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Perceptions and Challenges in Accessing Library Electronic Resources: A Case Study of the National Open University of Nigeria (NOUN)

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Abstract

This study investigated user perceptions and challenges associated with accessing and utilizing electronic resources at the National Open University of Nigeria (NOUN), including their implications for remote users. Using a quantitative research approach and survey methodology, the study involved 1,680 participants: 1,513 students, 140 academic staff, and 27 academic librarians. Employing a combination of probability (stratified random and systematic) and nonprobability (purposive) sampling ensured comprehensive representation. Participants completed self-administered closed-ended questionnaires distributed through online platforms, primarily Google Forms. Data collected underwent thorough analysis using the Statistical Package for the Social Sciences (SPSS). Findings indicated that the NOUN library offers access to electronic resources such as journals and books. However, the overall perception of these resources by NOUN library users was below average. Both the library and users faced challenges like electricity outages and sluggish internet connectivity speed while accessing or utilizing electronic resources. Recommendations highlight the importance of library management creating awareness programs using modern communication tools. Furthermore, integrating electronic resource usage into the university's curriculum is suggested. This research explored user perceptions and challenges related to electronic resource access and usage at the National Open University of Nigeria. Through a quantitative approach, the study provided insights into current electronic resource utilization, pinpointing areas for improvement, particularly in terms of awareness and curriculum integration.

Key terms

E-resources, Remote access, User perceptions, User attitudes, Information and communication technologies (ICTs), Academic Librarian, Academic Staff, Academic Library, E-Books, E-Journals

Introduction

Over the years, librarians have harnessed emerging technologies to introduce novel services to library patrons. Libraries have continuously played a crucial role as hubs for disseminating information, catering to the needs of students, educators, and research groups by providing access to and exploration of available electronic resources (Lamont, 1999; Vassiliou & Rowley, 2008; Thanuskodi, 2011). The societal landscape has also witnessed significant shifts in task execution, as libraries adapt to changes, evidenced by diminishing physical document collections in favor of electronic resources driven by technological progress (Bhatia, 2011; Natarajan & Revathi, 2012).

An overview of electronic resources

Electronic resources, often referred to as e-resources, are versatile tools for supplying information accessible through various information and communication technology (ICT) devices. These resources can be accessed by users across different locations synchronously or asynchronously (Swain & Panda, 2009). E-resources encompass data and/or encoded computer programs that process data into readable formats, facilitated by peripheral devices connected to computers, either directly or remotely (Reitz, 2004). The transition of libraries from information storehouses to knowledge centers is a result of evolving roles, progressing from mere information repositories to facilitators of information access (Swain & Panda, 2009; Thomas, Satpathi & Satpathi, 2010).

Literature review

The perception of academics toward electronic resources has significantly improved due to the exponential growth of electronic information and advancements in access modes within academic libraries (Olle´ & Borrego, 2010). Modern information and communication technologies have revolutionized traditional library services, resulting in extensive collections of electronic resources that encourage students' pedagogical development (Swain, 2010).

Numerous studies have explored academic staff and students' perceptions and attitudes toward electronic resources. While Shuling (2007) and Mawindo Hoskins (2008) found a preference for printed books, Ge (2010), Thanuskodi (2011), and Garg (2014) reported a majority preference for

electronic resources. Kumar & Kumar (2010), Tahir, Mahmood & Shafique (2010), and Gupta & Sharma (2015) observed a preference for both electronic and print resources. Some respondents remained uncertain about the superiority of print over electronic resources (Peiris & Peiris, 2012).

Electronic resources house electronically stored information accessible through computer networks, requiring regular maintenance for reliable access and effective library service delivery (Haridasan & Khan, 2009; Resnick & Clark, 2009). Challenges related to power failures, slow connectivity, and inadequate infrastructure have been identified in accessing electronic resources (Egberongbe, 2011; Warraich & Ameen, 2008; Kumar & Kumar, 2010; Oduwole & Oyewunmi, 2010; Kwafoa, Imoro & Afful-Arthur, 2014). Additional hurdles include insufficient search skills, training, and time to acquire skills (Okiki, 2012; Hadagali et al., 2012; Oyedapo & Ojo, 2013; Gupta & Sharma, 2015). Lack of support from library staff, difficulty finding relevant information, and a shortage of qualified librarians have also been reported as challenges (Ranganthan, 2011; Dulle, 2015). Economic factors such as lack of funds and high subscription costs pose barriers to access and use in developing countries (Ranganthan, 2011; Dulle, 2015).

Study Objectives

The primary objectives of this research were as follows:

To investigate the perceptions and attitudes of both academic staff and students towards the electronic resources accessible within the NOUN library.

To identify the challenges connected with the access to and utilization of electronic resources by the academic staff and students affiliated with NOUN.

Research questions

The research inquiries that guided this study were:

1. How do academic staff and students perceive the electronic resources provided by the library?
2. What obstacles do academic staff and students encounter while attempting to access and utilize the library's electronic resources?

Research Methodology

Research methodology encompasses systematic and structured procedures employed by researchers to strategize, execute, and assess a research investigation. It delineates the methodologies, strategies, approaches, and resources harnessed by researchers to address research inquiries or validate hypotheses. Research methodology serves as a compass to ensure meticulous planning, robustness, and the production of reliable and valid data, thus lending solidity and credibility to the research endeavor.

Research Approach

This research work employed a quantitative research approach. This method involves the collection and analysis of numerical data to describe, interpret, foresee, or oversee phenomena of interest (Gay, Mills & Airasian, 2009, p. 7; Mertler & Charles, 2008, p. 26). This approach was chosen to comprehensively investigate the degree of accessibility and utilization patterns of electronic resources within the National Open University of Nigeria (NOUN) by its students and staff members.

Research Design

The study utilized survey design methodology. This choice was made due to its capability to efficiently portray the characteristics of potentially extensive groups of individuals (Mertler & Charles, 2008, p. 224).

Research Site

The focal points of this research were the NOUN study centers, situated across Nigeria's six geopolitical zones (as displayed in table 1.0 below). These study centers fall into three distinct categories: Main Study Centers, Special Study Centers, and Community Study Centers. These centers share a uniform structure, offering identical courses through standardized instructional materials. The focus of this study was directed towards study centers characterized by substantial populations. Table 1.0 presents an overview of the research sites, encompassing student, academic staff, and academic librarian populations categorized by geographic zones.

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

S/N	ZONE	NO OF CENTERS	TARGET POPULATION						ACADEMIC STAFF	LIBRARIAN
			STUDENTS							
			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
	Total	70	32,944	11,848	34,746	44,893	362	124,793	309	54

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

Target Population

The study's focus encompasses three distinct categories within the population: academic librarians, academic staff (comprising faculty members), and students. As reported in the NOUN Annual Report (2014/2015, p. 79), the registered student count stands at 189,364, with a staff body of 2,656. Among these, there are 370 academics and 2,286 non-academic staff members. The library team comprises 80 individuals, out of which 54 are academic librarians (National Open University of Nigeria Library 2016). The distribution of the target population across these categories is provided in Table 1.1.

Sample Frame

The sample frame encompasses a roster of research participants drawn from selected study centers. These centers were chosen through purposive sampling techniques. To ensure a well-executed study with a representative cross-section of the target population, two distinct sample frames were utilized. The first frame consists of students, categorized into subgroups (Level) within each chosen study center, while the second frame comprises academic staff members, further categorized into subgroups (academic staff/academic librarians).

Sampling Procedures

The selection of zones and participating study centers from the student population utilized nonrandom sampling. This approach was chosen due to the uniform nature of the population. Purposive sampling, driven by knowledge of the group to be sampled, was employed, with consideration given to population size. Study centers with larger populations were accorded higher priority. The allocation of students across different levels in the desired study center is outlined in Table 1.1 below.

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

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
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Sample Size

The total student target population spans the six geopolitical zones and amounts to 77,523. Utilizing the Sample Size Table with a Confidence Level of 95% and a Margin of Error of 2.5% (Research Advisors 2006, p. 2), the Desired Student Sample size was determined as 1,513. To select research participants within the desired study centers, a combination of stratified random sampling and systematic sampling was employed. The desired research sample size for each chosen study center was computed by determining the percentage representation of the target population and then multiplying it by the Desired Student Sample size (1,513), as stipulated by Research Advisors (2006:2) using the stratified random sampling technique.

The Academic staff population totals 370 individuals, with 275 serving as lecturers in various academic units and 54 as academic librarians. These two groups collectively form the target population. The remaining 41 academic staff hold positions such as study center directors (35), heads of the directorate (4), and members of the office of vice-chancellorllor (3).

For the selection of academic staff and academic librarian sample sizes, a purposive sampling technique was adopted. This technique, driven by the researcher's expertise and familiarity with the population, involves deliberate identification of selection criteria based on informed judgment (Gay, Mills & Airasian, 2009, p. 134; Mertler & Charles, 2008, p. 127; Fraenkel, Wallen & Hyun, 2012, p. 100). To achieve a balanced representation, the researcher opted to use 50% of the entire academic population as the sample size. Thus, the academic librarian sample size was set at 27, and the academic staff sample size was approximately 140.

Data Collection Methods and Procedures

The study employed an online survey tool (Google Forms) to collect primary data from respondents at the selected study centers, aiming to address the research objectives.

Reliability and Validity

The instrument's reliability was established through a pilot test. The researcher conducted a pilot test, which involves a small-scale application of the draft questionnaire to assess clarity,

comprehensiveness, and acceptability. This step facilitated corrections and improvements in the instrument, making it suitable for the actual research population. The pilot test was conducted with 20 participants from a NOUN study center, possessing the same characteristics as the main sample. To assess the consistency of instrument content in eliciting similar responses, Cronbach's alpha statistics were employed, yielding values ranging from 0.76 to 0.90.

Data Analysis and Presentation

The collected data underwent analysis using descriptive and inferential statistical tools through the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were employed to generate frequencies, means, and standard deviations. These statistics were utilized to answer research questions, with tables employed for presentation. Respondents expressed their opinions through a five-point scale measuring agreement, difficulty, and frequency.

Presentation of Results

Research Question 1: What are the perceptions of academic staff and students regarding the library's electronic resources?

Table 1.2 displays the mean and standard deviation scores depicting the significance of electronic resources within NOUN libraries concerning the research and academic pursuits of the academic staff.

Table 1.2: Mean and standard deviation scores of how important electronic resources in the NOUN library are to academic staff's research work/study.

ITEMS	UP(1)	SI(2)	IM(3)	VI(4)	EI(5)	Mean ($\bar{x}$)	SD (s)
Electronic Journal	2 1.8%	1 .9%	4 3.6%	59 53.6%	44 40.0%	4.29	0.75
Electronic Book	2 1.8%	- %	15 13.6%	41 37.3%	52 47.3%	4.28	0.84
Institutional Repositories	3 2.7%	6 5.5%	21 19.1%	25 22.7%	55 50.0%	4.12	1.07

Electronic Dictionary	5 4.5%	10 9.1%	24 21.8%	20 18.2%	51 46.4%	3.93	1.21
Indexing and Abstracting Databases	6 5.5%	3 2.7%	33 30.0%	21 19.1%	47 42.7%	3.91	1.15
Electronic Thesis/Dissertation	4 3.6%	2 1.8%	39 35.5%	27 24.5%	38 34.5%	3.85	1.04
Electronic Archives	12 10.9%	10 9.1%	32 29.1%	19 17.3%	37 33.6%	3.54	1.33
Electronic Newspaper	11 10.0%	16 14.5%	32 29.1%	15 13.6%	36 32.7%	3.45	1.35
CD Databases	9 8.2%	22 20.0%	34 30.9%	12 10.9%	33 30.0%	3.35	1.32
Electronic Magazine	12 10.9%	24 21.8%	31 28.2%	14 12.7%	29 26.4%	3.22	1.34
GRAND MEAN=3.5627							

The outcomes presented in Table 1.2 above illustrate the assessment provided by academic staff regarding the significance of electronic resources for their research endeavors and academic studies. The scores for various resources were as follows: electronic journals (mean = 4.29, standard deviation = 0.75); electronic books (mean = 4.28, standard deviation = 0.84); institutional repositories (mean = 4.12, standard deviation = 1.07); electronic dictionaries (mean = 3.93, standard deviation = 1.21); and indexing and abstracting databases (mean = 3.91, standard deviation = 1.15).

Meanwhile, Table 1.3 presents the mean and standard deviation scores indicating the perceived importance of electronic resources within the NOUN library for students' research undertakings and academic pursuits.

Table 1.3: Mean and standard deviation scores of how important electronic resources in the NOUN library are to students' research work/study.

ITEMS	UP(1)	SI(2)	IM(3)	VI(4)	EI(5)	Mean ($\bar{x}$)	SD (s)
Electronic Book	114 11.3%	33 3.3%	154 15.2%	339 33.5%	373 36.8%	3.81	1.80
Electronic Journal	120 11.8%	55 5.4%	188 18.6%	324 32.0%	326 32.2%	3.67	1.21
Electronic Thesis/Dissertation	151 14.9%	57 5.6%	193 19.1%	274 27.0%	338 33.4%	3.58	1.39
Electronic Dictionary	179 17.7%	84 8.3%	197 19.4%	249 24.6%	304 30.0%	3.40	1.44
Institutional Repositories	163 16.1%	91 9.0%	267 26.4%	188 18.6%	304 30.0%	3.37	1.41
Electronic Archives	181 17.9%	105 10.4%	230 22.7%	187 18.5%	310 30.6%	3.34	1.46
Electronic Newspaper	180 17.8%	134 13.2%	217 21.4%	194 19.2%	288 28.4%	3.27	1.45
Indexing and Abstracting Databases	196 19.3%	128 12.6%	234 23.1%	168 16.6%	287 28.3%	3.22	1.47
Electronic Magazine	207 20.4%	137 13.5%	215 21.2%	183 18.1%	271 26.8%	3.17	1.48
CD Databases	231 22.8%	178 17.6%	236 23.3%	133 13.1%	235 23.2%	2.96	1.47
GRAND MEAN=3.1900							

The outcomes displayed in Table 1.3 above depict the evaluation assigned by students to the significance of electronic resources in relation to their research pursuits and academic studies. The recorded scores for various resources were as follows: electronic books (mean = 3.81, standard deviation = 1.80); electronic journals (mean = 3.67, standard deviation = 1.21); electronic

theses/dissertations (mean = 3.58, standard deviation = 1.39); electronic dictionaries (mean = 3.40, standard deviation = 1.44); and institutional repositories (mean = 3.37, standard deviation = 1.41).

Moreover, Table 1.4 presents the mean and standard deviation scores illustrating the attributes of electronic resources that academic staff members regarded as most crucial for their research endeavors and academic studies.

Table 1.4: Mean and standard deviation scores of the features of electronic resources academic staff considered to be the most important for research work/study

ITEMS	UP(1)	SI(2)	IM(3)	VI(4)	EI(5)	Mean ($\bar{x}$)	SD (s)
Access To Current/Up-To-Date Information	1 .9%	- %	5 4.5%	64 58.2%	40 36.4%	4.29	0.64
Improves Quality Of Research Work/Study	3 2.7%	- %	6 5.5%	54 49.1%	47 42.7%	4.29	0.81
Ability To Download Fulltext	2 1.8%	1 .9%	9 8.2%	54 49.1%	44 40.0%	4.25	0.79
Quick Information Retrieval	3 2.7%	1 .9%	13 11.8%	42 38.2%	51 46.4%	4.25	0.90
Availability Of Relevant Information	3 2.7%	- %	8 7.3%	43 39.1%	56 50.9%	4.25	0.90
Access To Wider Range Of Information	5 4.5%	- %	4 3.6%	66 60.0%	35 31.8%	4.15	0.87
Increases Quantity Of Research Work/Study	3 2.7%	2 1.8%	16 14.5%	45 40.9%	44 40.0%	4.13	0.92
GRAND MEAN=3.8575							

The outcomes displayed in Table 1.4 above exhibit the attributes that academic staff members deemed most vital when utilizing electronic resources for their research endeavors and academic studies. These attributes include access to current and up-to-date information (mean = 4.29, standard deviation = 0.64); enhancement of research work/study quality (mean = 4.29, standard deviation = 0.81); capability to download full-text content (mean = 4.25, standard deviation =

0.79); expedient retrieval of information (mean = 4.25, standard deviation = 0.90); and availability of pertinent information (mean = 4.25, standard deviation = 0.90).

Additionally, Table 1.5 presents the mean and standard deviation scores outlining the characteristics of electronic resources that students regarded as particularly crucial for their research undertakings and academic studies.

Table 1.5: Mean and standard deviation scores of the features of electronic resources students considered to be the most important for research work/study.

ITEMS	UP(1)	SI(2)	IM(3)	VI(4)	EI(5)	Mean ($\bar{x}$)	SD (s)
Access To Current/Up to Date Information	98 9.7%	29 2.9%	103 10.2%	464 45.8%	319 31.5%	3.87	1.77
Ability To Download Full text	113 11.2%	27 2.7%	116 11.5%	397 39.2%	360 35.5%	3.85	1.25
Availability Of Relevant Information	126 12.4%	24 2.4%	88 8.7%	447 44.1%	328 32.4%	3.82	1.26
Access To Wider Range Of Information	126 12.4%	18 1.8%	111 11.0%	427 42.2%	331 32.7%	3.81	1.26
Improves Quality Of Research Work/Study	139 13.7%	26 2.6%	95 9.4%	413 40.3%	340 33.6%	3.78	1.31
Increases Quantity Of Research Work/Study	143 14.1%	50 4.9%	132 13.0%	301 29.7%	387 38.2%	3.73	1.38
Quick Information Retrieval	124 12.2%	20 2.0%	129 12.7%	402 39.7%	338 33.4%	3.70	1.27
GRAND MEAN=3.4875							

The findings presented in Table 1.5 above demonstrate the attributes that students regarded as paramount when considering electronic resources for their research endeavors and academic studies. These attributes encompass access to current and up-to-date information (mean = 3.87, standard deviation = 1.77); capacity to download full-text content (mean = 3.85, standard deviation = 1.25); presence of relevant information (mean = 3.82, standard deviation = 1.26); access to a

broader spectrum of information (mean = 3.81, standard deviation = 1.26); and enhancement of research work/study quality (mean = 3.78, standard deviation = 1.31).

Furthermore, Table 1.6 provides the mean and standard deviation scores outlining the perceptions of academic staff members regarding the electronic resources accessible within the NOUN library.

Table 1.6: Mean and standard deviation scores of academic staff's perception of electronic resources available at the NOUN library

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ($\bar{x}$)	SD (s)
It Takes Too Much Time To Find Relevant Electronic Resources	2 1.8%	27 24.5%	60 54.5%	13 11.8%	8 7.3%	2.98	0.86
There Are Too Many Electronic Resources	20 18.2%	23 20.9%	35 31.8%	22 20.0%	10 9.1%	2.81	1.22
Electronic Resources Are Not Always Accessible	5 4.5%	37 33.6%	56 50.9%	8 7.3%	4 3.6%	2.72	0.81
Electronic Resources Are Not Updated	5 4.5%	33 30.0%	68 61.8%	1 .9%	3 2.7%	2.67	0.71
What I Find From Electronic Resources Is Not What I Need	11 10.0%	35 31.8%	55 50.0%	8 7.3%	1 .9%	2.57	0.81
GRAND MEAN=2.7450							

The outcomes displayed in Table 1.6 above indicate how academic staff members perceive the electronic resources offered by the NOUN library. Notably, it was revealed that the process of locating pertinent electronic resources consumes excessive time (mean = 2.98, standard deviation = 0.86), and the profusion of electronic resources presents a challenge (mean = 2.81, standard deviation = 1.22).

Additionally, Table 1.7 presents the mean and standard deviation scores illustrating the perspectives of students regarding the electronic resources accessible within the NOUN library.

Table 1.14: Mean and standard deviation scores of students' perception of electronic resources available at NOUN library

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ($\bar{x}$)	SD (s)
There Are Too Many Electronic Resources	233 23.0%	135 13.3%	259 25.6%	288 28.4%	98 9.7%	2.88	1.31
It Takes Too Much Time To Find Relevant Electronic Resources	214 21.1%	165 16.3%	376 37.1%	210 20.7%	48 4.7%	2.72	1.15
Electronic Resources Are Not Always Accessible	250 24.7%	232 22.9%	373 36.8%	123 12.1%	35 3.5%	2.47	1.09
What I Find From Electronic Resources Is Not What I Need	207 20.4%	292 28.8%	447 44.1%	52 5.1%	15 1.5%	2.38	.92
Electronic Resources Are Not Updated	313 30.9%	210 20.7%	365 36.0%	103 10.2%	22 2.2%	2.31	1.08
GRAND MEAN=2.3283							

The findings presented in Table 1.7 above illustrate how students perceive the electronic resources offered by the NOUN library. Notably, it was observed that the abundance of electronic resources poses a challenge (mean = 2.88, standard deviation = 1.31), the process of locating pertinent electronic resources consumes considerable time (mean = 2.72, standard deviation = 1.15), and the accessibility of electronic resources is not always consistent (mean = 2.47, standard deviation = 1.09).

Furthermore, Table 1.8 provides the mean and standard deviation scores outlining the level of satisfaction expressed by academic staff members regarding the electronic resources accessible within the NOUN library.

Table 1.8: Mean and standard deviation scores of academic staffs' satisfaction with the electronic resources available at NOUN library

ITEMS	UD(1)	VD(2)	DS(3)	ST(4)	VS(5)	Mean ($\bar{x}$)	SD (s)
Electronic Journal	11	1	1	56	41	4.05	1.15
	10.0%	.9%	.9%	50.9%	37.3%		
Electronic Book	12 10.9%	-%	1 .9%	67 60.9%	30 27.3%	3.94	1.13
Electronic Newspaper	24 21.8%	-%	2 1.8%	58 52.7%	26 23.6%	3.56	1.43
Electronic Dictionary	22 20.0%	-%	2 1.8%	68 61.8%	18 16.4%	3.55	1.34
Institutional Repositories	22 20.0%	-%	9 8.2%	59 53.6%	20 18.2%	3.50	1.35
Indexing and Abstracting Databases	26 23.6%	-%	5 4.5%	65 59.1%	14 12.7%	3.37	1.39
Electronic Thesis/Dissertation	30 27.3%	-%	10 9.1%	55 50.0%	15 13.6%	3.23	1.45
Electronic Magazine	32 29.1%	-%	2 1.8%	63 57.3%	13 11.8%	3.23	1.48
Electronic Archives	49 44.5%	-%	5 4.%	44 40.0%	12 10.9%	2.73	1.60
CD Databases	47 42.7%	2 1.8%	11 10.0%	39 35.5%	11 10.0%	2.68	1.55
GRAND MEAN=3.1764							

The outcomes displayed in Table 1.8 above depict the level of satisfaction expressed by academic staff members concerning the electronic resources provided by the NOUN library. Notably, it was observed that satisfaction ratings were as follows: electronic journals (mean = 4.05, standard deviation = 1.15); electronic books (mean = 3.94, standard deviation = 1.13); electronic

newspapers (mean = 3.56, standard deviation = 1.43); electronic dictionaries (mean = 3.55, standard deviation = 1.34); and institutional repositories (mean = 3.50, standard deviation = 1.35).

Furthermore, Table 1.9 presents the mean and standard deviation scores outlining the degree of satisfaction reported by students regarding the electronic resources accessible within the NOUN library.

Table 1.9: Mean and standard deviation scores of student's satisfactions with the electronic resources available at the NOUN library

ITEMS	UD(1)	VD(2)	DS(3)	ST(4)	VS(5)	Mean ($\bar{x}$)	SD (s)
Electronic Book	233 23.0%	16 1.6%	49 4.8%	464 45.8%	251 24.8%	3.48	1.47
Electronic Journal	280 27.6%	32 3.2%	66 6.5%	428 42.3%	207 20.4%	3.25	1.52
Electronic Newspaper	330 32.6%	28 2.8%	67 6.6%	386 38.1%	202 19.9%	3.10	1.58
Electronic Dictionary	353 34.8%	31 3.1%	38 3.8%	412 40.7%	179 17.7%	3.03	1.59
Electronic Thesis/Dissertation	356 35.1%	24 2.4%	82 8.1%	378 37.3%	173 17.1%	2.99	1.58
Electronic Magazine	378 37.3%	29 2.9%	65 6.4%	365 36.0%	176 17.4%	2.93	1.60
Electronic Archives	389 38.4%	36 3.6%	67 6.6%	407 40.2%	114 11.3%	2.82	1.55
Institutional Repositories	419 41.4%	27 2.7%	85 8.4%	347 34.3%	135 13.3%	2.76	1.58
Indexing and Abstracting Databases	463 45.7%	33 3.3%	93 9.2%	327 32.3%	97 9.6%	2.57	1.54
CD Databases	510 50.3%	56 5.5%	103 10.2%	266 26.3%	78 7.7%	2.35	1.49
GRAND MEAN=2.7709							

The findings presented in Table 1.9 above depict the level of satisfaction reported by students regarding the electronic resources accessible within the NOUN library. Notably, the satisfaction ratings were as follows: electronic books (mean = 3.48, standard deviation = 1.47); electronic journals (mean = 3.25, standard deviation = 1.52); electronic newspapers (mean = 3.10, standard deviation = 1.58); electronic dictionaries (mean = 3.03, standard deviation = 1.59); and electronic theses/dissertations (mean = 2.99, standard deviation = 1.58).

Furthermore, Table 1.10 provides the mean and standard deviation scores outlining the resource preferences of academic staff members in conducting their research work and academic studies.

Table 1.10: Mean and standard deviation scores of academic staff's choice of resources employed to carry out their research work/study.

ITEMS	UD (1)	SD(2)	D(3)	A(4)	SA(5)	Mean ($\bar{x}$)	SD (s)
I prefer Electronic Resources in carrying out my research work/study	3 2.7%	2 1.8%	4 3.6%	32 29.1%	69 62.7%	4.47	0.87
Both	7 6.4%	4 3.6%	- %	41 37.3%	58 52.7%	4.30	1.03
I prefer Print Resources in carrying out my research work/study	5 4.5%	3 2.7%	3 2.7%	50 45.5%	49 44.5%	4.23	0.97
None	37 33.6%	58 52.7%	13 11.8%	1 .9%	1 .9%	1.83	0.74
GRAND MEAN=3.7075							

The findings depicted in Table 1.10 above highlight the resource preferences of academic staff members when engaging in their research work and academic studies. Notably, the responses were as follows: a preference for electronic resources in research work/study (mean = 4.47, standard deviation = 0.87); an inclination towards both electronic and print resources (mean = 4.30, standard deviation = 1.03); and a preference for print resources in research work/study (mean = 4.23, standard deviation = 0.97).

Additionally, Table 1.11 provides the mean and standard deviation scores illustrating the resource preferences of students in conducting their research work and academic studies.

Table 1.11: Mean and standard deviation scores of students' choice of resources employed to carry out their research work/study.

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ($\bar{x}$)	SD (s)
Electronic Resources in carrying out my research work/study	134 13.2%	6 .6%	11 1.1%	393 38.8%	469 46.3%	4.04	1.30
Both	187 18.5%	19 1.9%	18 1.8%	365 36.0%	424 41.9%	3.81	1.46
I prefer Print Resources in carrying out my research work/study	236 23.3%	17 1.7%	67 6.6%	481 47.5%	212 20.9%	3.41	1.45
None	562 55.5%	343 33.9%	80 7.9%	20 2.0%	8 .8%	1.59	0.78
GRAND MEAN=3.2125							

The findings presented in Table 1.11 above provide insights into the preferences of students regarding the resources they utilize for their research work and academic studies. Notably, the responses were as follows: a preference for electronic resources in research work/study (mean = 4.04, standard deviation = 1.30); an inclination towards both electronic and print resources (mean = 3.81, standard deviation = 1.46); and a preference for print resources in research work/study (mean = 3.41, standard deviation = 1.45).

Furthermore, Table 1.12 offers the mean and standard deviation scores that outline the evaluation of electronic resources in the NOUN library as assessed by academic librarians.

Table 1.12: Mean and standard deviation scores of academic librarians' evaluation of electronic resources in NOUN library

ITEMS	NAU(1)	NU(2)	NS(3)	US(4)	VU(5)	Mean ($\bar{x}$)	SD (s)

Resource						Mean	SD
Electronic Journal	-	6 22.2%	-	21 77.8%	-	3.78	0.42
Electronic Book	-	8 29.6%	2 7.4%	17 63.0%	-	3.49	0.85
Electronic Thesis/Dissertation	-	1 3.7%	12 44.4%	14 51.9%	-	3.44	0.67
CD Databases	-	12 44.4%	2 7.4%	13 48.1%	-	3.33	0.83
Electronic Newspaper	-	12 44.4%	3 11.1%	12 44.4%	-	3.22	0.93
Electronic Magazine	-	12 44.4%	3 11.1%	12 44.4%	-	3.22	0.93
Electronic Dictionary	1 3.7%	10 37.0%	4 14.8%	13 48.1%	-	3.19	1.03
Institutional Repositories	-	5 18.5%	7 25.9%	15 55.6%	-	3.03	1.28
Electronic Archives	-	11 40.7%	5 18.5%	11 40.7%	-	3.03	1.09
Indexing and Abstracting Databases	1 3.7%	6 33.3%	6 22.2%	11 40.7%	-	2.93	1.17
GRAND MEAN = 3.0773							

The findings depicted in Table 1.12 above provide an insight into the assessment conducted by academic librarians regarding the electronic resources available in the NOUN library. The evaluation encompassed various aspects, with the following mean and standard deviation scores: electronic journal (mean = 3.78, standard deviation = 0.42); electronic book (mean = 3.49, standard deviation = 0.85); electronic thesis/dissertation (mean = 3.44, standard deviation = 0.67); CD databases (mean = 3.33, standard deviation = 0.83); and electronic newspaper (mean = 3.22, standard deviation = 0.93).

In addition, Table 1.13 presents the mean and standard deviation scores outlining the evaluation of electronic resources within the NOUN library, as assessed by academic staff.

Table 1.13: Mean and standard deviation scores of academic staffs' evaluation of electronic resources in NOUN library

ITEMS	NAU(1)	NU(2)	NS(3)	US(4)	VU(5)	Mean (x̄)	SD (s)
Electronic Journal	3 2.7%	- %	- %	51 46.4%	56 50.9%	4.43	0.76
Electronic Dictionary	8 7.3%	- %	1 .9%	71 64.5%	30 27.3%	4.41	0.97
Electronic Book	6 5.5%	- %	- %	58 52.7%	46 41.8%	4.25	0.92
Electronic Thesis/Dissertation	12 10.9%	- %	2 1.8%	67 60.9%	29 26.4%	3.92	1.13
Indexing and Abstracting Databases	15 13.6%	- %	- %	67 60.9%	28 25.5%	3.85	1.21
Institutional Repositories	18 16.4%	- %	1 .9%	63 57.3%	28 25.5%	3.75	1.30
Electronic Archives	20 18.2%	1 .9%	1 .9%	61 55.5%	27 24.5%	3.67	1.35
Electronic Newspaper	16 14.5%	1 .9%	5 4.5%	70 63.6%	18 16.4%	3.66	1.21
Electronic Magazine	28 25.5%	1 .9%	3 2.7%	65 59.1%	13 11.8%	3.31	1.42
CD Databases	30 27.3%	3 2.7%	4 3.6%	52 47.3%	21 19.1%	3.28	1.52
GRAND MEAN=3.6391							

The outcomes presented in Table 1.13 above portray the assessment conducted by academic staff members regarding the electronic resources accessible within the NOUN library. The evaluation covered various aspects, revealing the subsequent mean and standard deviation scores: electronic journal (mean = 4.43, standard deviation = 0.76); electronic dictionary (mean = 4.41, standard deviation = 0.97); electronic book (mean = 4.25, standard deviation = 0.92); electronic

thesis/dissertation (mean = 3.92, standard deviation = 1.13); and indexing and abstracting databases (mean = 3.85, standard deviation = 1.21).

Furthermore, Table 1.14 showcases the mean and standard deviation scores outlining the evaluation of electronic resources within the NOUN library, as assessed by the students.

Table 1.14: Mean and standard deviation scores of students' evaluation of electronic resources in NOUN library

ITEMS	NAU(1)	NU(2)	NS(3)	US(4)	VU(5)	Mean ($\bar{x}$)	SD (s)
Electronic Book	162 16.0%	6 .9%	5 .5%	435 42.9%	402 39.7%	3.89	1.37
Electronic Journal	178 17.6%	16 1.6%	12 1.2%	483 47.7%	32.4 32.0%	3.75	1.38
Electronic Thesis/Dissertation	246 24.3%	6 .6%	7 .7%	452 44.6%	302 29.8%	3.55	1.52
Electronic Dictionary	250 24.7%	6 .6%	13 1.3%	458 45.2%	286 28.2%	3.52	1.52
Electronic Newspaper	259 25.6%	6 .6%	19 1.9%	448 44.2%	281 27.7%	3.48	1.53
Electronic Archives	278 27.4%	10 1.0%	25 2.5%	483 47.7%	217 21.4%	3.35	1.52
Electronic Magazine	300 29.6%	7 .7%	26 2.6%	444 43.8%	236 23.3%	3.30	1.57
Institutional Repositories	317 31.3%	8 .8%	18 1.8%	441 43.5%	229 22.6%	3.25	1.59
Indexing and Abstracting Databases	364 35.9%	8 .8%	437 43.1%	437 43.1%	189 18.7%	3.08	1.62
CD Databases	438 43.2%	20 2.0%	36 3.6%	359 35.4%	160 15.8%	2.79	1.64
GRAND MEAN=3.2055							

The outcomes presented in Table 1.14 above illustrate the assessment conducted by students regarding the electronic resources available within the NOUN library. The evaluation encompassed various dimensions, revealing the subsequent mean and standard deviation scores: electronic book (mean = 3.89, standard deviation = 1.37); electronic journal (mean = 3.75, standard deviation = 1.38); electronic thesis/dissertation (mean = 3.55, standard deviation = 1.52); electronic dictionary (mean = 3.52, standard deviation = 1.52); and electronic newspaper (mean = 3.48, standard deviation = 1.53).

Research Question 2: What are the challenges encountered by students and academic staff while accessing and using library electronic resources?

Table 1.15 displays the mean and standard deviation scores representing the challenges encountered by the library in facilitating access to electronic resources, as indicated by academic librarians.

Table 1.15: Mean and standard deviation scores of the challenges the library encounters while providing access to electronic resources as indicated by academic librarians.

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean ($\bar{x}$)	SD (s)
Electricity Outage	1 3.7%	1 3.7%	2 7.4%	10 37.0%	13 48.1%	4.22	1.01
High Cost of Providing Alternative Power Supply	1 3.7%	1 3.7%	1 3.7%	13 48.1%	11 40.7%	4.19	0.96
Low Internet Connectivity Speed	2 7.4%	1 3.7%	1 3.7%	12 44.4%	11 40.7%	4.07	1.14
Inadequate Awareness on The Availability Of Electronic Resources	1 3.7%	2 7.4%	3 11.1%	12 44.4%	9 33.3%	3.96	1.06
Slow Download Speed	3 11.1%	1 3.7%	4 14.8%	9 33.3%	10 37.0%	3.81	1.30
Lack Of Internet Access In The Library	3 11.1%	2 7.4%	3 11.1%	9 33.3%	10 37.0%	3.78	1.34

Cost Of Access To Internet Is High	3 11.1%	1 3.7%	5 18.5%	11 40.7%	7 25.9%	3.67	1.24
Insufficient Computers In The Library	3 11.1%	2 7.4%	6 22.2%	10 37.0%	6 22.2%	3.52	1.25
Limited User License	8 29.6%	3 11.1%	5 18.5%	5 18.5%	6 22.2%	2.93	1.57
GRAND MEAN=3.5480							

The results illustrated in Table 1.15 above revealed the challenges confronted by the library in facilitating access to electronic resources, as indicated by academic librarians. These challenges encompassed electricity outages (mean = 4.22, standard deviation = 1.01), the high cost associated with providing alternative power supply (mean = 4.19, standard deviation = 0.96), low internet connectivity speed (mean = 4.07, standard deviation = 1.14), inadequate awareness regarding the availability of electronic resources (mean = 3.96, standard deviation = 1.06), and slow download speed (mean = 3.81, standard deviation = 1.30).

Similarly, Table 1.16 presents the mean (x) and standard deviation (s) scores depicting the challenges encountered by academic staff members while accessing and utilizing electronic resources.

Table 1.16: Mean and standard deviation scores of the challenges encountered by academic staff while accessing and using electronic resources.

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean (x)	SD (s)
Electricity outage	6 5.5%	3 2.7%	13 11.8%	56 50.9%	32 29.1%	3.95	1.00

Low internet connectivity speed	6	4	11	58	31	3.95	1.01
	5.5%	3.6%	10.0%	52.7%	28.2%		
The cost of access to the internet is high	13	1	19	58	19	3.63	1.15
	11.8%	.9%	17.3%	52.7%	17.3%		
Slow download speed	12	2	21	61	14	3.57	1.10
	10.9%	1.8%	19.1%	55.5%	12.7%		
Insufficient time to access electronic resources due to work overload	10	10	34	36	20	3.42	1.16
	9.1%	9.1%	30.9%	32.7%	18.2%		
Too much information is retrieved when a search is initiated	10	7	38	50	5	3.30	0.99
	9.1%	6.4%	34.5%	45.5%	4.5%		
Lack of internet access in the library	13	7	37	41	12	3.29	1.13
	11.8%	6.4%	33.6%	37.3%	10.9%		
Inadequate awareness on the availability of electronic resources	14	8	30	50	8	3.27	1.12
	12.7%	7.3%	27.3%	45.5%	7.3%		
Lack of training or orientation on the use of library electronic resources	12	11	36	41	10	3.24	1.11
	10.9%	10.0%	32.7%	37.3%	9.1%		
Shortage of librarians to assist in the use of library electronic resources	16	8	29	53	4	3.19	1.12
	14.5%	7.3%	26.4%	48.2%	3.6%		
Limited access to library electronic resources	11	12	39	44	4	3.16	1.02
	10.0%	10.9%	35.5%	40.0%	3.6%		
Lack of knowledge about email alerts and RSS services	9	12	48	35	6	3.15	0.98
	8.2%	10.9%	43.6%	31.8%	5.5%		
Lack of knowledge about advanced search techniques	5	20	50	28	7	3.11	0.93
	4.5%	18.2%	45.5%	25.5%	6.4%		
Limited library hours to use electronic resources	19	6	45	29	11	3.06	1.19
	17.3%	5.5%	40.9%	26.4%	10.0%		
Difficulty in reading from the monitor	8	19	50	27	6	3.04	0.97
	7.3%	17.3%	45.5%	24.5%	5.5%		
Electronic resources are not remotely accessible	8	23	53	17	9	2.96	0.99
	7.3%	20.9%	48.2%	15.5%	8.2%		
Lack of online search skills	9	19	60	13	9	2.95	0.98
	8.2%	17.3%	54.5%	11.8%	8.2%		

Difficulty in finding relevant information	11	21	49	24	5	2.92	1.00
	10.0%	19.1%	44.5%	21.8%	4.5%		
Insufficient computers in the library	21	9	53	24	3	2.81	1.07
	19.1%	8.2%	48.2%	21.8%	2.7%		
GRAND MEAN=3.1510							

The findings depicted in Table 1.16 above unveiled the obstacles faced by academic staff members when engaging with electronic resources. These challenges encompassed electricity outages (x = 3.95, standard deviation = 1.00), sluggish internet connectivity speed (mean = 3.95, standard deviation = 1.01), the high cost associated with internet access (mean = 3.63, standard deviation = 1.15), gradual download speed (mean = 3.57, standard deviation = 1.10), and insufficient time to access electronic resources due to a workload (mean = 3.42, standard deviation = 1.16).

Likewise, Table 1.17 showcases the mean and standard deviation scores portraying the challenges faced by students while attempting to access and utilize electronic resources.

Table 1.17: Mean and standard deviation scores of the challenges encountered by students while accessing and using electronic resources.

ITEMS	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean (x)	SD (s)
Low internet connectivity speed	152	23	98	466	274	3.68	1.31
	15.0%	2.3%	9.7%	46.0%	27.0%		
Electricity outage	172	43	135	391	272	3.54	1.38
	17.2%	4.2%	13.3%	38.6%	26.9%		
Cost of access to internet is high	190	26	147	432	218	3.46	1.36
	18.8%	2.6%	14.5%	42.6%	21.5%		
Slow download speed	227	24	113	453	196	3.36	1.42
	22.4%	2.4%	11.2%	44.7%	19.3%		
Insufficient computers in the library	267	78	179	346	143	3.02	1.43
	26.4%	7.7%	17.7%	34.2%	14.1%		
Lack of internet access in the library	302	44	201	284	182	3.00	1.50
	29.8%	4.3%	19.8%	28.0%	18.0%		

Shortage of librarians to assist in the use of library electronic resources	294 29.0%	77 7.6%	165 16.3%	345 34.1%	132 13.0%	2.94	1.45
Insufficient time to access electronic resources due to work overload	264 26.1%	73 7.2%	245 24.2%	334 33.0%	97 9.6%	2.93	1.35
Limited library hours to use electronic resources	307 30.3%	67 6.6%	174 17.2%	346 34.2%	119 11.7%	2.90	1.44
Indequate awareness on the availabilty of electronic resources	223 22.0%	131 12.9%	305 30.1%	276 27.2%	78 7.7%	2.86	1.25
Limited access to library electronic resources	267 26.4%	109 10.8%	225 22.2%	335 33.1%	77 7.6%	2.85	1.33
Electronic resources is not remotely accessible	248 24.5%	148 14.6%	288 28.4%	237 23.4%	92 9.1%	2.78	1.29
Lack of knowledge about advanced searching techniques	207 20.4%	211 20.8%	308 30.4%	228 22.5%	59 5.8%	2.72	1.19
Lack of training or orientations on the use of library electronic resources	260 25.7%	172 17.0%	276 27.2%	237 23.4%	68 6.7%	2.69	1.27
Difficulty in finding relevant information	263 26.0%	142 14.0%	318 31.4%	233 23.0%	57 5.6%	2.68	1.24
Lack of knowledge about email alert and RSS services	255 25.2%	180 17.8%	324 32.0%	200 19.7%	54 5.3%	2.62	1.21
Too much information is retrieved when a search is initiated	342 33.8%	111 11.0%	246 24.3%	234 23.1%	80 7.9%	2.60	1.36
Lack of online search skills	248 24.5%	224 22.1%	325 32.1%	170 16.8%	46 4.5%	2.55	1.16

Difficulty in reading from the monitor	234	217	385	136	41	2.54	1.11
	23.1%	21.4%	38.0%	13.4%	4.0%		
GRAND MEAN=2.8475							

The findings presented in Table 1.17 provide insight into the difficulties faced by students when they endeavor to access and utilize electronic resources. These challenges encompassed issues such as sluggish internet connectivity speed (mean = 3.68, standard deviation = 1.31), occurrences of electricity outages (mean = 3.54, standard deviation = 1.38), the high expense associated with internet access (mean = 3.46, standard deviation = 1.36), delayed download speed (mean = 3.36, standard deviation = 1.42), and a scarcity of available computers in the library (mean = 3.02, standard deviation = 1.43).

Discussion of Findings

Library Policies and Infrastructure Supporting the Use of Electronic Resources at NOUN

The study revealed that a significant proportion of both academic librarians (96%) and academic staff (82%) acknowledged that increasing the library budget could enhance the utilization of electronic resources. Additionally, 74% of academic librarians and 76% of academic staff believed that collaborative acquisition efforts with other libraries could mitigate subscription costs and enrich the pool of electronic resources. However, there was some reservation, as 46% of academic librarians and 51% of academic staff were not in favor of reducing electronic resource acquisition to address funding challenges. Previous research by Erich (2013), Khan & Ahmed (2013), Ahmed (2014), and Ahmed & Amjah (2014) supported the notion that well-structured budgets, formation of consortia for shared acquisitions, and comprehensive collection and infrastructure development strategies incorporated into library policies can counteract budget limitations. This suggests that implementing policies supporting robust financial allocations for library infrastructure, electronic resource subscriptions, and collaborative efforts among libraries could enhance resource utilization.

Furthermore, an overwhelming majority (over 95%) of academic librarians and academic staff concurred those various strategies, including quality staff development programs, information

literacy initiatives, and the adoption of new technologies, could enhance the utilization of electronic resources. These findings were aligned with previous studies by Gandhi (2003), Warraich & Ameen (2010), Thanuskodi (2011), Tyagi (2011), Erich (2013), and Khan & Ahmed (2013). These measures collectively contribute to the greater utilization of electronic resources, which, in turn, lead to heightened academic and research productivity, consistent access to resources, and increased awareness among patrons.

Perceptions and Attitudes of Academic Staff and Students Towards Library Electronic Resources

The study found that a substantial percentage of academic staff (94%) considered electronic journals as important to their research, while over 70% emphasized the significance of electronic books and institutional repositories. Similarly, around 70% of students emphasized the importance of electronic books in their research endeavors, and over 60% valued electronic journals and electronic theses/dissertations. Comparable findings were reported by Oyewusi & Oyeboade (2009), Ge (2010), Warraich & Ameen (2010), Wu & Chen (2012), and Gupta & Sharma (2015). This signifies that both academic staff and students have a positive perception and attitude towards library electronic resources, recognizing their vital role in facilitating research and academic pursuits.

In terms of specific resource features, access to current information, improved research quality, and the ability to download full-text content were highlighted as crucial attributes. These findings were consistent with research by Deng (2010), Ge (2010), Madhusudhan (2010), Warraich & Ameen (2010), Ranganathan (2011), Ahmed (2013), and Qasim & Khan (2015). This underscores the fact that patrons value electronic resources for their ability to provide timely and pertinent information, enhance research quality, and offer convenient access to content.

However, when considering perceptions of electronic resources available at NOUN library, there was a substantial gap in awareness and opinions. Academic staff (51%) expressed uncertainty about the accessibility of electronic resources, while students (46%) indicated positive perceptions. This gap signals the need for targeted awareness campaigns to improve patron perceptions and encourage utilization. Similar observations were made in studies by Mawindo & Hoskins (2008), Deng (2010), Ge (2010), Dhanavandan, Esmail & Nagarajan (2012), and Gakibayo & Okello-

Obura (2013), which highlighted the importance of adequate awareness to enhance perceptions of library electronic resources.

Satisfaction Levels and Resource Preferences

The study indicated high levels of satisfaction among academic staff (88%) with electronic journals and electronic books, while students (70%) expressed satisfaction with electronic books. Previous research by Haridasan & Khan (2009), Kumar & Singh (2011), Kumar & Ansari (2011), and others corroborated these findings, indicating patrons' contentment with the available electronic resources.

Furthermore, a considerable proportion of academic staff (92%) and students (75%) exhibited a preference for electronic resources when conducting research. However, over 70% of both groups indicated an inclination towards using both electronic and print resources. These results mirrored those of previous studies by Mawindo & Hoskins (2008), Ge (2010), Kumar & Kumar (2010), Tahir, Mahmood & Shafique (2010), Egberongbe (2011), Peris & Peris (2012), and others, highlighting the multifaceted preferences of users.

Evaluating NOUN Library Electronic Resources

Among academic staff, over 90% found electronic journals, electronic dictionaries, and electronic books to be useful, while students demonstrated strong preferences for electronic books, electronic journals, and electronic theses/dissertations. This highlights the positive impact of library electronic resources on academic pursuits for both academic staff and students.

Challenges Faced by Library Users

The challenges faced by library users in accessing and using electronic resources were evident. Both academic librarians and academic staff highlighted electricity outages, high costs of alternative power supply, and low internet connectivity speed as prominent issues. Similar challenges were reported in prior studies by Mawindo & Hoskins (2008), Ozoemelem (2009), Kumar & Kumar (2010), and others. These challenges underscore the need for improved infrastructure and support for electronic resource access.

The study's findings offer valuable insights into various aspects of electronic resource utilization, perceptions, and challenges at NOUN. These results provide a foundation for enhancing resource

access, improving awareness, and addressing the challenges faced by library users, ultimately contributing to an enriched academic environment.

Conclusions

While most of both academic staff and students acknowledged the significance of the "current up-to-date information" feature in electronic resources for their research and study, the overall perception of NOUN library's electronic resources was notably subpar. This suggests a prevalent lack of favorable perception among the academic community. Nevertheless, academic staff and students demonstrated satisfaction with electronic journals and books, indicating a preference for these resources due to their perceived utility.

Both the library and its users encountered challenges related to electricity outages and low internet connectivity speeds during the provision, access, and use of electronic resources.

Recommendations

To address the limitations revealed in the study:

1. The library management should design and implement effective awareness programs tailored to the needs of an Open and Distance Learning (ODL) university community. Modern communication tools like social media platforms should be harnessed to enhance outreach.
2. The university should incorporate library usage, emphasizing electronic resources and information literacy skills, into the curriculum to foster proficient resource utilization among students.
3. The university administration should allocate consistent and sufficient funds for electronic resource subscriptions, acknowledging the essential role these resources play in academic advancement.
4. The library management should prioritize the subscription to electronic resources that align with users' specific needs. In tandem, the Federal government should provide an enabling environment and essential infrastructure, including a dependable and affordable power supply.
5. The university must work towards offering high-speed internet connectivity across all NOUN library locations.

Implications of the findings for remote resource access and usage at noun

The study's revelation of poor user awareness of NOUN library's electronic resources implies that remote users may miss out on the rich and diverse content available for their studies and research. Employing contemporary communication tools like emails and SMS, as recommended by the study, can substantially enhance awareness and usage of electronic resources among NOUN's remote users. Such initiatives are likely to elevate academic performance and research output.

The study's identification of underutilized library electronic resources raises concerns about the potential consequences. Negligible utilization may lead to diminished research and study quality, longer time investments in acquiring information, and the burden of physically accessing a library with limited seating capacity and constrained resources. These challenges can impede user efficiency and effectiveness in obtaining the necessary information for academic pursuits.

References

Ahmed, S. & Amjad, A. 2014. Evaluation of researchers' satisfaction with electronic resources in two universities of Pakistan. *Library Hi Tech News*. [Online] 31 (7), 20-25. Available from: DOI: 10.1108/LHTN-06-2014-0043.

Ahmed, S.M. 2013. Use of electronic resources by the faculty members in diverse public universities in Bangladesh. *The Electronic Library*. [Online] 31 (3), 290 – 312. Available from: http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/EL-05-2011-0081

Ahmed, S.M. Zabed 2014. The use of IT-based information services: An investigation into the current status of public university libraries in Bangladesh. *Program: electronic library and information systems*. [Online] 48 (2), 167 – 184. Available from: http://0www.emeraldinsight.com.oasis.unisa.ac.za/doi/pdfplus/10.1108/PROG-08-2012-0048

Bhatia, J. K. 2011. Use of Electronic Resources in Degree College Libraries in Chandigarh. *DESIDOC Journal of Library & Information Technology*. [Online] 31 (6), 480-484. Available from: http://0-search.proquest.com.oasis.unisa.ac.za/docview/1413411953?accountid=14648

Deng, H. 2010. Emerging patterns and trends in utilizing electronic resources in a higher education environment: An empirical analysis. *New Library World*. [Online] 111 (3/4) 87–103. Available from: http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/03074801011027600

Dhanavandan, S., Esmail, S. M. & Nagarajan, M. 2012. Use of Electronic Resources at Krishnasamy College of Engineering & Technology Library, Cuddalore. *Library Philosophy & Practice*. [Online] 1-7. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=a1066f08f271-492e-9c4c-666a8597bacf%40sessionmgr4003&vid=1&hid=4002

Dulle, F. W. 2015. Online Information Resources Availability and Accessibility: A Developing Countries' Scenario. *African Journal of Library, Archives & Information Science*. [Online] 25 (1), 45-57. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=3fe7cbcb-4256-48c1-b610-44101f38072c%40sessionmgr4004&vid=1&hid=4002

Egberongbe, H. S. 2011. The Use and Impact of Electronic Resources at the University of Lagos. *Library Philosophy & Practice*. [Online] 147-155. Available from: http://0web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=46bf6a17-659c-4cb9-8c6c-999aa9aee204%40sessionmgr4005&vid=1&hid=4002

Erich, A. 2013. The role of the university library for an efficient use of the electronic resources. *Library and Information Science Department, Faculty of Letters, University of Bucharest, Roman*. [Online] (17), 65-83. Available from: http://0search.proquest.com.oasis.unisa.ac.za/docview/1622284712?accountid=14648

Fraenkel J.R., Wallen N.E.,& Hyun H.H. 2012. *How to design and evaluate research in education (8thed.)*. New York: McGraw-Hill

Gakibayo, A.& Okello-Obura, C. 2013. Electronic Information Resources Utilization by Students in Mbarara University Library. *Library Philosophy & Practice*. [Online] 1-26. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=e015cb9f-e862-49bc-bb6d-0a029f88b70b%40sessionmgr4003&vid=1&hid=4112

Gandhi, S. 2003. Academic Librarians and Distance Education: Challenges and Opportunities. *Reference & User Services Quarterly*. [Online] 43 (2), 138-154. Available from: *www.jstor.org/stable/20864157*

Garg, N. K. 2014. Use of InfoNet Digital Library Consortium at Kurukshetra University, Kurukshetra and Maharishi Dayanand University, Rohtak: A Study. *International Journal of Information Dissemination & Technology*. [Online] 4 (1), 79-84. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=7cea4317-4e0c-48fc-93c3-04049b1c3e45%40sessionmgr4001&vid=1&hid=4112

Gay, L.R., Mills, G.E., & Airasian P. 2009. *Educational Research: competencies for analysis and applications (9*[th]*ed.)*. New Jersey: Pearson

Ge, X. 2010. Information-Seeking Behavior in the Digital Age: A Multidisciplinary Study of Academic Researchers. *College & Research Libraries*. [Online] 71 (5), 435-455. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?vid=0&sid=a410eda3-881e-4ff1-9ef9-8122a3587b52%40sessionmgr4007

Gupta, S. K. & Sharma, S. 2015. Use of Digital Information Resources and Services by the Students of IIT Mumbai Central Library: A Study. *International Journal of Information Dissemination & Technology*. [Online] 5 (1), 1-11. Available from:

http://0web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=a3ee
ebf1-bfce-

45a6-9947-b31a3847f7e9%40sessionmgr4003&vid=0&hid=4107

Hadagali, G. S., Kumbar B. D., Nelogal, S. B. & Bachalapur M. M. 2012. Use of Electronic
Resources by Post-Graduate Students in Different Universities of Karnataka State.
International Journal of Information Dissemination & Technology. [Online] 2 (3), 189-
195. Available from: http://0-
web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=ba939a7d-
90b7-42ea-9786-600df3afe81b%40sessionmgr4001&vid=0&hid=4107

Haridasan, S. & Khan, M. 2009. Impact and use of e-resources by social scientists in National
Social Science Documentation Centre (NASSDOC), India. *The Electronic Library*.
[Online] 27 (1), 117 – 133. Available from:
http://0dx.doi.org.oasis.unisa.ac.za/10.1108/02640470910934632

Khan, A. & Ahmed, S. 2013. The impact of digital library resources on scholarly
communication: challenges and opportunities for university libraries in Pakistan. *Library Hi
Tech News*.

[Online] 30 (8), 12-29. Available from: DOI: 10.1108/LHTN-07-2013-0046

Kumar, D. & Ansari, M. M. A. 2011. Use and Awareness of Electronic Information Resources
and Services among the Teachers and Students of Institute of Informatics and
Management Sciences (IIMS) Meerut: A Case Study. *Indian Journal of Library &
Information Science*. [Online] 5 (3), 267-276. Available from:
http://0web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=94cc
148ce652-4f28-a65c-fa719efaab0d%40sessionmgr4004&vid=1&hid=4112

Kumar, S. B. T. & Kumar, G. T. 2010. Perception and usage of e-resources and the internet by
Indian academics. *Electronic Library*. [Online] 28 (1), 137-156. Available from:
DOI: 10.1108/02640471011023432

Kumar, S. & Singh, M. 2011. Access and use of electronic information resources by scientists of

National Physical Laboratory in India: A case study. *Singapore Journal of Library &*

Information Management. [Online] 40, 33-49. Available from:
http://0web.b.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?vid=0&s
id=4e6410

7c-18ea-4f81-9d13-2a00101f2720%40sessionmgr101

Kwafoa, P. Nana Y., Imoro, O. & Afful-Arthur, P. 2014. Assessment of the Use of Electronic
Resources among Administrators and Faculty in the University of Cape Coast. *Library*

Philosophy & Practice. [Online] 1-18. Available from: http://0-
web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=02017cd6-

9d50-4bda-a330-ad605b4ee4f5%40sessionmgr4004&vid=1&hid=4002

Lamont, M. 1999. Critical human factors in emerging library technology centers. *Library Hi Tech*.

[Online] 17 (4), 390-395. Available from: doi:10.1108/07378839910289457

Madhusudhan, M. 2010. Use of electronic resources by research scholars of Kurukshetra
University. *The Electronic Library*. [Online] 28 (4), 492 – 506. Available from: DOI
http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/02640471011033684

Mawindo, D. & Hoskins, R. 2008. Use of Print and Electronic Resources by Students at the
University of Malawi College of Medicine. *Mousaion*. [Online] 26 (1), 89-110.

Available   from: http://0-

web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=7512c107-aaf7-

4875-bfb1-2194d4ee66b1%40sessionmgr4004&vid=0&hid=4107

Mertler, C.A., & Charles, C.M. 2008. *Introduction to Educational Research (9th ed.)*. USA: Pearson

Natarajan,   R.,   &   Revathi,   R.   2012. Use   of   Electronic   Information
Resources: A Case Study of SASTRA University. *Indian Journal   of*

Library & Information Science.   [Online]   6   (1),   61-68.
Available

National Physical Laboratory in India: A case study. *Singapore Journal of Library &*

Information Management. [Online] 40, 33-49. Available from:
http://0web.b.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?vid=0&s
id=4e6410

7c-18ea-4f81-9d13-2a00101f2720%40sessionmgr101

Kwafoa, P. Nana Y., Imoro, O. & Afful-Arthur, P. 2014. Assessment of the Use of Electronic
Resources among Administrators and Faculty in the University of Cape Coast. *Library*

Philosophy & Practice. [Online] 1-18. Available from: http://0-
web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=02017cd6-

9d50-4bda-a330-ad605b4ee4f5%40sessionmgr4004&vid=1&hid=4002

Lamont, M. 1999. Critical human factors in emerging library technology centers. *Library Hi Tech*.

[Online] 17 (4), 390-395. Available from: doi:10.1108/07378839910289457

Madhusudhan, M. 2010. Use of electronic resources by research scholars of Kurukshetra
University. *The Electronic Library*. [Online] 28 (4), 492 – 506. Available from: DOI
http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/02640471011033684

Mawindo, D. & Hoskins, R. 2008. Use of Print and Electronic Resources by Students at the
University of Malawi College of Medicine. *Mousaion*. [Online] 26 (1), 89-110.

Available   from: http://0-

web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=7512c107-aaf7-

4875-bfb1-2194d4ee66b1%40sessionmgr4004&vid=0&hid=4107

Mertler, C.A., & Charles, C.M. 2008. *Introduction to Educational Research (9th ed.)*. USA: Pearson

Natarajan,   R.,   &   Revathi,   R.   2012. Use   of   Electronic   Information
Resources: A Case Study of SASTRA University. *Indian Journal   of*

Library & Information Science.   [Online]   6   (1),   61-68.
Available

from:http://0web.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid
=f3dc3f31-3024-

419b-9acf-01b7efc56ae5%40sessionmgr104&vid=1&hid=118

National Open University of Nigeria 2015. Annual Report 2014/2015. Nigeria, The Vice

Chancellor's Office National Open University of Nigeria.

Oduwole, A. A. & Oyewumi, O. 2010. Accessibility and use of web-based electronic resources
by physicians in a psychiatric institution in Nigeria. *Electronic Library & Information Systems*. [Online] 44 (2), 109-121. Available from: DOI: 10.1108/00330331011039472

Okello-Obura, C. 2013. Assessment of the Problems Postgraduate Students Face in Accessing EResources at Makerere University, Uganda: A Comparision between Education and Lis Students. *Mousaion*. [Online] 29 (2), 41-60. Available from:
http://0web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=26
3b737bcb2d-44f1-b60b-f36de29d8292%40sessionmgr4005&vid=0&hid=4107

Okiki, O. C. 2012. Electronic Information Resources Awareness, Attitude and Use by Academic Staff Members of University of Lagos, Nigeria. *Library Philosophy & Practice*.

[Online] 1-8. Available from:
http://0web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=09
84986c-

3492-4703-a10a-bd54e766be16%40sessionmgr4003&vid=0&hid=4107

Ollé, C. & Borrego, Á. 2010. Librarians' perceptions on the use of electronic resources at Catalan academic libraries: Results of a focus group. *New Library World*. [Online] 111 (1/2), 46-54. Available from: DOI: 10.1108/03074801011015685

Oyedapo, R. O. & Ojo, R. A. 2013. A Survey of the Use of Electronic Resources in Hezekiah Oluwasanmi Library, Obafemi Awolowo University, Ile -- Ife, Nigeria. *Library Philosophy & Practice*. [Online] 1-15. Available from: http://0-

web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=1acfc078-ff3d-41db-98e4-0e89318fa346%40sessionmgr4001&vid=0&hid=4001

Oyewusi, F. O. & Oyebode, S. A. 2009. An Empirical Study of Accessibility and Use of Library Resources by Undergraduates in a Nigerian State University of Technology. *Library Philosophy & Practice*. [Online] 1-10. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=5ebfd5a5-81bd-44eb-8030-939ccf3de155%40sessionmgr4002&vid=0&hid=4001

Ozoemelem, O. A. 2009. Use of Electronic Resources by Postgraduate Students of the Department of Library and Information Science of Delta State University, Abraka, Nigeria. *Library Philosophy & Practice*. [Online] 1-23. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=9685dcf0-52b3-45de-8b79-64d61cd7ce03%40sessionmgr4004&vid=0&hid=4001

Peiris, N. D. & Peiris, B.L. 2012. Use of Electronic Information Resources by postgraduate students: a case study. *Journal of University Librarians Association of Sri Lanka*. [Online] 16 (1) 46-69. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=95e0a758-1ce9-41d9-9406-b470b29dd5c4%40sessionmgr4004&vid=0&hid=4001

Qasim, J. & Khan, A. M. 2015. Use of e-journals by the scientists of CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi, India. *Electronic Library*. [Online], 33 (5), 928-942. Available from: DOI: 10.1108/EL-07-2014-0107

Ranganathan, C. 2011. Use of Electronic Information Resources by Faculty Members in Bharathidasan University: A Survey. *Indian Journal of Information Sources & Services (IJISS)*. [Online] 1 (2), 50-55. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?vid=11&sid=216360ae-8d6e-45a8-8c2e-c1b297e97f58%40sessionmgr4001&hid=4106

Reitz, J. M. 2004.Online Dictionary for Library and Information Science (ODLIS). [Online]
Available

from: http://www.abc-clio.com/ODLIS/odlis_p.aspx#publishing

Resnick, T. & Clark D. T. 2009. Evolution of electronic resources support: is virtual reference the
answer? Library Hi Tech. [Online] 27 (3), 357 – 371. Available from:
http://0dx.doi.org.oasis.unisa.ac.za/10.1108/07378830910988496

Shuling, W. 2007. Investigation and analysis of current use of electronic resources in university
libraries. *Library Management*. [Online] 28 (1/2), 72 – 88. Available from:
http://0dx.doi.org.oasis.unisa.ac.za/10.1108/01435120710723563

Swain, D. K. 2010. Students' keenness on use of e-resources. *The Electronic Library*. [Online] 28
(4),   580   –   591.   Available   from: http://0-
dx.doi.org.oasis.unisa.ac.za/10.1108/02640471011065391

Swain, D. K. & Panda, K.C. 2009. Use of electronic resources in business school libraries of an
Indian state: A study of librarians' opinion. *The Electronic Library.* [Online] 27 (1), 74
–   85.   Available   from: http://0-
dx.doi.org.oasis.unisa.ac.za/10.1108/02640470910934605

Tahir, M., Mahmood, K. & Shafique, F. 2010. Use of electronic information resources and
facilities by humanities scholars. *The Electronic Library*. [Online] 28 (1), 122 – 136.
Available from: http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/02640471011023423

Thanuskodi, S. 2011. Usage of Electronic Resources at Dr T.P.M. Library, Madurai Kamaraj
University: A Case Study. *DESIDOC Journal of Library & Information Technology*.
[Online]   31   (6),   437-445.   Available   from: http://0-
web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=83f65986-
545d-4abb-b238-39f6b1b914f1%40sessionmgr4005&vid=1&hid=4112

Thomas, V.K., Satpathi, C. & Satpathi, J.N. 2010. Emerging challenges in academic librarianship
and role of library associations in professional updating. *Library Management.* [Online]

31 (8/9), 594 – 609. Available from: http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/01435121011093379

Tyagi, S. 2011. Use and Awareness of Electronic Information Sources at IIT Roorkee, India: A Case Study. *Italian Journal of Library & Information Science*. [Online] 2 (1), 4586-1-4586-22. Available from: http://0-web.a.ebscohost.com.oasis.unisa.ac.za/ehost/pdfviewer/pdfviewer?sid=0b732386-43c3-4dee-9aaa-84535b819cf1%40sessionmgr4005&vid=1&hid=4112

Vassiliou, M., & Rowley, J. 2008. Progressing the definition of "e-book". *Library Hi Tech*. [Online] 26 (3), 355-368. Available from: doi:10.1108/07378830810903292

Warraich, N. F. & Ameen, K. 2010. Perceptions of LIS professionals regarding use of Pakistan National Digital Library databases. *The Electronic Library*. [Online] 28 (1), 108 – 121. Available from: http://0-dx.doi.org.oasis.unisa.ac.za/10.1108/02640471011023414

Wu, M. & Chen, S. 2012. How graduate students perceive, use, and manage electronic resources. *Aslib Proceedings*. [Online] 64 (6), 641 – 652. Available from: http://0dx.doi.org.oasis.unisa.ac.za/10.1108/00012531211281779