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# **The Impact of Policies and Infrastructures on The Access and Use of Library Electronic Resources: A Case Study of National Open University of Nigeria (NOUN)**

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## **ABSTRACT**

*The aim of this study was to investigate the Impact of policies and infrastructures on the access and use of library electronic resources the extent of access to and use of library electronic resources and their implications on remote users at the National Open University of Nigeria. The study adopted a quantitative research approach and survey research method was employed. The study targeted 1,680 population samples of which include 1,513 Students, 140 Academic staffs, and 27 Academic Librarians. Probability (Stratified random and systematic) sampling and nonprobability (purposive) sampling methods were adopted. Two sample frames were used: Students - classified into subgroups (Level) in each selected study centers and Academic staff - classified into subgroups (academic staff/academic librarian). Online (Google form) self-administered closed-ended questionnaire was sent to participants' email. Data collected were analyzed through Statistical Package for the Social Sciences (SPSS).*

*This finding revealed that the academic staff and students access and use the library electronic resources for various multidimensional purposes, however, there is a low patronage of these electronic resources by academic staff and students as less than 40% of academic staff and students access and use the library electronic resources. Recommendations: the library management should develop awareness programmes that is appropriate for an ODL university community through the use of modern communication tools, and emphasis should be on the use of electronic resources in the university curriculum.*

## **KEY TERMS:**

Electronic resources, National Open University of Nigeria, Remote Access, Awareness, Library policies, information and communication technologies (ICTs), Library access tools, Academic Librarian, Academic Staff, Social media, Academic Library, Remote users, Library users, NOUN.

## **INTRODUCTION**

Over the years, librarians have exploited emerging technologies to offer new services to library patrons, as libraries continuously play the important role as information dissemination entities where students, teachers, and research groups have access to and explore available electronic resources (Lamont, 1999 p. 390; Vassiliou & Rowley, 2008, p. 355; Thanuskodi, 2011, p. 36). The society has also witnessed a tremendous change in the way tasks are accomplished, libraries are reducing in size as stocks of the volume of printed documents shrinks and electronic resources gradually replace physical monographs due to technological advancements (Bhatia, 2011, p. 408; Natarajan & Revathi, 2012, p. 61). Electronic resources are compilations of subject or field databases which include academic journal articles, books, magazine articles, newspaper articles and reference materials such as encyclopedia, thesaurus, and dictionary. These databases are hosted by different database providers who specialize in specific or multiple disciplines. Library users have access to relevant and current information due to the availability of electronic resources in numerous subject fields, and this has made it possible for the academics to execute their daily tasks (Owolabi & Ajiboye, 2012, p. 167; Ukpebor, 2012, p. 93). Its flexibility in the delivery of teaching and learning materials to distant learners coupled with information retrieval speed has improved the quality of knowledge acquisition and broaden the learning scope especially in many distant learning tertiary institutions in Nigeria and Africa. Thus, making electronic resources an inestimable asset to education. With the aid of the internet, regularly updated and current information that might be out of reach to distant learners are remotely accessed. Simpson, Coghill & Greenstein (2005, p. 28) assert that partnership between librarians and partners, healthy feedbacks from library users would translate to rich and wholesome electronic resources collections. And libraries are committed to improving service delivery and meeting the demand for uninterrupted, instantaneous, integrated access to online information (Pilgrim & Dolabaille, 2011 p. 98).

National Open University library runs a standard hybrid system that offers rich academic electronic databases and monographs available to students and staffs for teaching, studying and research purposes. President Olusegun Obasanjo on the 27th of March 2002 approved the resuscitation of the institution to tackle the country's educational problems which are: lack of access to higher institutions, inequality in educational opportunity, the level of illiteracy and high demand for highly skilled professionals in the labour market. The drive behind the establishment of NOUN was to make both formal and non-formal education accessible to the ever-increasing population of Nigerians seeking to be educated.

### **ELECTRONIC RESOURCES: AN OVERVIEW**

Electronic resources (e-resources) are multi-platform, synchronous/asynchronous information-supply instruments that are accessible through information and communication technology (ICT) contrivances by multiple users at different locations (Swain & Panda, 2009, p. 76). Electronic resources are invaluable research tools, a subset of academic libraries and a significant academic resource used in learning, teaching, and research activities and complementing print-based resources by providing access to information to distant learners (Dadzie, 2005, p. 290; Liyi, Pinghao, Qihua & Lijun, 2011, p. 829). According to Swain & Panda (2009, p. 74) and Thomas, Satpathi & Satpathi (2010, p. 595), the libraries' role metamorphosed from information storehouses to information institutions, then to centers of knowledge and culminating in becoming guides/facilitators to information access. This evolution of academic libraries/information centers through ICT has transformed library services procedures and structures, making electronic resources easily accessible and available (Okon, Jacob & Nkoyo, 2005, p. 701; Prabha, 2007, p. 4; Deng, 2010, p. 88). According to Swain & Panda (2009, p. 75), library print resources stock has drastically reduced due to increase in ICT devices, electronic databases, modern book technologies. These developments include digitalization/multimedia technology, creation of metadata standards/copyright laws, institutional repositories, e-publishing/e-journals, static/dynamic web page creation/management (Thomas, Satpathi & Satpathi, 2010, p. 596; Ahmed, 2013, p. 290). According to Prakashe & Tayade (2015, p. 217), challenges associated with the management of electronic resources include monitoring changing access circumstances, license terms considerations and conditions attached to subscription, renewal, and authentication processes, resource sharing limitations, usage and data collection.

## **LITERATURE REVIEW**

Library as a professional institution helps in supporting its patrons to gain access quickly and efficiently to any type of information from its rich and robust diversified collections of resources (Erich, 2013, p. 76). The elements that ensure electronic resources usage, such as, technology, cost, management, training, content, and information are building blocks to effective and efficient policy formulation. Infrastructure investments, electronic resources acquisition procedures, copyright and licensing issues, user's request for an electronic resource, strategic training for library users and librarians are ways of ensuring efficient access and use of academic library electronic resources. Library management should establish strategic planning team to formulate policies that will knit the library and patrons closely together (Peris & Peris, 2012). According to Erich (2013, p. 78), when proper policies on acquisition, access, electronic resources promotion, decision making, fundraising and communication are efficiently and effectively implemented, it will negate the numerous challenges of poor access to and usage of library service, recurrent demoralization of library personnel and the marginalization of the library.

Hopkins & Summers-Ables (2012, p. 76) stated that creating change to library policy and practice based on electronic resource usage statistics will be integral to the success of libraries in the future; one way that libraries can utilize electronic resource statistics is to compare the curricula and degrees offered against electronic resource usage, that is:

1. A resource may not exhibit medium or high usage but could be extremely valuable to a niche educational component in the university.
2. Alternatively, it could mean that the electronic resource does not meet the needs of patrons.
3. It could also indicate that library outreach and education are needed to promote use and awareness.

Gakibayo & Okello-Obura (2013, p. 16) stated that information literacy programme should be integrated into university curriculum so that student can acquire important skills that would make them relevant in today's information and communication technology age. Ozoemelem (2009) & Egberongbe (2011) stated that information technology literacy programme with practical courses should also be inculcated into university's curriculum for students and staff. According to Gakibayo & Okello-Obura, (2013) and Oyedapo & Ojo (2013, p. 13), university management in

collaboration with the library should equip the library with competent personnel and modern networked computer systems with high-speed internet access. They should establish computer laboratories in faculties regularly organize training, seminar and workshops, and promote the usage of electronic resources through social media and electronic mail text messages.

Hadagali, Kumbar, Nelogal & Bachalapur (2012) stated that appropriate use of grants for the procurement of modern technologies will enhance the development of information services in academic libraries. According to Tahir, Mahmood & Shafique (2010), electronic resources pattern of use should change as technology changes in order to formulate policies that will improve utilization of electronic resources. The development of collection development policies reflecting the varied usage pattern would be highly instrumental in establishing an excellent study/research culture among library patrons. The involvement of library professionals in the design of library web pages should be encouraged (Warraich & Ameen, 2008). While universities should consider implementing integrated library system in automating library operations (Ahmed, 2014). University management needs to consider the development of an effective feedback mechanism for prompt and effective solutions (Qasim & Khan, 2015).

## **STATEMENT OF THE PROBLEM**

The library at the National Open University of Nigeria (NOUN) is no exception as far as the justification of the continued funding and existence of libraries, worldwide, are concerned. The library has subscribed to electronic resources; however, very little is known about the accessibility and use of these resources by academic staff, students and any other university community members for whom the resources are meant. There is a lack of evidence of the extent of accessibility and use of these electronic resources. Such evidence is necessary for the continued investment in electronic resources, and for libraries to be accountable to their constituents and funders alike (Miller & Schmidt, 2003, p. 203). According to Stone, Soltis, & Schott (2010, p. 1), the modern library faces the challenge of providing adequate and equal access to patrons that engage in online and internet searching for accessing information through the academic library. It is imperative to understand remote users and their needs as thoroughly as possible. This is particularly true for students and staff of NOUN who use electronic resources extensively to study at their homes, offices, while in transit.

## **OBJECTIVES**

The study was to: -

- find out how academic staffs and students access and use electronic resources in NOUN library;
- analyze the policies that enable access to and use of electronic resources by academic staffs and students at NOUN.

## **RESEARCH QUESTIONS**

- How do academic staff and students access electronic resources at NOUN?
- How often do academic staff and students access these electronic resources available in NOUN?
- What policies and infrastructure exist in the library to enable the use of electronic resources by academic staff and students?

## **RESEARCH METHODOLOGY**

### **Research Approach**

This study adopts a quantitative research approach. The quantitative approach is the process of gathering and analyzing numerical data to describe, explain, predict, or control phenomena of interest (Gay, Mills & Airasian, 2009, p. 7; Mertler & Charles, 2008, p. 26). The use of this approach will help to adequately investigate the extent of accessibility to and nature and of usage of library electronic resources by students and staff of the National Open University of Nigeria (NOUN).

### **Research Design**

The survey design was employed in this study. This was chosen by the researcher because of its ability to focus on describing the characteristics of potentially large groups of people (Mertler & Charles, 2008, p. 224).

### **Research Site**

NOUN study centers are the research sites, located in six geopolitical zones of Nigeria (see table 1.0 below). These study centers are in three categories: Main study center, Special Study center, and Community study center. They are all homogenous. They all have the same organizational structure and offer all available courses using the same instructional materials. This study will

focus on the study centers with the substantial large population. Table 1.0 present the research sites with students, academic staff and academic librarian population at zonal level.

S/N	ZONE	NO OF CENTERS	TARGET POPULATION							
			STUDENTS						ACAD EMIC STAFF	LIBRA RIAN
			UG		PG			Total		
			400 Level	500 Level	PGD	Masters	PhD			
1	South West	14	13,255	4,258	10,496	12,482	75	40,566	257	24
2	South South	11	7,282	2,253	6,393	7,596	70	23,594	9	4
3	South East	7	2,793	2,188	3,612	4,437	73	13,103	6	6
4	North Central	20	6,724	2,033	11,264	15,370	75	35,466	20	10
5	North West	9	1,864	698	1,902	3,010	43	7,517	8	8
6	North East	9	1,026	418	1,079	1,998	26	4,547	9	2
	<b>Total</b>	<b>70</b>	<b>32,944</b>	<b>11,848</b>	<b>34,746</b>	<b>44,893</b>	<b>362</b>	<b>124,793</b>	<b>309</b>	<b>54</b>

**Table 1.0: Research sites: Final year students (undergraduate and postgraduates), Academic staff and Librarians population distribution**

*(Source: NOUN ICT Database 2016, NOUN 2014/2015 Annual Report and NOUN University Library 2016 respectively)*

### **Target Population**

The population for this study is classified into three categories, namely academic librarians, academic staff members (i.e. faculty members), and students. According to NOUN Annual Report (2014/2015, p. 79), there are 189,364 registered students, 2,656 staff members. 370 are academics, 2,286 are non-academics. The library staff totals 80, out of which there are 54 academic librarians



(National Open University of Nigeria Library 2016). See Table 1.1 for the distribution of the target population across the various categories.

### Sample frame

The sample frame includes a list of target research participants from the selected study centers. These study centers were selected through purposive sampling techniques. To ensure that the study was well executed having a fair representation of the target population, two sample frames were used. The first sample frame consists of students, classified into subgroups (Level) in each selected study centers and the second sample frame consist of academic staff, also classified into subgroups (academic staff/academic librarian).

### Sampling Procedures

Nonrandom sampling was used to select the desired number of zones and the participating study centers from the target student population. The researcher used this procedure because of the homogenous nature of the population. Purposive sampling, which is selection based on knowledge of the group to be sampled was used based on population size. Study centers with large population size were given higher priority. The target population distribution of students at each level from the desired study center is highlighted in the table below (table 1.1)

S/N	ZONE	STUDY CENTER	POPULATION					TOTAL
			400 LEVEL	500 LEVEL	PGD (700 LEVEL)	MASTERS (800 LEVEL)	PhD	
1	South West	Ibadan Study Center	1260	369	942	1023	10	3604
2	South West	Lagos, Apapa	1592	234	1109	1343	29	4307
3	South West	Lagos, Agidingbi	6918	1831	4756	5752	18	19275
4	South South	Benin Study Center	2487	689	1390	1849	17	6432
5	South South	Port Harcourt Study Center	1985	835	2335	2454	24	7633
6	South East	Enugu Study Center	810	737	1398	1439	27	4411
7	North Central	Minna Study Center	470	104	740	1274	9	2597
8	North Central	Ilorin Study Center	1160	232	864	1235	7	3498
9	North Central	Jos Study Center	832	535	1041	1196	5	3609
10	North Central	Abuja Study Center	1989	573	5303	7699	28	15592

11	North West	Kano Study Center	526	119	398	676	17	1736
12	North West	Kaduna Study Center	703	203	792	1142	17	2857
13	North East	Maiduguri Study Center	205	124	191	397	9	926
14	North East	Bauchi Study Center	309	73	213	445	6	1046
								<b>77523</b>

**Table 1.1: Target Student Population in each Level from the Desired Study Center**

### **Sample size**

The total student target population is **77,523** spread across the six geopolitical zones. Using Sample Size Table with a Confidence Level = 95% and Margin of Error = 2.5% (Research Advisors 2006, p. 2). **1,513** was selected as the Desired Student Sample size.

Stratified random sampling and systematic sampling was used to select research participants in the desired study centers. The desired research sample size in each selected study centers was obtained by getting the percentage representation of the target population and then multiplying it with the desired student sample size (1,513) obtained from Research Advisor (2006, p. 2) using stratified random sampling technique.

The Academic staff population is 370. 275 are lecturers in the various academic units and 54 are academic librarians. These two groups constitute the target population. The remaining 41 academic staff occupy positions such as study center directors (35), heads of directorate (4), and the office of the vice chancellor (3)

Purposive sampling technique was used to select the desired sample size of academic staff and academic librarian based on previous experience or knowledge of the population for study by deliberately identifying selection criteria based on the researcher's judgement (Gay, Mills & Airasian, 2009, p. 134; Mertler & Charles, 2008, p. 127 & Fraenkel, Wallen & Hyun, 2012, p. 100). The researcher decided to use 50% the entire academic population as a sample size to get a fair representation. That is, 50% of Academic Librarian = 27 sample size and 50% of Academic Staff = 140 (approx.) sample size.

### **Data collection methods and procedures**

This study used the online survey tool (google form) to collect primary source data from respondents at the selected study centers to find answers to the research objectives.

## **Reliability and validity**

The reliability of the instrument was established via pilot test. The researcher administered a pilot test; the pilot test is a small-scale implementation of the draft questionnaire that assesses: questionnaire clarity, questionnaire comprehensiveness, and questionnaire acceptability. This approach helped the researcher to make corrections and addressed other shortfalls to make an appropriate instrument for the actual research population. The draft survey pilot test was administered to 20 participants in one of the study centers in the National Open University of Nigeria that were not part of the main sample but possessed every characteristic as the main sample of the study. To determine the extent to which the content instruments were consistent in eliciting the same responses, the researcher employed Cronbach's alpha statistics which range from 0.76 to 0.90.

## **Presentation**

### **Data analysis and presentation**

The data collected from this study were analyzed through descriptive and inferential statistical tools using Statistical Package for the Social Sciences (SPSS). The research questions were entered into the variable view of the SPSS software and coded while the responses of each respondent entered into the data view. Descriptive statistics was run on the data to generated frequencies, mean and standard deviation. Descriptive statistics such as frequency counts, percentages, means and standard deviation were used to answer research questions. Tables were used for presentation. In addition, respondents were asked to indicate their opinion on the questionnaire which was measured by the following five-point scales:

1. Strongly Disagree (SD), Disagree (D), Undecided (UD), Agree (A), Strongly Agree (SA);
2. Very Difficult (VD), Difficult (DF), Undecided (UD), Easy (E), Very Easy (VE);
3. Never (N), Rarely (R), Occasionally (OC), Often (OF), Most Often (MO);

## Presentation of results

The findings are presented in this section based on the research questions.

- **Research Question 1: How do academic staff and students access electronic resources at NOUN?**

Table 1.2 presents mean and standard deviation scores of the devices employed by library users to access electronic resources at NOUN as indicated by academic librarians.

**Table 1.2: Mean and standard deviation scores of the devices employed by library users to access electronic resources at NOUN as indicated by academic librarians**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
Center Library Computer	1 3.7%	%	2 7.4%	8 29.6%	16 59.3%	4.40	0.93
Personal Computer	1 3.7%	1 3.7%	1 3.7%	9 33.3%	15 55.6%	4.33	1.00
Mobile Phone	2 7.4%	%	2 7.4%	14 51.9%	9 33.3%	4.04	1.06
Tablet	3 11.1%	%	1 3.7%	14 51.9%	9 33.3%	3.96	1.19
<b>GRAND MEAN=3.5980</b>							

The results in Table 1.2 above, as indicated by academic librarians, showed that library users accessed electronic resources through center library computer ( $\bar{x}$  =4.40, s=0.93); a personal computer ( $\bar{x}$  =4.33, s=1.00); mobile phone ( $\bar{x}$  =4.04, s=1.06); and tablet ( $\bar{x}$  =3.96, s=1.19).

Table 1.3 presents mean and standard deviation scores of the devices employed by academic staffs to access electronic resources at NOUN.

**Table 1.3: Mean and standard deviation scores of the devices employed by academic staffs to access electronic resources at NOUN**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
Personal Computer	1 .9%	- %	2 1.8%	45 40.9%	42 56.4%	4.52	0.63
Tablet	11 10.0%	20 18.2%	25 22.7%	36 32.7%	18 16.4%	3.27	1.23
Mobile Phone	11 10.0%	32 29.1%	25 22.7%	30 27.3%	12 10.9%	3.00	1.19

Center Library	23	39	31	9	8	2.45	1.13
Computer	20.9%	35.5%	28.2%	8.2%	7.3%		
<b>GRAND MEAN=2.8680</b>							

The results in Table 1.3 above indicated that academic staffs accessed electronic resources through a personal computer ( $\bar{x}$  =4.52, s=0.63); tablet ( $\bar{x}$  =3.27, s=1.23); and mobile phone ( $\bar{x}$  =3.00, s=1.19).

Table 1.4 presents mean and standard deviation scores of the devices employed by students to access electronic resources at NOUN.

**Table 1.4: Mean and standard deviation scores of the devices employed by students to access electronic resources at NOUN**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
	(1)	(2)	(3)	(4)	(5)		
Personal Computer	100 9.9%	31 3.1%	145 14.3%	294 29.0%	443 43.7%	3.94	1.26
Mobile Phone	158 15.6%	64 6.3%	166 16.4%	295 29.1%	330 32.6%	3.56	1.40
Tablet	339 33.5%	118 11.6%	207 20.4%	209 20.6%	140 13.8%	2.69	1.45
Center Library Computer	572 56.5%	199 19.6%	156 15.4%	54 5.3%	32 3.2%	1.79	1.08
<b>GRAND MEAN=2.6340</b>							

The results in Table 1.4 above showed that students accessed electronic resources through a personal computer ( $\bar{x}$  =3.94, s=1.26); mobile phone ( $\bar{x}$  =3.56, s=1.40); and tablet ( $\bar{x}$  =2.69, s=1.45).

Table 1.5 presents mean and standard deviation scores of the ease at which electronic resources were accessed by academic staffs at NOUN.

**Table 1.5: Mean and standard deviation scores of the ease at which electronic resources were accessed by academic staffs at NOUN**

ITEMS	VD(1)	DF(2)	UD(3)	E (4)	VE (5)	Mean ( $\bar{x}$ )	SD (s)
Electronic Newspaper	6	8	-	61	35	4.00	1.05

	5.5%	7.3%	%	55.5%	31.8%		
Electronic Journal	3 2.7%	12 10.9%	6 5.5%	52 47.3%	37 33.6%	3.98	1.04
Electronic Dictionary	15 13.6%	8 7.3%	- %	66 60.0%	21 19.1%	3.64	1.26
Electronic Magazine	15 13.6%	10 9.1%	- %	63 57.3%	22 20.0%	3.61	1.29
Electronic Book	11 10.0%	22 20.0%	8 7.3%	48 43.6%	21 19.1%	3.42	1.28
Indexing and Abstracting Databases	25 22.7%	8 7.3%	1 .9%	65 59.1%	11 10.0%	3.26	1.39
Institutional Repositories	19 17.3%	22 20.0%	6 5.5%	47 42.7%	16 14.5%	3.17	1.37
Electronic Thesis/Dissertation	14 12.7%	32 29.1%	6 5.5%	47 42.7%	11 10.0%	3.08	1.28
Electronic Archives	23 20.9%	20 18.2%	4 3.6%	54 49.1%	9 8.2%	3.05	1.36
CD Databases	45 40.9%	15 13.6%	2 1.8%	40 36.4%	8 7.3%	2.55	1.50
<b>GRAND MEAN=3.1645</b>							

The results in Table 1.5 above indicated that academic staffs had easy access to electronic newspaper ( $\bar{x}$  =4.00, s=1.05); electronic journal ( $\bar{x}$  =3.98, s=1.04); electronic dictionary ( $\bar{x}$  =3.64, s=1.26); electronic magazine ( $\bar{x}$  =3.61, s=1.29); and electronic book ( $\bar{x}$  =3.42, s=1.28).

Table 1.6 presents mean and standard deviation scores of the ease at which electronic resources were accessed by students at NOUN.

**Table 1.6: Mean and standard deviation scores of the ease at which electronic resources were accessed by students at NOUN**

ITEMS	VD(1)	DF(2)	UD(3)	E (4)	VE (5)	Mean ( $\bar{x}$ )	SD (s)
Electronic Book	167 16.5%	104 10.3%	57 5.6%	408 40.3%	277 27.3%	3.52	1.41
Electronic Dictionary	284 28.0%	75 7.4%	552 5.1%	395 39.0%	207 20.4%	3.16	1.54
Electronic Newspaper	290 28.6%	91 9.0%	52 5.1%	366 36.1%	214 21.1%	3.12	1.56
Electronic Magazine	299 29.5%	106 10.5%	56 5.5%	363 35.8%	189 18.7%	3.04	1.55
Electronic Thesis/Dissertation	275 27.1%	149 14.7%	70 6.9%	366 36.1%	153 15.1%	2.97	1.48

Electronic Archives	338 33.4%	125 12.3%	64 6.3%	381 37.6%	105 10.4%	2.79	1.49
Institutional Repositories	349 34.5%	157 15.5%	51 5.0%	334 33.0%	122 12.0%	2.73	1.51
Indexing and Abstracting Databases	414 40.9%	154 15.2%	67 6.6%	287 28.3%	91 9.0%	2.49	1.54
CD Databases	463 45.7%	179 17.7%	93 9.2%	197 19.4%	81 8.0%	2.26	1.40
Electronic Journal	188 18.6%	121 11.9%	83 8.2%	391 38.6%	230 22.7%	1.26	.76
<b>GRAND MEAN=2.5991</b>							

The results in Table 1.6 above showed that students had easy access to electronic book ( $\bar{x} = 3.52$ ,  $s=1.41$ ); electronic dictionary ( $\bar{x} = 3.16$ ,  $s=1.54$ ); electronic newspaper ( $\bar{x} = 3.12$ ,  $s=1.56$ ); electronic magazine ( $\bar{x} = 3.04$ ,  $s=1.55$ ); and electronic thesis/dissertation ( $\bar{x} = 2.97$ ,  $s=1.48$ ).

Table 1.7 presents mean and standard deviation scores of the level of access to electronic resources available to academic staffs and students at NOUN as indicated by academic librarians.

**Table 1.7: Mean and standard deviation scores of the level of access to electronic resources available to academic staffs and students at NOUN as indicated by academic librarians**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
Full Text	2 7.4%	%	2 7.4%	13 48.1 %	10 37.0%	4.01	1.11
Bibliographic (Title, Author, Place, Year) Information	4 14.8%	%	4 14.8%	9 33.3 %	10 37.0%	3.78	1.37
Abstract Only	6 22.2%	2 7.4%	8 29.6%	7 25.9 %	4 14.8%	3.04	1.37
<b>GRAND MEAN=3.6100</b>							

The results in Table 1.7 above showed that the level of access to electronic resources available to academic staffs and students at NOUN as indicated by academic librarians are full text ( $\bar{x} = 4.01$ ,  $s=1.11$ ); and bibliographic (title, author, place, year) Information ( $\bar{x} = 3.78$ ,  $s=1.37$ ).

Table 1.8 presents mean and standard deviation scores of the level of access to electronic resources available to academic staffs at NOUN.

**Table 1.8: Mean and standard deviation scores of the level of access to electronic resources available to academic staffs at NOUN**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
Full Text	3 2.7%	1 .%	1 0.9%	55 50.0%	50 45.5%	4.35	0.79
Bibliographic (Title, Author, Place, Year) Information	7 6.4%	- %	1 0.9%	74 67.0%	28 25.5%	4.05	0.92
Abstract Only	8 7.3%	20 18.2%	40 36.4%	32 29.0%	10 9.1%	3.15	1.06
<b>GRAND MEAN=3.8500</b>							

The results in Table 1.8 above indicated that the level of access to electronic resources available to academic staffs at NOUN is full text ( $\bar{x}$  =4.35, s=0.79); and bibliographic (title, author, place, year) Information ( $\bar{x}$  =4.05, s=0.92).

Table 1.9 presents mean and standard deviation scores of the level of access to electronic resources available to students at NOUN.

**Table 1.9: Mean and standard deviation scores of the level of access to electronic resources available to students at NOUN**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
Full Text	188 18.6%	42 4.1%	52 5.1%	418 41.3%	%	3.61	1.43
Bibliographic (Title, Author, Place, Year) Information	268 26.5%	51 5.0%	63 6.2%	435 42.9%	196 19.3%	3.24	1.50
Abstract Only	378 37.3%	122 12.0%	260 25.7%	188 18.6%	65 6.4%	2.45	1.32
<b>GRAND MEAN=3.1000</b>							

The results in Table 1.9 above showed that the level of access to electronic resources available to students at NOUN is full text ( $\bar{x}$  =3.61, s=1.43); and bibliographic (title, author, place, year) Information ( $\bar{x}$  =3.24, s=1.50).



Table 1.10 presents mean and standard deviation scores of academic staffs' reasons for not accessing electronic resources available at NOUN library.

**Table 1.10: Mean and standard deviation scores of academic staffs' reasons for not accessing electronic resources available at NOUN library**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
I do not know they exist	2 1.8%	35 31.8%	57 51.8%	10 9.1%	6 5.5%	2.85	0.83
I do not know how to access them	3 2.7%	34 30.9%	58 52.7%	10 9.1%	5 4.5%	2.82	0.81
I do not have internet access	1 .9%	38 34.5%	57 51.8%	13 11.8%	1 .9%	2.77	0.69
I do not have a computer to access them	1 .9%	44 40.0%	54 49.1%	10 9.1%	1 .9%	2.69	0.69
I do not have interest in them	6 5.5%	46 41.8%	53 48.2%	2 1.8%	3 2.7%	2.55	0.75
<b>GRAND MEAN=2.4550</b>							

The items that best describe why academic staffs do not access electronic resources available at NOUN library as shown in Table 1.10 above are I do not know they exist ( $\bar{x}$  =2.85, s=0.83); and I do not know how to access them ( $\bar{x}$  =2.82, s=0.81).

Table 1.11 presents mean and standard deviation scores of students' reasons for not accessing electronic resources available at NOUN library.

**Table 1.11 Mean and standard deviation scores of students' reasons for not accessing electronic resources available at NOUN library**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
I do not know they exist	153 15.1%	301 29.7%	357 35.2%	137 13.5 %	65 6.4%	2.67	1.08
I do not know how to access them	181 17.9%	294 29.0%	361 35.6%	132 13.0 %	45 4.4%	2.57	1.06
I do not have internet access	164 16.2%	353 34.8%	328 32.4%	139 13.7 %	29 2.9%	2.52	1.01

I do not have a computer to access them	173 17.1%	383 37.8%	307 30.3%	114 11.3 %	36 3.6%	2.46	1.01
I do not have interest in them	193 19.1%	436 43.0%	340 33.6%	35 3.5%	9 .9%	2.24	.83
<b>GRAND MEAN=2.2867</b>							

The results in Table 1.11 above showed that students do not access electronic resources available at NOUN library for reasons such as, I do not know they exist ( $\bar{x} = 2.67$ ,  $s=1.08$ ); and I do not know how to access them ( $\bar{x} = 2.57$ ,  $s=1.06$ ).

Table 1.12 presents mean and standard deviation scores of the electronic resources library users have access to in NOUN library as indicated by academic librarians.

**Table 1.12: Mean and standard deviation scores of the electronic resources library users have access to in NOUN library as indicated by academic librarians**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
Electronic Journal	%	%	3 11.1%	12 44.4%	12 44.4%	4.33	0.68
Electronic Book	2 7.4%	1 3.7%	4 14.8%	13 48.1%	7 25.9%	3.82	1.11
Electronic Dictionary	3 11.1%	1 3.7%	7 25.9%	11 40.7%	5 18.5%	3.51	1.19
Electronic Magazine	3 11.1%	3 11.1%	5 18.5%	10 37.0%	6 22.2%	3.48	1.28
Electronic Thesis/Dissertation	3 11.1%	1 3.7%	11 40.7%	7 25.9%	5 15.8%	3.37	1.18
Electronic Newspaper	3 11.1%	4 14.8%	6 22.2%	10 37.0%	4 14.8%	3.29	1.25
CD Databases	8 29.6%	2 7.4%	4 14.8%	7 25.9%	6 22.2%	3.03	1.51
Institutional Repositories	9 33.3%	1 3.7%	5 18.5%	7 25.9%	5 18.5%	2.92	1.57
Indexing and Abstracting Databases	7 25.9%	3 11.1%	9 33.3%	7 25.9%	1 3.7%	2.70	1.24
Electronic Archives	11 40.7%	4 14.8%	5 18.5%	6 22.2%	1 3.7%	2.33	1.33
<b>GRAND MEAN=3.1145</b>							

The results in Table 1.12 above indicated that library users have access to electronic journal ( $\bar{x}$  =4.33, s=0.68); electronic book ( $\bar{x}$  =3.82, s=1.11); electronic dictionary ( $\bar{x}$  =3.51, s=1.19); electronic magazine ( $\bar{x}$  =3.48, s=1.28); and electronic thesis/dissertation ( $\bar{x}$  =3.37, s=1.18). Others specified by some academic librarian include electronic past questions; and electronic courseware.

- **Research Question 2: How often do academic staff and students access these electronic resources available in NOUN?**

Table 1.13 presents mean and standard deviation scores of how often academic staffs access electronic resources at NOUN library.

**Table 1.13: Mean and standard deviation scores of how often academic staffs access electronic resources at NOUN library**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
Electronic Journal	- %	3 2.7%	5 4.5%	53 48.2%	49 44.5%	4.35	0.70
Electronic Book	4 3.6%	4 3.6%	21 19.1%	45 40.9%	36 32.7%	3.95	1.00
Electronic Dictionary	6 5.5%	10 9.1%	32 29.1%	40 36.4%	22 20.0%	3.56	1.08
Electronic Newspaper	3 2.7%	17 15.5%	30 27.3%	44 40.0%	16 14.5%	3.48	1.01
Institutional Repositories	4 3.6%	20 18.2%	33 30.0%	43 39.1%	10 9.1%	3.31	0.99
Electronic Thesis/Dissertation	3 2.7%	18 16.4%	49 44.5%	29 26.4%	11 10.0%	3.25	0.94
Indexing and Abstracting Databases	13 11.8%	15 13.6%	37 33.6%	38 34.5%	7 6.4%	3.10	1.10
Electronic Magazine	6 5.5%	27 24.5%	43 39.1%	22 20.0%	12 10.9%	3.06	1.05
Electronic Archives	8 7.3%	30 27.3%	42 38.2%	23 20.9%	7 6.4%	2.92	1.01
CD Databases	17 15.5%	31 28.2%	39 35.5%	19 17.3%	4 3.6%	2.65	1.05
<b>GRAND MEAN=3.1591</b>							

The results in Table 1.13 above indicated that academic staffs do often access electronic journal ( $\bar{x}$  =4.35, s=0.70); electronic book ( $\bar{x}$  =3.95, s=1.00); electronic dictionary ( $\bar{x}$  =3.56, s=1.08); electronic newspaper ( $\bar{x}$  =3.48, s=1.01); and institutional repositories ( $\bar{x}$  =3.31, s=0.99).

Table 1.14 presents mean and standard deviation scores of how often students' access electronic resources at NOUN library.

**Table 1.14: Mean and standard deviation scores of how often students access electronic resources at NOUN library**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
Electronic Book	141 13.9%	82 8.1%	198 19.5%	305 30.1%	287 28.3%	3.51	1.34
Electronic Journal	200 19.7%	122 12.0%	237 23.4%	267 26.4%	187 18.5%	3.12	1.38
Electronic Newspaper	214 21.1%	128 12.6%	202 19.9%	283 27.9%	186 18.4%	3.00	1.41
Electronic Dictionary	254 25.1%	108 10.7%	221 21.8%	292 28.8%	138 13.6%	2.95	1.39
Electronic Magazine	251 24.8%	144 14.2%	224 22.1%	266 26.3%	128 12.6%	2.88	1.37
Electronic Thesis/Dissertation	254 25.1%	127 12.5%	292 28.8%	249 24.6%	91 9.0%	2.70	1.30
Electronic Archives	276 27.2%	135 13.3%	298 29.4%	240 23.7%	64 6.3%	2.69	1.28
Institutional Repositories	279 27.5%	174 17.2%	265 26.2%	201 19.8%	94 9.3%	2.66	1.31
Indexing and Abstracting Databases	322 31.8%	199 19.6%	278 27.4%	156 15.4%	58 5.7%	2.43	1.24
CD Databases	379 37.4%	216 21.3%	248 24.5%	121 11.9%	49 4.9%	2.26	1.21
<b>GRAND MEAN=2.6745</b>							

The results in Table 1.14 above showed that students do often access electronic book ( $\bar{x}$  =3.51, s=1.34); electronic journal ( $\bar{x}$  =3.12, s=1.38); electronic newspaper ( $\bar{x}$  =3.00, s=1.41); electronic dictionary ( $\bar{x}$  =2.95, s=1.39); and electronic magazine ( $\bar{x}$  =2.88, s=1.37).

Table 1.15 presents mean and standard deviation scores of how often academic staffs access electronic resources from different locations.

**Table 1.15: Mean and standard deviation scores of how often academic staffs access electronic resources from different locations**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
At Work	2 1.8%	3 2.7%	18 16.4%	46 41.8%	41 37.3%	4.10	0.90
At Home	1 .9%	4 3.6%	19 17.3%	59 53.6%	27 24.5%	3.97	0.81
Center Library	18 16.4%	39 35.5%	39 35.5%	7 6.4%	7 6.4%	2.51	1.05
At Café	46 41.8%	43 39.1%	18 16.4%	2 1.8%	1 .9%	1.81	0.84
<b>GRAND MEAN=2.7040</b>							

The items that best describe how often academic staffs access electronic resources from different locations as shown in Table 1.15 above are, at work ( $\bar{x}$  =4.10, s=0.90); and at home ( $\bar{x}$  =3.97, s=0.81).

Table 1.16 presents mean and standard deviation scores of how often students' access electronic resources from different locations.

**Table 1.16: Mean and standard deviation scores of how often students access electronic resources from different locations**

ITEMS	N(1)	R(2)	OC(3)	OF (4)	MO (5)	Mean ( $\bar{x}$ )	SD (s)
At Home	77 7.6%	29 2.9%	148 14.6%	297 29.3%	462 45.6%	4.03	1.18
At Work	110 10.9%	70 6.9%	220 21.7%	329 32.5%	284 28.0%	3.50	1.26
At Café	346 34.2%	276 27.2%	236 23.3%	118 11.6%	37 3.7%	2.23	1.14
Center Library	436 43.0%	238 23.5%	220 21.7%	89 8.8%	30 3.0%	2.05	1.12
<b>GRAND MEAN=2.5820</b>							

The results in Table 1.16 above showed that students often access electronic resources at home ( $\bar{x}$  =4.03, s=1.18); and at work ( $\bar{x}$  =3.50, s=1.26).

- **Research Question 3: What policies and infrastructure exist in the library to enable the use of electronic resources by academic staff and students?**

Table 1.17 presents mean and standard deviation scores of how NOUN library can combat the issue of insufficient funds as indicated by academic librarians.

**Table 1.17: Mean and standard deviation scores of how NOUN library can combat the issue of insufficient funds as indicated by academic librarians**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
Requesting The University Management To Increase Library Budget	1 3.7%	-	-	10 37.0%	16 59.3%	4.52	0.70
Soliciting For Donations From Alumni Of The University	1 3.7%	1 3.7%	-	15 55.6%	10 37.0%	4.22	0.84
Engaging in Joint Acquisition with other Libraries	4 14.8%	3 11.1%	-	5 18.5%	15 55.6%	4.00	1.44
Soliciting For Donations From Faculty And Students	3 11.1%	2 7.4%	4 14.8%	9 33.3%	9 33.3%	3.70	1.32
Introducing Fee-Based Library services	5 18.5%	2 7.4%	4 14.8%	9 33.3%	7 25.9%	3.41	1.45
Reducing Printed Resources Acquisition	3 11.1%	5 18.5%	6 22.2%	9 33.3%	4 14.8%	3.22	1.25
Reducing Electronic Resources Acquisition	4 14.8%	7 25.9%	10 37.0%	4 14.8%	2 7.4%	2.74	1.13
<b>GRAND MEAN=3.3513</b>							

The items that best describe how NOUN library can combat the issue of insufficient funds as shown in Table 1.17 above are, requesting the university management to increase library budget ( $\bar{x}$  =4.52, s=0.70); soliciting donations from alumni of the university ( $\bar{x}$  =4.22, s=0.84); and engaging in joint acquisition with other libraries ( $\bar{x}$  =4.00, s=1.44).

Table 1.18 presents mean and standard deviation scores of how NOUN library can combat the issue of insufficient funds as indicated by academic staffs.

**Table 1.18: Mean and standard deviation scores of how NOUN library can combat the issue of insufficient funds as indicated by academic staffs**

<b>ITEMS</b>	<b>SD(1)</b>	<b>D(2)</b>	<b>UD(3)</b>	<b>A(4)</b>	<b>SA(5)</b>	<b>Mean (<math>\bar{x}</math>)</b>	<b>SD (s)</b>
Requesting The University Management To Increase Library Budget	12 10.9%	3 2.7%	4 3.6%	45 40.9%	46 41.8 %	4.00	1.25
Engaging in Joint Acquisition with other Libraries	9 8.2%	6 5.5%	11 10.0%	53 48.2%	31 28.2 %	3.83	1.15
Soliciting For Donations From Alumni Of The University	18 16.4%	6 5.5%	9 8.2%	67 60.9%	10 9.1%	3.41	1.24
Soliciting For Donations From Faculty And Students	19 17.3%	22 20.0 %	26 23.6%	35 31.8%	8 7.3%	2.92	1.23
Reducing Printed Resources Acquisition	20 18.2%	19 17.3 %	33 30.0%	29 26.4%	9 8.2%	2.89	1.22
Introducing Fee-Based Library services	15 13.6%	30 27.3 %	43 39.1%	21 19.1%	1 .9%	2.66	0.97
Reducing Electronic Resources Acquisition	16 14.5%	40 36.4 %	43 39.1%	9 8.2%	2 1.8%	2.46	0.91
<b>GRAND MEAN=2.9063</b>							

The results in Table 1.18 above showed how academic staffs indicated how NOUN library can combat the issue of insufficient funds, which include, requesting the university management to increase library budget ( $\bar{x}$  =4.00, s=1.25); engaging in joint acquisition with other libraries ( $\bar{x}$  =3.83, s=1.15); and soliciting donations from alumni of the university ( $\bar{x}$  =3.41, s=1.24).

The academic librarians and academic staffs were asked to indicate library roles that can assist educational and research activities.

Table 1.19 presents mean and standard deviation scores of library roles that can assist educational and research activities as indicated by academic librarians.

**Table 1.19: Mean and standard deviation scores of library roles that can assist educational and research activities as indicated by academic librarians**

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ( $\bar{x}$ )	SD (s)
Organising Quality Library Staff Development Programme	-	-	-	8 29.6 %	19 70.4%	4.70	0.47
Organizing Information Literacy Programme For Library Users	-	-	-	9 33.3 %	18 66.7%	4.67	0.48
Subscribing To Electronic Resource Relevant To Users' Need	-	-	-	11 40.7 %	16 59.3%	4.59	0.50
Embarking On Yearly Orientation Programme For New Library Users	-	-	-	12 44.4 %	15 55.6%	4.56	0.50
Regularly Investing In New Technologies And Maintaining Library Infrastructures	1 3.7%	-	-	12 44.4 %	14 51.9%	4.41	0.84



Employing IT Skilled Library Staff	1 3.7%	1 3.7%	-	11 40.7 %	14 51.9%	4.40	0.74
Creating Feedback Mechanisms To Track Users Complaints And Profer Solutions	1 3.7%	-	-	14 51.9 %	12 44.4%	4.33	0.83
Forming Consortiums To Reduce Cost Of Electronic Resources Subscriptions	2 7.4%	-	-	11 40.7 %	14 51.9%	4.29	1.07
Embarking On Long-Term Access To Electronic Resources	3 11.1%	-	-	9 33.3 %	15 55.6%	4.22	1.25
Developing Electronic Resources Collections Development Policy	3 11.1%	-	-	12 44.4 %	12 44.4%	4.11	1.22
<b>GRAND MEAN=4.1564</b>							

The results in Table 1.19 above indicated academic librarians opinion on how library roles can assist educational and research activities through, organising quality library staff development programme ( $\bar{x}$  =4.70, s=0.47); organizing information literacy programme for library users ( $\bar{x}$  =4.67, s=0.48); subscribing to electronic resource relevant to users' need ( $\bar{x}$  =4.59, s=0.50); embarking on yearly orientation programme for new library users ( $\bar{x}$  =4.56, s=0.50); and regularly investing in new technologies and maintaining library infrastructures ( $\bar{x}$  =4.41, s=0.84).

Table 1.20 presents mean and standard deviation scores of library roles that can assist educational and research activities as indicated by academic staffs.

**Table 1.20: Mean and standard deviation scores of library roles that can assist educational and research activities as indicated by academic staffs**

<b>ITEMS</b>	<b>SD(1)</b>	<b>D(2)</b>	<b>UD(3)</b>	<b>A(4)</b>	<b>SA(5)</b>	<b>Mean (<math>\bar{x}</math>)</b>	<b>SD (s)</b>
Subscribing To Electronic Resource Relevant To Users' Need	1 .9%	1 .9%	- %	52 47.3%	56 50.9%	4.46	0.65
Organizing Information Literacy Programme For Library Users	1 .9%	1 .9%	- %	61 55.5%	47 42.7%	4.38	0.64
Embarking On Long-Term Access To Electronic Resources	4 3.6%	1 .9%	- %	52 47.3%	53 48.2%	4.35	0.85
Regularly Investing In New Technologies And Maintaining Library Infrastructures	4 3.6%	1 .9%	- %	58 52.7%	47 42.7%	4.30	0.84
Organising Quality Library Staff Development Programme	4 3.6%	1 .9%	- %	65 59.1%	40 36.4%	4.24	0.82
Embarking On Yearly Orientation Programme For New Library Users	5 4.5%	2 1.8%	2 1.8%	55 50.0%	46 41.8%	4.23	0.94
Employing IT Skilled Library Staff	6 5.5%	1 .9%	- %	59 53.6%	44 40.0%	4.22	0.94
Creating Feedack Mechanisms To Track Users Complaints And Profer Solutions	6 5.5%	1 .9%	- %	62 56.4%	41 37.3%	4.19	0.93
Developing Electronic Resources Collections Development Policy	6 5.5%	1 .9%	2 1.8%	64 58.2%	37 33.6%	4.14	0.93
Forming Consortiums To Reduce Cost Of Electronic Resources Subscriptions	6 5.5%	2 1.8%	- %	67 60.9%	35 31.8%	4.12	0.94

**GRAND MEAN=3.9818**

The results in Table 1.20 above showed academic staffs opinion on how library roles can assist educational and research activities through, subscribing to electronic resource relevant to users' need ( $\bar{x}$  =4.46, s=0.65); organizing information literacy programme for library users ( $\bar{x}$  =4.38, s=0.64); embarking on long-term access to electronic resources ( $\bar{x}$  =4.35, s=0.85); regularly investing in new technologies and maintaining library infrastructures ( $\bar{x}$  =4.30, s=0.84); and organising quality library staff development programme ( $\bar{x}$  =4.24, s=0.82).

## **DISCUSSION OF THE FINDINGS**

### **USERS' ACCESS TO ELECTRONIC RESOURCES IN NOUN**

Majority of the academic librarians stated that library users access library electronic resources through the center library computer and through personal computer. Majority of the academic staff stated that they access library electronic resources through their personal computer and tablet. Majority of the students stated that they access library electronic resources through their personal computers and mobile phones. The study showed that the academic staff and students make use of their personal devices to access library electronic resources and access these resources through their center library computers occasionally. This is an indication that library electronic resources can be accessed by library users within and outside the university premises. Access through library computers is low, which implies that library users rarely come physically to the library and are more comfortable accessing library resources from distant locations. The findings corroborate with the studies by Peris and Peris (2012), Baikady, Jessy & Shivananda (2014) and Bansal (2015) which stated that library users access electronic resources, thus eliminating the barrier of distance. Majority of the academic staff respondents found it easy to access electronic newspapers, electronic journals and electronic dictionaries. Majority of the students found it easy to access electronic books, electronic dictionaries and electronic newspapers. The study also agreed with Oyewusi and Oyeboade (2009), Kumar & Kumar (2010), Ahmed (2013), Zafar (2013), Garg (2014) and Gupta & Sharma (2015) findings that majority of the respondents find it easy to access electronic resources. However, the finding revealed that over 30% of the respondents find it

difficult to access electronic resources at NOUN. This was corroborated by Abdulwahab, Amusan & Umma (2009) that over 30% of the students were undecided about the ease of accessing electronic resources. Though majority of the respondents claimed to find accessing electronic resources easy, a sizable number of respondents claimed otherwise.

Access to full-text documents expose researchers to detailed information on a subject of interest for better understanding and representation of a phenomenon. Majority of the academic staff and students stated that they have access to full text and bibliographic information. This was in agreement with previous studies by Tripathi & Jeevan (2009), Ozoemelem (2009), Okello-Obura & Ikoja-Odongo (2010), Warraich & Ameen (2010), Okello-Obura (2011), Hadagali, Kumbar, Nelogal & Bachalapur (2012), Santhi & Radhakrishnan (2012), Joshua (2014), Qasim & Khan (2015) that reported that respondents had access to full text electronic resources. The study showed that NOUN library subscribed to electronic resources with full text materials and library users could access them for their studies and research work.

Majority (51%) of the academic staff and over 30% of students were not sure electronic resources exist in the library, they do not know how to access them, do not have internet connection and computers to access these electronic resources, and are not interested in them. However, 52% of students and 38% of academic staff stated that they know electronic resources exist in the library, they know how to access them, they have internet connection and computers to access them and that they have interest in them. This finding suggest that many academic staff and students were not accessing library electronic resources due to lack of awareness. The studies by Haridasan & Khan (2009), Deng (2010), Egberongbe (2011), Okello-Obura (2011), also reported that respondents were unsure of the existence of electronic resources, do not know how to access them, lack facilities required to access them, hence were not accessing them.

89% and 74% of the academic librarians stated that library patrons can access electronic journals and electronic books respectively. This agrees with the studies by Okello-Obura & Ikoja-Odongo (2010), Swain (2010), Tahir, Mahmood & Shafique, (2010), Kumar & Singh (2011), Tyagi (2011), Thanuskodi (2011), Okello-Obura (2011), Natarajan & Revathi (2012), Okiki (2012), Ahmed (2013), Oyedapo & Ojo (2013), Kwafoa, Imoro & Afful-Arthur (2014) that reported that library users access library electronic resources such as electronic journals and electronic books at the library. The findings revealed that a low percentage of academic staff and students access full-text

documents through their personal devices. Also, a substantial percentage of academic staff and students are unaware of the existence of the library electronic resources and do not access them. This implies that the library electronic resources are not fully utilized by library users.

### **FREQUENCY OF ACCESS OF ELECTRONIC RESOURCES AVAILABLE IN NOUN**

Majority (93%) of the academic staff stated that they frequently access electronic journals, while majority (58%) of the students frequently access electronic books. This agrees with findings by Haridasan & Khan (2009), Deng (2010), Ge (2010), Bhatia (2011), Egberongbe (2011), Gupta (2011), Dhanavandan, Esmail & Nagarajan (2012), Khan & Ahmed (2013), Zafar (2013), Ahmed & Amjad (2014), Joshua (2014), Gupta & Sharma (2015) that students, research scholars and faculty members frequently access library electronic resources. The frequency of access to other available electronic resources apart from electronic books by students was not encouraging, as the percentage of those frequently accessing other available electronic resources ranges between 15% and 46%. The findings found that majority of the students access electronic books while the academic staff access electronic journals. This implies that students access library electronic resources mainly to study, while academic staff access these resources for research and publications.

Majority (79%) of the academic staff access electronic resources at work, while 75% of students access electronic resources at home. This showed that the academic staff find it convenient to access the electronic resources at work, while students preferred accessing electronic resources in the comfort of their homes. Studies by Deng (2010), Oduwole & Oyewunmi (2010), Okello-Obura & Ikoja-Odongo (2010), Okello-Obura (2011), Thanuskodi (2011), Peris & Peris (2012), Wu & Chen (2012), Natarajan & Revathi (2012), Garg (2014), Gupta & Sharma (2015), Dadzie & Walt (2015) reported that respondents also accessed library electronic resources at places outside of the library premises. The findings revealed that academic staff and students were not restricted by location and distance to access library electronic resources. Available resources in the library are accessible but the library is embattled by low patronage of these resources.

## **LIBRARY POLICIES AND INFRASTRUCTURES THAT ENABLE THE USE OF ELECTRONIC RESOURCES IN NOUN**

The proper funding of the library aids the development and implementation of library policies required to establish adequate infrastructures that enable the use of electronic resources. The majority 96% of the academic librarians and 82% of academic staff agreed that requesting the university management to increase library budget could enhance the use of the library electronic resources; 74% of the academic librarians and 76% of academic staff agreed that engaging in joint acquisition with other libraries to reduce subscription cost increase the volume of electronic resources available for use. However, 46% of academic librarians and 51% of academic staff are not in support of the reduction of electronic resources acquisition as a way of combating the issue of insufficient funds. Previous studies by Erich (2013), Khan & Ahmed (2013), Ahmed (2014), Ahmed & Amjah (2014) opined that well-articulated budgets; formation of a consortium that focus on joint acquisitions of electronic resources among university libraries; concise collections and infrastructural development plans entrenched into library policies can combat the issue of insufficient funds. This implies that the implementation of policies that support adequate funding of the library infrastructures, electronic resources subscriptions, and multiple libraries collaborations on electronic resources subscriptions could improve the use of these resources and access to these resources.

Majority (over 95%) of academic librarians and academic staff agreed that the use of NOUN library electronic resources for the purpose of education and research can be greatly enhanced by organizing quality library staff development programme for better library service delivery; organizing information literacy programme for library users and embarking on yearly orientation programme for new library users to create awareness on available library collections; subscribing to electronic resource relevant to users' need to encourage the use of library electronic resources; regularly investing in new technologies and maintaining library infrastructures for better service delivery; employing IT skilled library staff to facilitate the use of these resources; creating feedback mechanisms to track users complaints and proffer solutions for optimal utilization of electronic resources and improve service delivery; forming consortiums to reduce cost of electronic resources subscriptions and create a more robust electronic resource collections by participating libraries; embarking on long-term access to electronic resources to boost the utilization of these resources; and the creation of electronic resources collections development

policy to improve educational and research activities at NOUN. These same views were also shared by Gandhi (2003), Warraich & Ameen (2010), Thanuskodi (2011), Tyagi (2011), Erich (2013), Khan & Ahmed (2013). The implications of these library roles are better utilization of available electronic resources, greater academic and research output in terms of quantity and quality, increase awareness and consistent access to NOUN library electronic resources.

## **CONCLUSIONS**

Library policies geared towards combating insufficient funds in order to promote the use of electronic resources should be implemented, these include: increasing library budget, soliciting for donations from alumni of the university and engaging in joint acquisition with other libraries. To assist educational and research activities, organising quality library staff development programme and subscribing to electronic resources relevant to users' need are germane to improve the use of NOUN library electronic resources.

## **RECOMMENDATIONS**

The findings of the study revealed poor awareness, access and use of NOUN library electronic resources. Therefore, the following recommendations are proposed below:

1. The library management should develop an effective and efficient awareness programmes that is appropriate for an ODL university community through the use of modern communication tools such as the social media platforms.
2. The university management should provide adequate funds for electronic resources subscription and this should be consistent.
3. The library management should subscribe to electronic resources relevant to users' need.
4. The university management should equip all NOUN libraries with computers in order to improve patronage to the library and use of the library electronic resources.
5. The university management should introduce the use of library in the university curriculum with emphasis on the use of electronic resources and information literacy skills.
6. The university management should provide adequate funds for electronic resources subscription and this should be consistent.

## **IMPLICATIONS OF THE FINDINGS ON REMOTE ACCESS AND USE OF RESOURCES AT NOUN**

According to the study findings, NOUN library has electronic journals and books which implies that users do not have to be physically present in the library but can conveniently access library resources at any time and location; however, for print resources, they would have to visit the library. It also means that minimal space would be required for users' sitting space and physical library collections and the library does not need to expand building facilities. The study found that users access fulltext materials from their personal devices outside the university library, a situation that translates to reduction of users' visits to the library as majority of their information needs are met online. With the implementation of suggested library policies and infrastructure development, remote users at NOUN will have access to more electronic resources and better infrastructure that will improve learning and produce better research output.



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