

Relationship between Students Satisfaction with the availability of E-resources and Infrastructure, Staff Commitment and Students Involvement in using the E-resources in Colleges

Umar Bizi Bulama, Shaffe Mohd Daud and Rosnaini Mahmud
Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor,
Malaysia

DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v7-i14/3692>

Published Date: 25 December 2017

Abstract

The study attempted to examine the Relationship between Students Satisfaction with the Availability of E-resources and Infrastructure, Staff Commitment and Students Involvement in Using the E-resources in Colleges of Education in Northeastern Nigeria. This is a descriptive correlational study and using questionnaires as the instruments. The study covers 5 colleges of education, and only NCE level 3 students were involved in Northeastern Nigeria, which gives the total population (N) of 439. Out of 439 students' population, 406 were chosen samples and convenient sampling technique. The SPSS version 22 was used to run the analysis. The findings revealed a weak and significant relationship between students' satisfaction with the availability of e-resources and infrastructure in colleges of education ($r = .192, p < .05$); there is a medium and significant relationship between students satisfaction with the availability of e-resources and staff' commitment in colleges of education ($r = .455, p < .05$); and there is a medium and significant relationship between students' satisfaction with the availability of e-resources and students' involvement in Colleges of Education ($r = .430, p < .05$). However, based on the findings of this study, there is a need to improve the students' satisfaction with the availability of e-resources in Colleges of Education in Northeastern Nigeria. Also, the needs to improve the students' satisfaction with the availability of infrastructure, students' satisfaction with the staff commitment and students' involvement in using the e-resources among students in Colleges of Education in Northeastern Nigeria in order to meet up with the needs and demands of the students.

Keywords: Students Satisfaction, E-resources and Infrastructure, Staff Commitment, Students Involvement

Introduction

The availability of e-resource and how they're used by the students has been a major concern to academic library and information centers World-wide. The reason is not far- made as the

provision of e-resources has been the primary focus of libraries irrespective of types and students they served (Simisaye, 2012). According to Issa et al., (2009); Agboola and Bamigboye, (2011) revealed that most of the students are lacking the e-resources in an academic library. According to Ogunsola and Okusaga, (2008) discovered that lack of infrastructure facilities, low bandwidth, system breakdown and electricity power supply. According to Adegboire, (2010) revealed that lack of resources, power failure and lack of maintenance of e-resources. Also, Fabunmi (2009) revealed that lack of staff commitment, proper infrastructure which includes: telecommunication, servers, poor students' involvement, low-level of staff and software application (Gbaje, 2007; Okiy, 2010).

According to Gbaje and Zakari (2013) revealed that lack of policies has really affected the level of staff commitment in colleges, staff capacity building, equipment and the general preservation issues (Gbaje and Zakari, 2013). Idowu, (2016) exposed that there is a lack of staff commitment on current knowledge of e-resources changes in this 21st century. A study was conducted by Hadrian et al. (2014); Imo and Igbo, (2011); Ekoja and Gbaje (2012) revealed that lack of staff commitment students' involvement, inadequate of e-resources subscriptions, improper planning and implementation in using the e-resources are the major problem facing the students' satisfaction with the availability of e-resources. According to Onohwakpor, (2009) described that there is a relationship between e-resources, infrastructure, staff commitment, students involvement, and services on students' satisfaction with the availability of e-resources. Also, Mulla, (2011) revealed that 30% of the respondents felt that they lack staff commitment to effectively use the e-resources, 31.7% reported a lack of students involvement, while 12% stated that limited infrastructure. Thus, Jha, (2008); Mulla, (2011) described the significant relationship between students satisfaction with the infrastructure, students involvement and staff commitment on students satisfaction with the availability of e-resources in Nigeria.

Infrastructure is one of the basic firsthand information that needs more attention towards the e-resources among students irrespective of their age, gender, cultural background, political differences and educational background (Okiy, 2010 and Abubakar, 2011). E-resources have a relationship with the availability of infrastructure in order to search for e-resources, and store of information which were mostly lacking at colleges as a result of inadequate support of infrastructures (Ogunsola and Okusaga, 2008; Sinha, 2011; Abdulsalami, 2011 and Idowu, 2016). Staff commitment plays an important role on the availability of e-resources as perceived by the students. This is because the staffs are committed towards the e-resources among students was very low (Adegboire, 2010; Hudron-Kari and Baro, 2014). In the context of this research, the researcher wants to investigate the staff commitment with the availability of e-resources as perceived by the students in Colleges of education.

Students' involvement is a very important factor towards achieving the e-resources. Most of the students in developing countries are left far behind towards the involvement in using of e-resources. Because the nature of the college library is not a conducive environment for learning and searches of the e-resources (Archibong et al., 2010 and Abubakar, 2011). In line with this, the researcher wants to investigate the students' involvement in using the e-resources in colleges. However, there is adequate need to improve on the students' satisfaction with the availability of infrastructure with the e-resources. Also, there is a need

to improve students' satisfaction with the staff commitment. The needs for students' involvement in using the e-resources, at the same time also need to improve students' satisfaction with the availability of e-resources. It is very important for any academic e-resources to improve its services towards the students' satisfaction and provides adequate information resources in all formats that can support the college library in achieving their educational goal (Adeniyi and Ajiboye, 2013).

Objective

This study has three main objectives, namely

- 1- To determine whether there is a significant relationship between students' satisfaction with the availability of e-resources and infrastructure,
- 2- To determine whether there is a significant relationship between students' satisfaction with the availability of e-resources and perceived staff commitment,
- 3- To determine whether there is a significant relationship between students' satisfaction with the availability of e-resources and students' involvement.

Literature Review

Academic library with E-resources

Academic library with e-resources is a library that stored information electronically and made accessible to students through electronic systems and networks having a physical location (Hodge, 2000). It is therefore similar to a library as a store house of information that has an existence in virtual reality. Or is a book less space, facilitating the provision of information resources predominantly by electronic means, including the web, e-mail, fax, and electronic transfer scanned documents across the Internet inside the e-library (Fabunmi, 2009). The e-resources acquire space, there is wireless access to the library network and the internet provides all the software needed. For instance, e-resources are largely —invisible||, students acceptance of such a standard shift requires a holistic model of service, which minimizes isolation, encourages interaction and strives to enhance the online environment (Tuomi and Naamala, 2007). The academic libraries have provided means of information resources that can be accessed through use of computers in the library (Isah, 2010).

According to Sinha et al. (2011) e-resources can be defined as those resources which contain documents in electronic format that can be retrieved via the internet in a library environment. In other words, e-resources are those electronic artifacts that provide a collection of document, be it text, image and other multimedia artifacts like statistical, graphical mode which are available for library and information centers. These may be delivered on CD-ROM over internet. The availability of e-resources helps students to find e-journals, e-books, e-magazines, e-database, e-subject guide, e-newsletters, e-white paper, e-audio, e-exhibitions, e-conferences and web search tools on a range of topics or disciplines.

The advent of e-resources has cut the obstacle of valuable information difficult by students in the developing countries. In the same vein, Issa et al. (2009) emphasized on the popularity of e-resources, flexible in searching rather than the paper based and they can access in a remote area or in an academic library. Similarly, Ojedokun and Okafor, (2011) described the academic library as: A collection of full text and bibliographic information source which joins human services (such as electronic publishing, personal management and distance information use) and information technology tools (such as those to support browsing, authorizing and

communication. Therefore, the academic libraries have a physical space ICT facilities of different types used for production, storage and dissemination of information.

In another development, Issa et al., (2009) emphasized that there are different kinds of academic libraries for the various information needs of the targeted group of students. Some are developed by groups or organizations, higher education institutions, research centers, national libraries, as well as public libraries. They include contents that are both digital and those that have been digitized. Therefore, an e-resource generally contains e-books, e-journals, OPAC, web-bibliographies (equivalent to a printed bibliography), letters, maps, dictionaries, encyclopaedias, still and moving images, sound recordings, indexes, conference/seminar proceedings, e-theses/dissertations, e-abstracts and e-reviews, and handbooks. The traditional libraries have limited storage space, but the present academic libraries require very little physical space, which reduces the cost of maintaining academic e-resources (Issa et al., 2009). In this study, e-resources refer to a collection of information resources in electronic formats that can be accessed by the students inside the academic library.

The benefits derived from the academic resources are expected to have a positive effect on Nigerian Libraries. Therefore, Nigerian libraries are:

To offer quick and easy ways of performing increased workload of library tasks with greater efficiency; to enhance adequate ICT for easy accessibility of information needed by students; to enable major policy persons and strategies to be defined in relation to ICT; to exhibit the visions and hope for information users is now involved in resource sharing enabled by ICT; to enable libraries to fully adopt the use of ICT in information handling and library services such as indexing cataloguing, reference and information retrieval services, circulation, serial control and the provision of other technical services; to enable libraries to establish a positive correlation in the networked world; Nigerian libraries have now been found to shift their focus of operation from library centered to information-centered; the abilities to access information and adapt it for local problem solving are the real changing dividends as against information control (Henriatta, 2005).

Students widely use e-resources to access information in support of the print sources for their studies, hence Abubakar and Adetimirin (2015) agreed that e-resources constitute an important source of information and are widely contained by libraries to process and disseminate information to its users all over the world. Electronic sources consist of information sources that are in electronic format, and are characteristically very easy to use when accessing information compared to sources in print. Libraries, irrespective of their purpose, have started incorporating e-resources into their services to provide users with more efficient, effective and reliable sources of information. The age of total support on print information sources has passed, current large volumes of print information sources are being converted to electronic format (Issa et al., 2009). Therefore, Adekunmisi et al. (2013) indicated that many academic libraries in Nigeria are currently building academic repositories of their publications and other works that can be digitized and made available to students without restriction.

Relationship between Students Satisfaction with the Availability of e-resources and Infrastructure, Staff Commitment and Students Involvement in Using the e-resources in Colleges

According to Alison, Kiyangi and Baziraake (2012) revealed that there is a significant relationship between students' satisfaction with the availability of e-resources and infrastructure. Furthermore, Sivathaasan, (2013) exposed that there is a significant relationship between students' satisfaction with the availability of e-resources and infrastructure. Therefore, there is also a significant relationship between students' satisfaction with the availability of e-resources and infrastructure (Caplan, 2011).

According to Watts and Ibegbulem (2006) described some of the factors facing the use of electronic resources available at the medical library of the College of Medicine in Nigeria, Nsukka. The findings revealed that there is a significant relationship between infrastructure, affordable online access, information searching skills, staff commitment and students are barriers to the use of electronic resources. In another study, Alison et al., (2012) described that using available of e-resources have a significant relationship with the staff commitment and its influenced by staff commitment, institutional factors including internet connectivity and number of resources available to students. The literature review of this study has also discovered that availability of e-resources, and institutional factors affecting the use of the resources by staff commitment (Tenopir, 2003). Sife and Chilimo, (2007) revealed that there is a significant relationship between students' satisfaction with the availability of e-resources and staff commitment in an academic library. Therefore, Sivathaasan, (2013) investigates the impact of library collections on user satisfaction. Results revealed that there is a significant relationship between students' satisfaction with the availability of e-resources and staff commitment in libraries. Based on the explanation above, the study shows that, there is a medium and significant relationship between students' satisfaction with the availability of e-resources and staff commitment in colleges.

There is a significant relationship between students' satisfaction with the availability of e-resources and student involvement in using e-resources (Caplan, 2011). In another study, Mulla (2011) also discovered that there is a significant relationship between students satisfaction with the availability of e-resources and students involvement in using e-resources. Zhang et al. (2011) described the use of e-resources among students in China. The findings revealed that there is a correlation between the students involvement in using of e-resources and students satisfaction. Farran et al. (2007) conducted an empirical study, with a sample of 350 students. Results revealed that there is a significant relationship between students' satisfaction with the availability of e-resources and student involvement in using the e-resources. Consequently, Varghese, (2008) described the students studies in the electronic environment: review and brief analysis. The results showed that there is a significant relationship between student involvement and students satisfaction with the availability of e-resources in the library.

According to Zhang et al. (2011) examined the utilization of National Science and Technology Library (NSTL) electronic resources in colleges. The results reveal that there is a significant relationship between student satisfactions with the availability of e-resources student involvement in using e-resources. Therefore, there is a request for the services of the reference desk, project tracing, and e-resources among students.

Methodology

Research Design and Location

The research design of this study is based on descriptive correlational study. This study was carried out in Northeastern Nigeria, which comprises of Six (6) States. The States were Adamawa State, Bauchi State, Borno State, Gombe State, Taraba State and Yobe State. The researcher chooses Colleges of Education in Northeastern Nigeria because is one of the most deprived region that needs more attention. Out of the six (6) States, the researcher excluded one State which is Gombe due to Boko Haram insurgency that worsens the security situation in the entire Northeastern Nigeria (Ebisine, 2014; Walker, 2012). Therefore, the Colleges of Education that are involved in this study are College of Education Hong in Adamawa State; College of Education Azare in Bauchi State, College of Education Waka-Biu in Borno State, College of Education Zing in Taraba State and College of Education Gashu'a in Yobe State respectively.

Population and Sampling

The population of this study is only NCE 3 students in Colleges of Education in Northeastern Nigeria. There are eight (8) State Colleges of Education in Northeastern. However, for the purpose of this study, only five Colleges of Education were selected as a source of target population. The Colleges were colleges of education Azare, Biu, Gashu'a, Hong and Zing. Therefore, their students are final year, evidently similar in terms of cultural and educational background. The sample size of this study was determined using Cochran (1977). Many researchers who use the survey research method experiences below 100% respondents' rate (Bartlett, 2005). Many researchers commonly add 10% to the sample size to compensate for persons that the researcher is unable to contact (Israel, 1992; Singh & Masuku, 2013). Moreover, the study would add 10% of the sample size to avoid drop out. With regard to this therefore, the researcher calculated 40 as the 10% of determining sample size of 399. So, $399 + 10 = 439$. The convenient sampling technique based on distribution of Colleges and students were chosen as the most appropriate sampling technique of collecting data in this study.

Instrumentation

Section A: Demographic Information

The purpose of this section is to gather demographic information of the respondents. It includes three items on personal characteristics of the respondents which are gender, age and name of their institutions.

Section B: Students' Satisfaction with the Availability of E-resources

Refers to students' satisfaction with the e-resources is a fulfilments of a students' information needs and expectation by providing adequate access to e-resources. This section measures the students' satisfaction with the availability of e-resources in colleges of education. This section was adapted from Esther (2014) on the emergence of digital libraries services in Northwest Nigerian universities: challenges and prospects and modified by the researcher to measure the students' satisfaction on the electronic libraries. All the 14 items were adapted based on the past reviewed research measured using a 5 point Likert scale options from 1 = strongly disagree, 2 = disagree, 3 = slightly agree, 4 = agree and 5 = strongly agree.

Section C: Students Satisfaction with the availability of Infrastructure

Refers to satisfaction with the availability of infrastructure refers to the satisfaction of students with information materials in the library. This section intended to measure the students' satisfaction with the availability of infrastructure. The instrument that was used to the infrastructure was modified by the researcher from Ani and Biao, (2005) and Archibong et al. (2010). This instrument has 7 items with 5 points Likert scale options from 1 = strongly disagree, 2 = disagree, 3 = slightly agree, 4 = agree and 5 = strongly agree.

Section D: Students' Satisfaction with the Staff Commitment

Refers to students' satisfaction with the staff commitment refer to the act of staff that connects with the commitment in a library work. This section intended to measures the students' satisfaction with the staff commitment. The instrument was modified by the researcher from Sivathaasan and Chandrasekaran (2013). The instrument has 7 items with a 5 point Likert scale options from 1 = strongly disagree, 2 = disagree, 3= slightly agree, 4 = agree and 5 = strongly agree.

Section E: Students' Involvement in Using the E-resources

Refers to students' involvement in using the e-resources refers to act of involving the students towards searching of e-resources in the academic library. Students' Involvement in Using the e-resources This section intended to measures the students' involvement in using the e-resources. The instrument to measure students' involvement was modified from Winters (2004) and it was used in a study titled —California College libraries in the 21st century (Winters, 2004). The instrument has 7 items using 5 points Likert scale options from 1 = strongly disagree, 2 = disagree, 3 = slightly agree, 4 = agree and 5 = strongly agree.

Reliability

A pilot study is an initial study conducted on a small sample before the main study, in order to identify any potential problems which may impact on the outcomes of the main study (Offredy and Vickers, 2013). Before the pilot test was conducted, some modifications were made based on the feedback provided by the panel of experts as part of the validation. They suggested replacing some words, phrases and items to make them applicable and relevant to the objectives and definitions of terms.

For the purpose of this research; a pilot study was conducted to measure the instruments. Statistically, when the Cronbach's alpha coefficient is more than .70, the instrument is therefore considered as a reliable (Pallant, 2001). To determine the reliability of the instrument, the pilot test was run with 41 samples and construct reliability for actual data (n= 406) was assessed. The reliability coefficient is 0.70 for Cronbach's alpha is considered as good (Furia, et al. 2009) (See Table 1).

Table 1:

Pilot Test Results

Variables	Number of items	Cronbach Alpha Value
Students' satisfaction with the availability of e-resources	14	.86
Students satisfaction with availability of Infrastructure	7	.79

Students' satisfaction with the staff commitment	7	.77
Students' Involvement in using the e-resources	7	.78

Data Collection

The data collection was obtained through the use of a self-administered questionnaire through colleges of education instruction. The total of 406 questionnaires was returned. Prior to data analysis, the data were carefully screened by checking the missing data, primarily for the variables containing missing values. The frequency of every reliable was also checked. Some instruments were found to be errors and incomplete values and therefore taken out of the main data and overall which reduced the sample valid size to 406 responses. The minimum sample size was 439 students and thus, 406 were considered to be more than sufficient. The return rate of the valid data, totalled about 92.5 %. According to Babbie (1989) suggested a 50% rate of return could be considered as adequate for analysis and reporting, and response rate of more than 60% is very good for conducting data analysis and writing reports.

Data Analysis

Analyses procedures such frequencies, percentages, means, standard deviation and pearson product moment correlation were performed.

Results

Demographic

With regards to gender distribution among the total respondents (406), male constitutes 58.6% (238) and that of female were 41.4% (168). The ages of the respondents ranged between 18 to 37 years. In this regard, , the age category of 18 – 24 years old were 67.0% (272), age category of 25 – 31 years old were 28.8% (117) and age category ranging from 32 and above were 4.2% (17). Considering the Mean value of the respondents' age (23.59 years \approx 24 years) and the standard deviation of (3.51 \approx 24 years) which fall between 18 – 24 years category, it indicates that the respondents in that age category were more than the other age levels.

Based on colleges groups' distribution of the respondents, the descriptive analysis reveals that COE Gashua had the highest percentage value of 26.4% (107), followed by COE Azare with a percentage value of 25.1% (102). COE Zing has percentage of respondents as 24.6% (100), COE Hong had 14.8% (60), while COE Biu has a percentage value of 9.1 (37).

Descriptive Results

Students' Satisfaction with the Availability of E-resources

Out of 406 respondents only 3.7% (15) of the respondents have low-level of satisfaction with the availability of e-resources in Colleges, while, 47.0% (191) were reported to have moderate students satisfaction with the availability of e-resources and 49.3% (200) of them were reported to have high level of students satisfaction with the availability of e-resources. Based on the Mean score of 2.75 and standard deviation of .57, the result indicated that there is a moderate level of students' satisfaction with the availability of e-resources.

Students' Satisfaction with the Availability of Infrastructure

Out of 406 respondents, 32.5% (132) of them reported to have low-level of students satisfaction with the availability of infrastructure, 52.5% (213) were having a moderate level of students' satisfaction with the availability of infrastructure and only 15% (61) of them reported high level of satisfaction. Based on the Mean score of 1.09 and standard deviation of .56, the result indicated that there is a weak level of students' satisfaction with the availability of infrastructure in colleges

Students' Satisfaction with the Perceived Staff Commitment

For the students' satisfaction with the staff commitment, only 6.5% (26) were reports to have a low-level of students satisfaction with the staff commitment, 57.6% (234) have a moderate students' satisfaction with the staff commitment and 35.9% (146) were reported to have a high level of students' satisfaction with the staff commitment. This finding showed that the majority of the respondents have a moderate level of students' satisfaction with the staff commitment given the Mean score of 3.11 and Standard Deviation of .71.

Students' Involvement in Using the E-resources

It can be noted that only 3.7% (15) of the respondents have a low-level of students' involvement in using the e-resources, 80.3% (326) of the respondents were reported to have moderate level of students' involvement in using the e-resources and 16.0% (65) of the respondents were reported to have a high-level of students' involvement in using the e-resources. Therefore, there is a moderate level of involvement in using the e-resources among the students based on the Mean score of 3.05 and Standard Deviation of .70.

The Relationship between Students Satisfaction with the Availability of E-resources and Infrastructure, Staff Commitment and Students Involvement in Using the e-resources in Colleges

The Pearson correlation analysis of Table 2 revealed that there is a low and significant relationship between students' satisfaction with the availability of e-resources and infrastructure in Colleges of Education ($r = .192, p < .05$).

Pearson correlation analysis was conducted there is a relationship between students' satisfaction with the availability of e-resources and staff commitment. As shows in Table 2, there is a low and significant relationship between students' satisfaction with the availability of e-resources and staff commitment among students in colleges' of education ($r = .455, p < .05$).

The Pearson correlation analysis shows that there is a medium and significant relationship between students' satisfaction with the availability of e-resources and students' involvement in using the e-resources among students in colleges' of education ($r = .430, p < .05$).

In a nutshell, using the Pearson correlation analysis of 406 respondents revealed that, there is a low and significant relationship between students' satisfaction with the availability of e-resources and infrastructure; there is a medium and significant relationship between students' satisfaction with the availability of e-resources and staff commitment, and there is a medium and significant relationship between students satisfaction with the availability of e-resources and students' involvement in colleges of education.

Table 2:

The Correlation Matrix between Independent and Dependent Variable

Variables	Y	X1	X2	X3
Y (Students Satisfaction with the availability of e-resources)	1			
X1 (Infrastructure)	.192**	1		
X2 (Staff Commitment)	.455**	.539**	1	
X3 (Students' Involvement)	.430**	.538**	.680**	1

Discussion*Relationship between Students satisfaction with the availability of e-resources and infrastructure*

Based on the Pearson correlation statistical analysis as presented in 4.9 reveals that there is a significant relationship between students satisfaction with the availability of e-resources and infrastructure; Also, there is a significant relationship between students satisfaction with the availability of e-resources and staff commitment; and there is a significant relationship between students satisfaction with the availability of e-resources and students' involvement in using the e-resources in colleges of education. Therefore, these findings were found to support this study.

The findings of Pearson correlation analysis reveals that there is low and significant relationship between students' satisfaction with the availability of e-resources and infrastructure in colleges with ($r=.192$, $p<.05$). This study supported by Alison et al, (2012) described that there is a low and significant relationship between satisfaction with the e-resource and infrastructure. Likewise, Caplan, (2011) described that a low and significant relationship between satisfaction with the e-resource and infrastructure. In another study, Sivathaasan (2013) showed that there is a low and significant relationship between students' satisfaction and infrastructure. Infrastructure is one of the important mechanisms to function properly in any well-established academic library. Thus, there is a low and significant relationship between students' satisfaction with the availability of e-resources and infrastructure.

Relationship between Students Satisfaction with the Availability of e-resources and Student Satisfaction with the Staff Commitment

There is a significant relationship between students' satisfaction with the availability of e-resources and staff commitment. Pearson correlation analysis indicated that students' satisfaction with the availability of e-resources and staff commitment in colleges ($r =.455$, $p < .05$). Alison, et al., (2012) showed that there is a medium and significant relationship between students' satisfaction with the e-resources and staff commitment. Also, Sivathaasan, (2013) reported that there is a medium and significant relationship between students' satisfaction with the availability of e-resources and staff commitment. In another study, Sife and Chilimo, (2007) maintained that a medium and significant relationship between students' satisfaction with the availability of e-resources and staff commitment. Watts and Ibegbulum, (2006) also, revealed that there is a medium and significant relationship between students satisfaction and staff commitment. Therefore, there is a medium and significant relationship between students' satisfaction with the availability of e-resources and staff commitment in colleges.

Relationship between Students Satisfaction with the availability of E-resources and Student Involvement

Findings of Pearson correlation analysis revealed that there is a significant relationship between students satisfaction with the availability of e-resources and students involvement in using the e-resources is ($r = .430, p < .05$). The studies by Zhang, et al., (2011) and Zhang et al., (2011) described a medium and significant relationship between students' satisfaction and students' involvement in using the e-resources. In addition, Caplan, (2010) supported a medium and significant relationship between students' satisfaction and students' involvement in using the e-resources. Similarly, Mulla (2011) revealed that there is a medium and significant relationship between students' satisfaction and students' involvement in using the e-resources. Therefore, there is a medium and significant relationship between students' satisfaction with the availability of e-resources and students' involvement in colleges.

Recommendation for Future Studies

The finding of this study is restricted to the Colleges of Education in Northeastern Nigeria. A study should be piloted to generalize other Colleges of Education in Northeastern Nigeria as they are facing similar problems of students satisfaction with the availability of e-resources on students satisfaction with the availability of infrastructure, students satisfaction with the staff commitment and students involvement in using the e-resources.

An in-depth investigation on factors influencing the proper use of students satisfaction with the availability of infrastructure, students satisfaction with the staff commitment and students involvement in using the e-resources in academic library resources in Colleges of Education in Northcentral, Northwest and Northeastern, Nigeria.

A research can be conducted on the factors influencing the lecturers' satisfaction with the availability of infrastructure, lecturers satisfaction with the staff commitment and lecturers involvement in using the e-resources in Colleges of Education in Northcentral, Northwest and Northeastern, Nigeria.

Conclusion

The present study revealed some important results in order to fill up the gap in students' satisfaction with the availability of e-resources in colleges of education. The study revealed that the students satisfaction with the availability of infrastructure, students satisfaction with the staff commitment and students' involvement in using the e-resources among students in colleges.

There is moderate students' satisfaction with availability of e-resources in Colleges of Education. This shows that, students were insufficiently satisfied with the availability of e-resources such as e-books, e-journals, full-text databases, on-line databases, online public access catalogues among others towards the e-resources in order to meet up with the challenges facing the students' satisfaction. Students' satisfaction is one of the most important factors towards the e-resources in Colleges.

There is a low students' satisfaction with availability of infrastructure. This shows that the students are insufficiently satisfied with the availability of infrastructure such as: electricity power supply, internet, computers, computer networking, serve, sufficient computers for

students and telecommunication system. Likewise, there is a moderate students' satisfaction with the staff commitment. This discloses that the students are insufficiently satisfied with the staff commitment in terms of: assisting students towards the helpfulness, knowledge and expertise, knowledge of resource approachability and inter-library loans). And, there is a moderate students' involvement in using the e-resources in colleges of education. This study reveal that the students' are insufficiently satisfied with the e-resources such as: e-books, e-journals, online searching of group assignment, OPAC, CAS, SDI and downloading of e-resources.

There was a low and significant relationship between students' satisfaction with the availability of e-resources and infrastructure; there was a medium and significant relationship between students' satisfaction with the availability of e- resources.

References

- Abdulsalami, L. T., and Salami, P. F. (2013). Academic and Research Libraries in the Digital Environment. Challenges and Prospects. *Journal of Education and Practice*, 4(6), 21-27.
- Abubakar, B. M. (2011). Academic libraries in Nigeria in the 21st century. *Library Philosophy and Practice (e-journal)*. Paper 446. <http://digitalcommons.unl.edu/libphilprac/446>
- Abubakar, D., and Adetimirin, A. (2015). Influence of Computer Literacy on Postgraduates' Use of E-Resources in Nigerian University Libraries. *Library Philosophy and Practice (e-journal)*. Paper 1207. <http://digitalcommons.unl.edu/libphilprac/1207>
- Adegbore, A. M. (2010). Automation in two Nigerian university libraries. *Library Philosophy and Practice (e-journal)*. Paper 425. <http://digitalcommons.unl.edu/libphilprac/425>.
- Adekunmisi, S. R., Ajala, E. B., and Iyoro, A. O. (2013). Internet Access and usage by undergraduate students: a case study of Olabisi Onabanjo University, Nigeria. *Library Philosophy and Practice (e-journal)*. Paper 848. <http://digitalcommons.unl.edu/libphilprac/848>
- Adeniyi Aderibigbe, N., and Adebimpe Ajiboye, B. (2013). User education program as determinant of electronic information resources usage in Nimbe Adedipe University Library, Nigeria. *The Electronic Library*, 31(2), 244-255.
- Agboola, I. O., and Bamigboye, O. B. (2011). Students' level of study and user of library resources in Nigerian universities: a comparative study. *Library Philosophy and Practice (e-journal)*. Paper 528. <http://digitalcommons.unl.edu/libphilprac/528>
- Alison KA, Kiyingi GW, Baziraake BB (2012). Factors affecting utilization of electronic health information resources. *Annals of Library and Information Studies*, 59(2). <http://www.niscair.res.in>.
- Ani, O. E., and Biao, E. P. (2005). Globalization Its impact on scientific research in Nigeria. *Journal of librarianship and information science*, 37(3), 153-160.
- Archibong, I. A., Ogbiji, J., and Anijaobi-Idem, F. (2010). ICT competence among academic staff in universities in Cross Rivers State, Nigeria. *Computer and Information Science*, 3(4), p109.
- Babbie, E. R. (1989). *The practice of social research*: Wadsworth Publishing Company.
- Bartlett, K. R. (2005). *Survey research in organizations*. Research in organizations: Foundations

- and methods of inquiry, 97-113.
- Caplan, A (2011). Changing Perceptions. *Public Libraries*, 50(1) (Available: <http://www.publiclibrariesonline.org/magazines/from-the-president/changingperceptions>).
- Ekoja, I. I., and Gbaje, E. S. (2012). Digital Preservation Activities At Two Foremost Information Institutions In Nigeria. *Information for Sustainable Development in a Digital Environment*. Nairobi: Kenya Library Association, 245.
- Esther, G. (2014). Management of University Electronic libraries in Northwest Nigeria. *Library Philosophy and Practice (e-journal)*. Paper 1184. <http://digitalcommons.unl.edu/libphilprac>.
- Fabunmi, B. A. (2009). Challenges and prospects of virtual libraries in universities in Nigeria. *European Journal of Scientific Research*, 33 (1), 202-208.
- Farran, N., Casadesus, J., Krakowska, M. and Minguillon, J. (2007), —Enriching elearning metadata through digital library usage analysis||, *The Electronic Library*, 25 (2), 148-65.
- Furia, A. C., Lee, R. E., Strother, M. L., and Huang, T. T. (2009). College students' motivation to achieve and maintain a healthy weight. *American Journal of Health Behavior*, 33(3), 256-263.
- Gbaje, E. S. (2007). Implementing a national virtual library for higher institutions in Nigeria. *LIBRES: Library and Information Science Research Electronic Journal*, 17(2), 1-15.
- Hodge, G. (2000). *Systems of Knowledge Organization for Digital Libraries: Beyond Traditional Authority Files*. Digital Library Federation, Council on Library and Information Resources, 1755 Massachusetts Ave., NW, Suite 500, Washington, DC 20036.
- Hudron Kari, A., and Baro, E. (2014). The use of library software in Nigerian University Libraries and challenges. *Library Hi Tech News*, 31(3), 15-20.
- Idowu, F. C. (2016). Virtual Library: Challenges of Information Provision in Six Selected Academic Libraries in Ogun State, Nigeria. *The Polymath Journal*, 4(1), 6.
- Imo, N. T., and Igbo, U. H. (2011). The challenges of software use in Nigerian university libraries:
Review of experiences from 1990-2009. *Library Philosophy and Practice (e-journal)*. Paper 646. <http://digitalcommons.unl.edu/libphilprac>.
- Isah, A. (2010b). Electronic library use by academic staff at the University of Ilorin, Nigeria. *Journal of Library and Information Science (JOLIS)*. 7. (1 & 2), 138-149.
- Issa, A. O., Ayodele, A. E., Abubakar, U., and Aliyu, M. B. (2011). Application of information technology to library services at the federal university of technology, Akure library, Ondo State, Nigeria. *Library Philosophy and Practice (e-journal)*. Paper 576. <http://digitalcommons.unl.edu/libphilprac/576>
- Israel, G. D. (1992). Determining sample size. University of Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, EDIS.
- Issa, A. O., Blessing, A., and Daura, U. D. (2009). Effects of information literacy skills on the use
of e-library resources among students of the University of Ilorin, Kwara State, Nigeria. *Library Philosophy and Practice (e-journal)*, 245.
- Jha, A. K. (2008). Library automation in the special and university libraries of Kathmandu valley:
status, needs and importance (Doctoral dissertation, Tribhuvan University).
- Mulla, K.R. (2011). Use of electronic resources by faculty members in HKBK College of Engineering: a survey||, *Library Philosophy and Practice (e-journal)*. Paper 593.
- Offredy, M., and Vickers, P. (2013). Developing a healthcare research proposal: An interactive

- student guide. John Wiley & Sons.
- Ogunsola, L., and Okusaga, T. (2008). Establishing virtual libraries in African universities: problems and prospects. *Ozean Journal of Social Science*, 1(1), 43- 52.
- Ojedokun, A. A., and Okafor, V. N. (2011). Relevance and Adequacy of IT Skills of Librarians in Southern Nigeria in the Digital and Electronic Environment in Nigeria: A Survey. *Nigerian Library Association*, 70.
- Okiy, R. B. (2010). Globalization and ICT in academic libraries in Nigeria: the way forward. *Library Philosophy and Practice (ejournal)*. Paper 501. <http://digitalcommons.unl.edu/libphilprac>.
- Onohwakpor, J. E. (2009). Evaluation of library system effectiveness and users' satisfaction in the Delta State Public Library Board (Doctoral dissertation, Ph. D Thesis) Abraka, Delsu: Department of Library and Information Science).
- Pallant, J. (2001). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for WIndows (versions 10 and 11): SPSS Student Version 11.0 for Windows: Open University Press*.
- Sife, A. S., & Chilimo, W. (2007). Effectiveness of Sokoine National Agricultural Library in disseminating veterinary information. Session 1: Library products and services.
- Simisaye, A.O., (2012). "Faculty Use of University Library Resources: A Study of Tai Solarin University of Education, Ijagun, Ogun State, Nigeria". *Library Philosophy and Practice (e-journal)*. Paper 820. <http://digitalcommons.unl.edu/libphilprac>.
- Singh, A. S., & Masuku, M. B. (2013). Fundamental of applied research and sampling techniques. *Int J Med Appl Sci*, 2(4), 123-124.
- Sinha, M. K. (2011). Information and communication technology (ICT) awareness amongst university and college teachers of north eastern region of India: A Survey. *Library Progress (International)*, 31(2), 217-234.
- Sinha, M. K., Singha, G., and Sinha, B. (2011). Usage of electronic resources available under UGC-INFONET Digital Library Consortium by Assam University library users. *Proceedings of the 8th International CALIBER-2011, Goa University, Goa*, 489-510.
- Sivathaasan, N. (2013). Impact of library collections on user satisfaction: A case study of undergraduate students of Faculty of Management Studies and Commerce, University of Jaffna, Sri Lanka. *European Journal of Business and Management*, 5(13), 141-146.
- Sivathaasan, N., and Chandrasekaran, K. (2013). Factor analysis of user satisfaction: a special reference to the library, University of Jaffna, Sri Lanka. *Merit Research Journal of Art, Social Science and Humanities*, 1(3), 040-046.
- Tenopir C (2003). Use and users of electronic library resources: An overview and analysis of recent research studies. Council on Library and Information Resources. Available: <http://www.clir.org/pubs/ reports/pub120.pdf>.
- Tuomi, V., and Naamala, V. (2007). *Transforming Or Distributing? Academic Libraries in the Digital Era: Citeseer*.
- Varghese, R. R. (2008). User studies in the electronic environment: Review and brief analysis. *The International Information & Library Review*, 40(2), 83-93.
- Watts C, Ibegbulem I (2006). Access to electronic healthcare information resources in developing countries: Experience from the medical library, College of Medicine, University of Nigeria. *IFLA J*. 32(54). 2009-03-21 available at <http://ifla.sagepub.com/content/32/1/ 54.full.pdf+html>.
- Winters, L. S. (2004). *California community college libraries in the 21st century*.

Zhang, L., Ye, P., & Liu, Q. (2011). A survey of the use of electronic resources at seven universities in Wuhan, China. *Program*, 45(1), 67-77.

Zhang, L., Ye, P., Liu, Q., & Rao, L. (2011). Survey on the utilization of NSTL electronic resources in colleges and universities in Wuhan, China. *The Electronic Library*, 29(6), 828-840.