in digital format are kept for use. More appropriate functions are the ones given by Smith [7] and Digital Library Federation (DLF) [8]. [7], defined a digital library as an "organised and focused collection of digital objects including text, images, video and audio with the methods of access and retrieval and for the selective creation, organisation, maintenance and sharing of collection". This definition considered an Important function of library which are to organise and maintain information. Digital Library Federation (2001)[8], defined digital library as "organisation that provides the resources including the specialised staff to select, structure, offer intellectual access to interpret, distribute, preserve the integrity of and ensure the persistence over times of collection of digital works so that they are readily and economically available for use by a defined community or set of committee". The definition placed emphasis on the fact that digital libraries are provided by organisation that have the platform and infrastructure to make such resources available. Cataloguing according Sheila (2005)[9], serves as the foundation of all the library services as they are the ones who organizes information in such a way as to make it easily accessible.

Trivedi & Patel (2010)[1], enumerated the functions of digital library to include: Access to large amount of information to users, access to primary information sources, support for multimedia contents along with text network accessibility on internet and intranet, user

21

friendly interface, hypertext limits for navigation, client server architecture, advanced search and retrieval and integration with other digital libraries.

Trivedi& Patel's enumeration is related more to the function of a digital library system than the function of digital library. Digital library system according to [10], is "the deployed and running software system that implement the digital library facilities". [10]. also defined Digital Library Management System (DLMS) as the generic software system that supports the production and administration of DLS and the integration of additional software offering more refined, specialize and advanced facilities. The digital library is the final system perceived by the end users as being the digital library.

Establishing a scope that appropriately defines a digital library is very difficult. This is because digital library is a concept that integrate academic and environment use. Definition therefore includes the use of abstractions and interpretation that are available in the academic and industrial sector. Another issue is the issue of interoperability. Also the approach to the referencing became a major issue of consideration. Candela et. al. (2008)[10] developed a system of reference model for classification and other ontology issues.

Digital library has grown tremendously from its inception; expansion of the internet has gently added to the growth of digital library. Also latest technologies are online storage file retrieval and file sharing systems have added to the growth of digital libraries.

CHALLENGES TO USE OF DIGITAL LIBRARY

There are many challenges users of digital library face. Lynch & Grarcia-Nolina (1995) [11], noted that building digital library is difficult, expensive and it is a long term project. [10] also posited that building digital library will have some unique challenge because digital information is not fixed, it can easily be copied and also it has to be remotely accessible by multiple users simultaneously.

Jie, &Bao-Zhong(2012)[12], enumerated some challenges of digital library to include costly affair, technology obsolence, storage media relate, dominance of data creators and publishers, trained manpower, user education and training and security against hacking and abotage.

BENEFITS OF DIGITAL LIBRARY

Notwithstanding the challenges, some of the benefits of digital library include:

Multiple Access

According to [12], the same resources can be used at the same time by a number of users.

Easy access to reference materials

Digital library is an internet based platform and therefore one can easily access varieties of information that are available in the library repository.

Easy conversion of data from one form to another

Data come in different format. Digital library involves converting data from one form to another. For instance, document file can be converted to Portable Data Format (PDF).

24/7 AVAILABILITY

Digital library is available within the twenty-four hours we have in a week. Any person can get information at any time from any place.

QUALITY OF STORED INFORMATION

Software does not wear or tear. Once a material is stored in a digital library, the quality of the material can be improved, for instance, by adjusting the colour setting, or the point size. Also, more legible characters can change illegible characters.

ABILITY TO STORE SEVERAL MATERIALS

One can download and store different materials that are relevant to a research. Such material can be accessed and used at any time.

ACCESS TO A SINGLE COPY OF INFORMATION

Any information that is stored in an electronic format can be reproduced such that can access and make use of it.

MINIMIZATION OF BUREAUCRATIC BOTTLENECK DURING REPLACEMENT

In a physical library, the process involved in registration and re-registration especially when one lost his library card is tedious because it might involve physically searching through all the registration books to ensure that the person is registered. With digital library, replacement of password takes lesser time.

PURPOSE

The study is aimed at finding out:

i. The extent students are aware of the existence of digital library in the school

ii. The ability of students to access resources from the digital library

iii. How often students make use of the digital library

iv If students use the digital library for assignment of for other purposes

vIf electricity is a major challenge to the use of digital library in the school

viIf network access is a problem to the use of digital library in the school

viiIf the students like using the digital library   2

RESEARCH METHODOLOGY

Survey method was used to find out the extent the students of Federal Polytechnic, Oko use digital library for research and reference purposes. Federal Polytechnic, Oko has a total of 34 departments with 4,080 students. Using a confidence level of 95% and margin error of 5%, a total of two hundred and twenty (220) structured questionnaire with four-point Linkert scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) were administered to two hundred and twenty (220) students. The questionnaire was drafted with some guidelines which enabled the respondents to know exactly what they were to answer. The questionnaire was administered by visiting each department and distributing to the students by hand. The filled questionnaires were collected immediately. The essence of collecting the questionnaires immediately was to avoid exchange of ideas or change of mind which might falsify the results. The research period covered a period of two weeks visiting the different departments. Out of the 220 questionnaires administered, seventeen (17) were not properly filled and therefore treated as invalid while three (3) were decimated. A total of two hundred (200) were properly filled and therefore used.

24

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RESULTS

Linkert scale which is a psychometric scale was adopted for the analyses of the research. The weighted mean allotted for each category ranged from 1 to 4. This is as shown below:

Strongly Agree	SA	4		
Agree			A	3
Disagree		D	2	
Strongly Disagree	SD	1		

Table 1: Extent of use of the digital library

S/No	Question	SA	A	D	SD
1	I am aware of the existence of digital library	120	87	50	43
2.	I can access resources from the digital library	115	102	47	36
3	I use the digital library very often	78	80	73	70
4	I use the digital library for assignment	103	88	70	39
5	Electricity is a major challenge to digital library use	101	91	58	50
6	Network access is a problem to digital library access	106	98	51	45
7	I like using the digital library	26	54	97	125
	Total	649	600	444	407

Table 2. Distribution of students who are aware of the existence of digital library

Linkert Scale	Frequency	Percentage (%)
Strongly Agree	95	47.5
Agree	62	31
Disagree	25	12.5
Strongly Disagree	18	9
Total	200	100

Table 3: Distribution of students who can access resources from the digital library

Linkert Scale	Frequency	Percentage
Strongly Agree	90	45
Agree	77	38.5
Disagree	22	11
Strongly Disagree	11	5.5
Total	200	100

Table 4. Distribution of students who use the digital library often

Linkert Scale	Frequency	Percentage
Strongly Agree	52	26
Agree	55	27.5
Disagree	48	24
Strongly Disagree	45	22.5
Total	200	100

Table 5. Distribution of students who use the digital library for assignment

Linkert Scale	Frequency	Percentage
Strongly Agree	78	39
Agree	63	31.5
Disagree	45	22.5
Strongly Disagree	14	7
Total	200	100

Table 6. Distribution of students on the challenge posed by electricity in the use of digital library

Linkert Scale	Frequency	Percentage
Strongly Agree	76	38
Agree	66	33
Disagree	33	16.5
Strongly Disagree	25	12.5
Total	200	100

Table 7. Distribution of students on the challenge posed by network access in the use of digital library

Linkert Scale	Frequency	Percentage
Strongly Agree	81	40.5
Agree	73	36.5
Disagree	26	13
Strongly Disagree	20	10
Total	200	100

Table 8. Distribution of students who like using the digital library

Linkert Scale	Frequency	Percentage
Strongly Agree	26	13
Agree	45	22.5
Disagree	55	27.5
Strongly Disagree	74	37
Total	200	100

From table 2, 47.5% of the students strongly agreed that they are aware of the existence of digital library. 31% agreed that they are aware of the existence of digital library thereby making a total of 78.5% of the sampled population who are aware of the digital library. The remaining 12.5% of the sample disagreed that they are aware of the existence of digital library while 9% strongly disagreed that they are aware of the existence of the digital library.

From table 3, 45% of the sampled population strongly agreed that they know how to access resources from the digital library while 38.5% agreed that they can access resources from the digital library. But 11% of the sample disagreed that they know how to access resources from the digital while 5.5% strongly disagreed that they can access resources from the digital library. Therefore, 16.5% of the sample who cannot access the digital library is significant.

From table 4, 26% of the sample strongly agreed that they use the digital library often, 27.5% agreed that they use the digital library often. However, 24% disagreed that they use the library often while 22.5% strongly disagreed that they make use of the library often.

From table 5, 39% of the population strongly agreed that they access the digital library in order to do assignment. 31.5% agreed that they access the digital library because of assignment. However, 22.5% of the population disagreed that they access digital library because of assignment while 7% strongly disagreed that they access the digital library because of assignment.

From table 5, 38% of the population strongly agreed that electricity instability is a challenge to the use of digital library. 33% agreed that electricity is a challenge to the use of digital library. However, 16.5% of the population disagreed that electricity is a major challenge to the use of digital library while 12.5% strongly disagreed that electricity is a major challenge to the use of digital library.

From table 6, 40.5% of the sample strongly agreed that network problem is a major challenge to the use of digital library. 36.5% agreed that network problem is a major challenge to the use of digital library. However, 13% disagreed that network problem is a major challenge to the use of digital library while 22.5% strongly disagreed that network problem is a major challenge to the use of digital library.

From table 7, 13% of the sampled population strongly agreed that they like using the digital library while 22.5% agreed that they like using the digital library. However, 27.5% of the sampled population disagreed that they like using the digital library while 37% of the sampled population strongly disagreed that they like using the digital library.

DISCUSSION

From the results, 78.5% of the sampled students are aware of the digital library while 21.5% are not aware. Although the percentage of the sampled population that are aware of the existence of digital library is relatively high, the percentage that are not aware of the existence of digital library is very significant.

83.5% of the sample know how to access resources from the library while 16.5% of the sample cannot access the digital library. The number of the sampled population who do not know how to access digital library is relatively significant.

53.5% of the sample access the digital library often while 46.5% do not access the digital library often. 70% of the sample access the digital library because of assignment while 29.5% do not access the digital library because of assignment. 71% of the sampled population believe that electricity instability is a challenge to the use of digital library while 29% of sample believe that electricity instability is not a challenge to the use of digital library in the school. 77% of the sample believe that network problem is a major challengeto the use of digital library while 23% of the sample believe that network problem is not a major challenge to the use of digital library

in the school. Also, 35.5% of the sampled population like using the digital library while 64.5% of the sample do not like using the digital library.

RECOMMENDATIONS

- There is need for the management of Federal Polytechnic Oko, and by extension, all the higher institutions in Nigeria to evolve a curriculum that will encourage their students to access the digital library.

- Management of institutions should provide alternative power source to support the digital library.

- Management should also liaise with network providers to ensure that the hitches observed during access to materials are eliminated.

- The role of librarians in the improvement of use of digital library by students should be established by institutions.

CONCLUSION

This study investigated the extent of the use of digital library by students of the Federal Polytechnic, Oko. The study covered a two-week period that involved the administration of questionnaire to students of various departments at the main campus, Oko. The study found out that there is need to create more awareness for students to know about the existence of digital library. There is the need to encourage students to get more interested in the use of digital library and to access it often. The study also called on the management to liaise with network providers to handle the challenges posed by network instability.

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