

Self Concepts and Browsing Frequency as Determinants of Virtual Technology Use-Efficiency in Selected Institution in Nigeria

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Abstract

This study investigated self concepts and browsing frequency as determinants of virtual technology use-efficiency in Nigeria. A survey method was used and questionnaire was the instrument used to collect data from two hundred(200) library user, out of which 180 responded giving a response rate of 90 percent, the study found that the library acquire some selected online databases which include NUC virtual library, SAGE, HINARI, Ebscohost, USPE e-library and open access databases. The study identified different purpose of online searching to include using yahoo and Google search engine and other online databases to do their research work and recommended that the library should create awareness about the database they subscribed to, most students are not aware of the importance of these databases to their academic advancement.

Keywords: self concepts, browsing frequency, virtual technology, use-efficiency

Introduction

The world is infused with high level of digital technology which motivates student of tertiary institution to have confidence with internet searching for relevant information using electronic resources and Nigeria is not left out in the developments of digital age.

Self-concept is an internal model that uses self-assessment in order to define one's self-schemas on the use of virtual technology in academics. Thus, teachers need to provide students with specific feedbacks that focus on their browsing skills or abilities (Byrne, 1984) self-concept is an ever changing term depending on the person because our feelings, personal belief systems and attitude can change when new information technology is shown to us (Fournier, 2010)

Information seeking behavior is the way information users conduct themselves or act when looking for, retrieving or acquiring information (Uhegbu, 2007) . Information seeking behaviour of internet users depends on their level of education, access to information sources within a limited period (Aina, 2004). Jagboro (2003) view information seeking behaviour in digital environments within the contest of how students retrieved information from CD-ROMs. These CD-ROMs could offer engaging interactive experience for the young student.

Library is an institution that manages the intellectual products of the society and make the information materials accessible to its users. The university library services are undergoing massive changes as electronic resources and the ways of delivering services are already irrevocably integrated with printed and digital services; and the librarian has to stand-up for the challenges as old models are discarded and new ones developed, they need to manage the resources in order to add value to research (Carswell, 2000). The university library as part of academic library is a key component of university system and their information materials include the printed and non printed resources such as CD-ROM databases, journals , textbooks, periodicals, internet facilities, indexes and abstracts(Popoola and Haliso, 2009). These library resources (printed and non-printed) are the raw materials that the librarian acquire, catalogues, preserves and disseminate to the users.

A university library is attached to the university system to support in the areas of learning, teaching, research and services. The users of the university libraries are students, researchers, lecturers and supportive staff (non-teaching staff) and members of the communities where the institution is located. (Aina, 2004).

Apart from serving its primary purposes of providing information resources and services for learning, research and teaching, it also serves as a depository of knowledge as was the case with University of Ibadan Library, Nigeria, which performed the functions of a national library until 1970 when the National library of Nigeria decree was enacted, replacing the national library of Nigeria Act of 1964.

University library services may be viewed as the activities that libraries and their personnel render to meet the information needs of their users such services include traditional library services and digital age internet-based and business bureau services (Popoola and Haliso, 2009)

Students seek for convenient, fast and timely information by using digital library collections (Lukersiewiez, 2007) Students preferred simple and fast to use search engines that provide a better status for their lifestyles (Ciber, 2008) , thus abandoning manual card catalogue in the library to online public access catalogue(OPAC).

Students depend on electronic sources to a great level, that the growing interests on E-books and a greater diversity of resource discovery behavior among students that use e-books is increasing to detriment of hard copy

sources. (Ball et al, 2007)

Students are increasingly expected to use electronic resources at the tertiary institution to supplement their lecture notes and these requires the acquisition and use of skills necessary to exploit these facilities, The ability to search and retrieve information effectively becomes an essential skill useful for the student's future life as well as enabling the positive and successful use of the electronic resources while at the university (Ray and Day, 1998). Also, a library must reach a position where the acquisition of information skill is important as key learning objectives for every student entering a university, so that no student finished from a school without being equipped to cope with the modern information dispensation.

Due to technological development traditional teaching has created new learning environments that students participate in flexible learning process through more indirect contacts with teachers and facilities, including scientific information. In collaboration, Farley and Hayward (1998) affirm that the teaching and learning patterns have developed towards greater modularization and place an emphasis on self-directed, independent study and student centred learning. Students more than ever before needs the services of the library in this dispensation.

The success of library depends on their ability to serve the needs of the academic communities; Lee (2005) suggested that the knowledge and experiences of library staff are the intellectual assets of any library and should be valued and shared. Budd,(1999) affirms that academic library collections are no longer collections that comprises only printed but that of multiple formats and media .

University library are charged with the responsibility to provide information services to their users, as academic library, the librarian needs to liaise with their users from various department to support effective teaching, learning and research in the universities. Carvin, (2006) as they explain that liaison is particularly important in a world of resource-based learning where students are encourage in carrying out independent work and make wider use of a range of learning resource including electronic information resources and these challenges require university libraries to offer users friendly ICTs orientation facilities.

The library is traditionally and historically the custodian of knowledge and information has witnessed, a paradigm shift from traditional information handling method to technological form; due to astronomical development in the information technological world, university libraries are embarking on new policies in order to curb information explosion, and making relevant information materials available to users at affordable prices within a limited period of time. An internet facility is giving the libraries the challenges of providing users access to current information. The role of library services are being re- evaluated and reshaped in the advent of information communication technologies.

Students can search for academic materials through the use of search engines directly on the websites of the online databases, and some of the databases are SAGE, NUC virtual library database, HINARI,USPE E-library, open access databases; while search engines are yahoo, Google, among others.

The availability of web based tools to be used for academic purposes is changing students working attitude in their campus libraries when consulting academic materials. Chen and Peng (2008) opined that virtual and digital libraries, online public access catalogue(OPAC), online electronic text resources, online research databases provide great relief for researchers by providing opportunity to access relevant academic information to researchers. Other advantages stated by Brophy (1993) are that electronic information sources are often faster than consulting print indexes and the search become more straight forward when using the combination of keywords; they open up possibility of searching multiple files at one time; they can be printed and searches saved to be repeated at later date and they are updated more often than printed tools.

Some of the identified hindrances to online search as identified by Anderson (2001) is lack of constant electricity supply, system maintenance , shortage of genuine equipment and spare parts; lack of adequate funds for libraries; lack of trained personnel, internet services fluctuation; lack of installation skill among others.

Statement of the problem

Digital technology has pervaded every aspect of our civilization, thereby setting forth a revolution not only in how we store and transmit recorded knowledge, historical records and a host of other kinds of communication but also in methodology we are adopt to access those information.

In Nigerian universities, online facilities are now the order of the day and library staff are to supervise and facilitate the use of those facilities. Scholar have researched into different aspects of information communication technology, Yet little have been done in the area of how to expose students to various online databases the libraries subscribed to and how to improve students information skills since they only use keywords in searching and then the need for intermediaries, (usually, library staff) who understand the controlled vocabulary techniques to conducting online search come in to assist researchers in retrieving information..

Objectives of the Study

The following are of the objectives

1. To identify the electronic database available and accessible in the library
2. To investigate the online strategies used by students
3. To determine how frequent the online facilities are been used

4. To identify the benefits and constraints encountered by students during online searching

Research Questions

1. What are the electronic databases available and accessible in the library?
2. What strategies do users use when searching for academic materials in the library?
3. What is the frequency use of online facilities?
4. What are the constraints faced when searching for academic materials online?

Methodology

Survey method are used and questionnaires were the main instrument use for data collection. The study area is Adekunle Ajasin University, Nigeria; and the population is approximately 9,287 students. However the sample population was drawn from the five faculties in the institution.

The institution has a total of five (5) Faculties comprising: Arts, Education, Science, Law and Social and Management Sciences, The sampling method adopted for the purpose of this study was simple random sampling technique.

Data Analysis and Findings

Research question 1: what are the search engines and electronic databases available in your institution?

	ITEMS	Readily Available	Available	Not Available	No. of Respondents
1	Yahoo	102(56.7%)	78(43.3%)	-	180 (100%)
2	NUC Virtual library	76(42.2%)	94(52.2%)	10(5.6%)	180(100%)
3	GOOGLE	125(69.4%)	42(23.3%)	13((7.2%)	180(100%)
4	SAGE	50(27.8%)	28(15.6%)	100(55.6%)	180(100%)
5	HINARI	8(4.4%)	102(56.7%)	70(38.9%)	180(100%)
6	Open access database	78(43.3%)	68(37.8%)	34(18.9%)	180(100%)
7	USPE E-library	-	-	-	
8	EBSCOHOST	-	-	-	

The availability of search engine and online databases at Adekunle Ajasin university, Akungba-Akoko, Ondo State, shows that out of the eight (8) search engine and online databases available in the library, yahoo search engine is commonly used with 102 (56.7%), while 78(43.3%) also agree that the search engine is available in the library, non of the respondent said yahoo is not available or not readily available which means students make use of the search engine for their academic work on daily basis at least when the need arises. NUC virtual library is another online database that is patronized by students also searching for academic materials online with 76(42.2%) who claims NUC virtual library is readily available in the library 94 (52.2%) also agree for the availability of NUC virtual library database in the library while 10(5.6%) are of different view that it is not readily available, the reason been that students are always contented with yahoo and Google search engine and do not bother with other search engine which are equally available. Google search engine is another and popular search engine that is commonly used by students from Adekunle Ajasin university with 125(69.4%) this respondents are of the view that Google search is readily available to them and that it serve their needs academically. Another group of respondents also agreed that Google is readily available at any time in the library with 42(23.3%) on the other hand 13(7.2%) did say that Google is not available respectively. SAGE is another online database patronized by students though not as popular as yahoo and Google search engine, in spits of the fact that it is readily available for used in the library which must of them are not aware of its availability.50(27.8%) readily available, 28(15.6%) available while 100(55.6%) not available.

Open access database also students do make use of it with the respondents of 78(43.3%) readily available, 68(37.8%)available and 34(18.9%) not available. With this, it shows that respondent make good use open access database often when searching for information materials in the library.

Items 7-8 which are online databases subscribe to by the library are not popular among students most respondents claimed that they are neither readily accessible nor readily available.

Research question 2: what are the different purposes for which online searching is conducted in the library?

	ITEMS	Class work	Assignment	project	No. of Respondents
1	Yahoo	128(71%)	24(13%)	28(16%)	180(100%)
2	NUC Virtual library	66(36.7%)	34(18.9%)	80(44.4%)	180(100%)
3	GOOGLE	48(26.7%)	40(22.2%)	92(51.1%)	180(100%)
4	SAGE	28(15.6%)	24(13.3%)	128(71.1%)	180(100%)
5	HINARI	-	-	-	
6	Open access database	37(20.6%)	41(22.8%)	102(56.7%)	180(100%)
7	USPE E-library	-	-	-	
8	EBSCOHOST	-	-	-	

It was observed that students who used yahoo search engine for academic task such as assignments given to an individual or group are enormous with 128 (71%) those who use the same for class work are 24(13%) while students using it for seminar represent 28(16%) this revealed that most students copy from existing projects from the same or other neighboring universities projects written by other students or they are contented with those information from book materials including journals. For NUC virtual library database, those students who uses it for assignments are 66(36.7%) and 34(18.9%) for class work while 80(44.4%) respondents consult it for project. It is quite encouraging for the students respondent that use NUC virtual library database when writing project during their final year in the university.

Google search engine is another veritable source of getting information when searching for academic materials 48(26.7%) of the total respondents used Google when writing assignment 40(22.2%) used Google for project writing, SAGE database attract 28(15.6%) of the respondents who uses it for assignments, 24(13.3%) used it for class work and 128(71.1%) of the respondents used it for project. Open access database is also one of the best database used by students for academic tasks with 37(20.6%) uses it for assignment, 41(22.8%) make use of it during class work and 102(56.7%) use it when writing project. From the data above online databases attracted few patronage from user for their various academic tasks.

Research question 3: what are the frequencies of use of online facilities?

	ITEMS	Daily	Weekly	Monthly	Never	No. of Respondents
1	Yahoo	116(64.4%)	38(21.1%)	20(11.1%)	6(3.3%)	180(100%)
2	NUC Virtual library	12(6.7%)	87(48.3%)	60(33.3%)	21(11.7%)	180(100%)
3	GOOGLE	130(72.2%)	41(22.8%)	9(5%)	-	180(100%)
4	SAGE	28(15.6%)	21(11.7%)	24(13.3%)	107(59.4%)	180(100%)
5	HINARI	-	-	-	-	
6	Open access database	42(23.3%)	50(27.8%)	46(25.6%)	42(23.3%)	180(100%)
7	USPE E-library	-	-	-	-	
8	EBSCOHOST	-	-	-	-	

It showed that the use of internet facilities support learning and research is paramount to achieving educational goals and objectives of universities as is evident that respondent visited yahoo search engine on daily basis with 116 (64.4%), when searching for academic materials online, 38(21.1%) said they use yahoo weekly, while those who used it monthly are 20(11.1%) never the less in spite of it immense contribution to students success academically 6(3.1%) never access or use yahoo search which means they are comfortable with other search engines. On the use of Google search 130(72.2%) make use of Google on daily basis in this research work, 41(22.8%) use it weekly, 9(5%) use it monthly while non of the respondent choose never make use of Google search for any academic work.

Students who uses NUC virtual library database are distributed between the variables of question as to how often do they use the search engine. 12(6.7%) use it on daily basis, 87(48.3%) use it weekly, 60(33.3%) used it monthly while 21(11.7%) never use the database when searching for academic materials. Open access database is another popular database use by the students of Adekunle Ajasin university when searching for academic materials with 42(23.3%) said they uses it on daily basis , 50(27.8%) use it weekly, 60(20.3) use it once a week, while 46(25.6%) make use of it monthly and 42(30.2) never use it for any academic work. From the table 3.it revealed that yahoo, Google, are popular search engine and NUC virtual library, SAGE,HINARI, and open access database are being used by students of the institution when searching for academic materials. It is evident from the table that all other online databases are not being accessed frequently by the students of Adekunle Ajasin University as they did with yahoo, Google, NUC virtual library, SAGE,HINARI, and open access database going by their responses.

Research question 4: what are the benefits of online searching?

Table 4: Benefits of online searching

	Items	Agree	Disagree	percentage
1	It has exposed me to some recent researches in my area of study	161(89.4%)	19(10.6)	180(100%)
2	Materials downloaded from online form part of my collections	153(85%)	27(15%)	180(100%)
3	It has greatly improved my academic performance	162(90%)	18(10%)	180(100%)
4	Online searching has exposed me to those materials that I may not have access to	152(84.4%)	28(15.0)	180(100%)
5	It is faster to search for materials online than the normal traditional library catalogue system	171(95%)	9(5%)	180(100%)
6	Online searching is cost effective because I am able to download free e-books and articles	172(95.6%)	8(4.4%)	180(100%)
7	It is easy to get hardcopy of materials downloaded	78(43.3%)	102(56.7%)	180(100%)
8	Vast collections of materials are abounding online	142(78.9%)	38(21.1%)	180(100%)

It showed that there are many benefits derived from online searching, most of the respondents supported the assertion that online searching exposed them to recent researches in their field of studies with 161 (89.4%), while 19(10.6%) disagree. Some students also agree that most downloaded online materials formed part of their reading materials with 153(85%) some respondents who are conservative hold firm to their lecture note without using any online materials to argument their lecture notes 27 (15%) are in this group who disagree with online searching. Many students believed online searching has brought about improvement in their academic performance, 162(90%) agree with this that they add to their lecture notes using materials downloaded online and 18(10%) disagree saying that the point should not be over emphasize because they believe without using online searching they can still pass very well.

On the exposure to some materials hitherto not having access to using traditional library most especially those foreign materials online 152(84.4%) agree to it and 28(15.0%) disagree respectively. On quick access to information materials 171(95%) agree that it is easier to get information online than using traditional card catalog and 9(5%) disagree saying one can easily get information faster in the library either through browsing the shelves or using card catalogues. Many students argued that online searching is cost effective and to this 172(95.6%) agree with the statement that they download materials free of charge online, all they incur is the cost of printing and such materials anytime they are in need of such information. While 8(4.4%) disagree that library provide free reading of books and journals in the library to its users, then bother to search online again. 78(43.3%) agree that it is to get hard copy of materials downloaded online which become their property on like the traditional library where you read or borrow books, used and return back to the library. 102(56.7) disagree that one can always go into the library and photocopy materials any time the library is open. Though there are many students who believed enough materials are abound online 142(78.9%) agree with the statement such that they can do without lecture notes while 38(21.1%) disagree saying many junks are abound, thus will prefer using their lecture note and listening to their lecturers.

Research question 5: Challenges of online searching for academic materials

Challenges of online searching

s/n	Items	Agree	Disagree	percentage
1	power failure always draw students back whenever they are searching online, especially if the works department refused to put on the generating set	170(94.4%)	10(5.6%)	180(100%)
2	Printer is not available in the e-library	131(72.8%)	49(27.2%)	180(100%)
3	There is shortage of man power in the library to man the e-library services	74(41.1%)	106(58.9%)	180(100%)
4	The opening hours of the e-library is short	103(57.2%)	77(42.8%)	180(100%)
5	Do Students has the required online search skill	120(66.7%)	60(33.3%)	180(100%)
6	the computer system Frequently breakdown, hence prevent student from access	108(60%)	72(40%)	180(100%)
7	Speed of the internet connectivity is another challenges facing online searching, at time service may be slow	154(85.6%)	26(14.4%)	180(100%)

It was discovered from the data collected that there are so many challenges facing online searching in spite of its immense advantages to students of higher institutions in Nigeria, 170(94.4%) agree that power failure always draw them back whenever they are searching online, especially if the works department refused to put on the generating set. 131(72.8%) are saying that there is no printer available in the e- library, that instead of printing

their searching materials immediately, they are always directed to send such materials into their e-mail boxes and go outside to print such documents. 49(27.2%) disagree saying it is an opportunity to browse for an hour at a go without charging any fee, that students can copy within this period without necessarily print the documents. Also that there was not enough man power in the library to manage the e-library, 74(41.1%) agreed, while 106(58.9%) disagree, this group of students don't see staffing as a challenge.

Many students complained of the opening hours of the e-library 103(57.2%) agree that they are not comfortable with the opening and closing hour of the library, while 77(42.8%) disagree probably they do their lectures in the morning and afternoon. On the required searching skill 120(66.7%) agree that many students don't acquire the skill to search for themselves online without assistance from any body. 60(33.3%) disagree, that so far you can seek assistance from friends that should not be a challenge. Frequent breakdown of computer system is also a challenge as 108(60%) agree that most often there is system breakdown which do not give them access to use e-library. 72(40%) disagree saying access to e-library should be at students discretion without hindrance. Speed of the internet connectivity is another challenges facing online searching, at times service may be slow and thus discourage users from continuing searching. 154(85.6%) agree with this statement and 26(14.4%) disagree.

Discussion

This study found that the library acquire some selected online databases which include NUC virtual library, SAGE, HINARI, Ebscohost, USPE e-library and open access databases and also make use of online search engine such as yahoo and Google mostly.

The study also identified different purpose of online searching to include using yahoo and Google search engine and other online databases to do their research work such as project writing, classwork, assignments among others. The respondents made use of these databases and search engine regularly to enrich their research work. Majority said they have derived from online searching as it improved their academic performance and the downloaded materials supplement their lecture notes. Rowland (2007) observed students to depend on electronic sources to a great level that growing interest on e- books are increasing to the detriment of hardcopy sources. Also their challenges include lack of adequate power supply and most of the time the power supply by power holding company will be too low to power the systems, the institution generator are usually used.

Conclusion and Recommendations

Online searching for information required some search skill that enable users to access accurate information needed, the search which is usually conducted by means of a keyboard and screen, that communicate with computer system which contains files of data this can only be done by users with skills and some level of training for them to appreciate and conduct result-oriented online searches. The e-library facilities should not be seen as entertainment tools or media, instead it should be use as tools that will facilitate teaching and learning that will improve academic performance. the staffing situation of the library should be addressed, the place is under staff with just one staff on duty to attend to sixty users. The training of staff in the areas of how to manipulate information technology (IT) application to library services is also necessary.

The library should create awareness about the database they subscribed to, most students are not aware of the importance of these databases to their academic advancement. It could be through organizing training to users or inculcating it into their curriculum. Also teaching of search skills of library databases should be accorded a prominent role as soon as the students come into the university.

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