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USE OF ELECTRONIC INFORMATION RESOURCES AMONG STAFF AND STUDENTS OF NIGERIA MARITIME UNIVERSITY, OKERENKOKO, DELTA STATE

Kingsley IKPOZA[1], Aroghene EGHWUBARE[2] and Amaka Henrietta UNACHUKWU[3]
[1]**Dennis Osadebe University, Asaba, Delta State, E-Mail: kingsley.ikpoza@dou.edu.ng**
[2]**University Library, Nigeria Maritime University, Okerenkoko, Delta State,eghwubarearoghene@gmail.com**
[3]**University Library, Nigeria Maritime University, Okerenkoko, Delta State amigold93@gmail.com**

Abstract

This study examined the use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State. A survey research design was adopted. The population was 2,735 staff and students, from which a stratified random sample of 117 was selected. A structured questionnaire was used to collect primary data, analyzed descriptively using frequency tables, percentages, and statistical mean. Findings revealed that staff and students use electronic information resources such as e-books/e-journals, e-theses/e-dissertations, online databases (Emerald, Science Direct, Hinari, Agora, Research4Life, ProQuest, Ebscohost, Jstor, ERIC, Elsevier), e-newspapers/e-magazines, and internet resources (email, Wikipedia, Google search, World Wide Web). These resources are used for teaching/learning, test preparation, research work, leisure reading, assignment writing, examination preparation, seminar preparation, updating knowledge, general information gathering, and updating lecture notes. However, users encounter challenges including unavailability of network to access e-resources, poor network connectivity, insufficient ICT facilities, difficulties in reading from the screen, restrictions to e-resources, poor power supply, slow downloads, and difficulty in navigation. It was recommended that the Nigeria Maritime University management should improve power supply in the university community to encourage increased usage of electronic information resources among staff and students. Also, provision of adequate and relevant ICT facilities should be prioritized to help staff and students use electronic information resources satisfactorily. Lastly, reliable network connectivity should be provided to eradicate the incessant network failure experienced by staff and students in the use of electronic information resources.

Keywords: Use, Electronic Information Resources, Staff, Students, Maritime University and Delta State.

Introduction

The rapid advancement of digital technologies and the growing preference for electronic modes of access have compelled academic libraries to strengthen their provision of electronic information resources (EIRs). This is necessary to improve service delivery and to meet users' information needs promptly. In the twenty-first century, access to scholarly information has shifted from predominantly print formats to electronic and virtual platforms. This shift is multifaceted and poses considerable challenges to how academic libraries satisfy users' information needs. Staff and students in higher education institutions, particularly universities, increasingly rely on and prefer electronic resources. As a result, academic libraries have had to reconsider their service delivery models and give greater priority to electronic-based resources in order to enhance institutional effectiveness and efficiency.

Information resources are now widely digitised as e-books, e-journals, e-newspapers, electronic theses and dissertations, and e-magazines, among others, which allows rapid and convenient access. Their use among staff and students in higher education has become more common because of their currency and rich content (Ruzegea & Msonde, 2021). EIRs provide more equitable access to information and knowledge, independent of time, location, and subject discipline. University staff and students use them to support teaching, learning, and research. Unlike print materials, which are updated infrequently, EIRs offer current information. Since the advent of Information and Communication Technology (ICT), information resources have increasingly been produced in electronic formats that require a computer or other electronic device to access (Birla & Williams, 2020). Ternenge and Kashimana (2019) describe EIRs as supplements to printed sources. Abubakar and Adetimirin (2015) contend that they are important because they satisfy users' information needs and are readily accessible in academic libraries. Johnson et al. (2012) define EIRs as data presented electronically and accessible through computer networks. Natarajan and Santhi (2012) note that e-books, digital libraries, online journals, and e-learning tools represent the latest developments in academic libraries, made possible by ICT.

EIRs underpin the provision of accurate and timely information for better educational outcomes and research productivity. With the information explosion and the emergence of new technologies, much of the information that staff and students need is now located in library electronic collections, computer laboratories, and ICT centres (Olawale, Adegbore, & Akinolu, 2025). Libraries have also become increasingly digital, with books and magazines taking the form of e-books and e-magazines (Akpojotor, 2016). This transformation has facilitated global information sharing, and e-journals, e-books, and databases are now accessible even in remote areas. Jone (2008, as cited in Akpojotor, 2018) argued that EIRs mitigate storage problems and improve information flow by removing physical constraints on storing, accessing, and sharing information among multiple users. These developments have changed how staff and students seek information, making the process faster and less costly.

Togia and Tsigilis (2017) regard EIRs as valuable instruments for study, research, and learning. Chima-James and Ogaraku (2018) found that academic staff and students use them for research, seminar and conference paper writing, lecture note preparation, teaching, current awareness, and self-development. According to Kashyap (2016), the most commonly used types are e-books, e-journals, e-theses, e-research and technical reports, encyclopaedias, e-dictionaries, e-newspapers, and e-bibliographies. In universities, they support lesson planning, examination preparation, assignment writing, lecture note updating,

coursework research, and scholarly writing. Evolving user preferences have pushed academic libraries to prioritise electronic resources (Dadzie, 2005), and libraries are steadily moving from print to electronic collections as user needs change and e-resources gain popularity (Kesavan, 2009). Libraries are no longer confined to housing print materials. They now also provide online and electronic content (Yebowaah & Plockey, 2017). EIRs also foster collaborative research, use of communication tools, and knowledge creation and sharing. Okazie (2016) maintains that they complement rather than replace print materials.

In recent years, the use of EIRs among university staff and students has grown considerably. The ability to transmit, acquire, download, process, and disseminate knowledge on any topic is a strong motivating factor. EIRs widen access, improve usability and effectiveness, and open new avenues for productivity in teaching, learning, and research. Hadagali, Kumbar, Nelogal, and Bachalapur (2012) observe that these activities are increasingly dominated by electronic resources, and that users have come to recognise their importance. Ukpebor (2012) notes that students in particular depend on them for timely and reliable information and for collaboration with scholars worldwide. According to Akinnubi, Amupitan and Babatunde (2024), the utilization of electronic information resources is essential for staff and students, especially because they provide better, faster and easier access to information than information accessed through print media. Electronic information resources help to expand access, increase usability and effectiveness and establish new ways for staff and students to use information to be more productive in their teaching, learning and research activities. In contrast to print media, which are not regularly updated, the utilization of electronic information resources aid staff and students in staying current with changes in their respective subject fields. Therefore, the crux of this study is to investigate the use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State.

Objectives of the Study

The main objective of the study is to examine use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State.

The specific objectives are as follows:

1. Find out the electronic information resources used among staff and students of Nigeria Maritime University, Okerenkoko, Delta State.
2. Examine the purposes for which staff and students use electronic information resources in Nigeria Maritime University, Okerenkoko, Delta State.
3. Ascertain the challenges of the use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State.

Research Questions

The following research questions were raised to help guide the study.

1. What are the electronic information resources used among staff and students of Nigeria Maritime University, Okerenkoko, Delta State?
2. What are the purposes for which staff and students use electronic information resources in Nigeria Maritime University, Okerenkoko, Delta State?
3. What are the challenges of the use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State?

Review of Related Literature

Electronic information resources (EIRs) are digital, soft-copy information materials accessible outside traditional print formats. Olawale, Adegbore, and Akinolu (2025) define them as information stored in digital form on computers or computer-related

infrastructures such as CD-ROMs, flash drives, digital libraries, or the Internet. Deng (2010) describes them as library items in digital form, including e-books, e-newspapers, e-journals, databases, periodicals, archives, theses, dissertations, conference papers, and government files. Thanuskodi (2012) views them as information contained electronically and available via electronic systems and networks, while Oak (2016) sees them as frameworks where information is stored electronically and accessed through computer networks. Shariful (2012) adds that EIRs appear in electronic and digitised items accessible via the Internet or a library's internal database.

In academic environments, staff and students use a variety of EIRs to meet their information needs, including e-books, e-journals, online databases, and internet resources. Oni et al. (2016) found that students of Benson Idahosa University frequently accessed e-books (80%), e-journals (73%), e-newspapers/magazines (66%), and Wikipedia (57%). Daramola (2016) reported that e-journals, e-books, e-magazines, and e-mail were the most frequently used e-resources, mainly for completing assignments and research. Babarinde, Agbo, and Fagbemi (2022) found that schools in Enugu State employed a wide range of electronic tools for instruction, including phones (100%), slides (90%), internet facilities (60%), computers and projectors (66.6%), and television (37%).

Prangya and Rabindra (2013) identified commonly used online databases in higher institutions, including Emerald, Science Direct, Academic Search Premier, Oare Sciences, Hinari, Virtual Library, OPAC, CD-ROMs, e-books, e-journals, AGORA, and MEDLARS. Edem and Ani (2015) found that Nigerian university libraries offer e-journals and offline databases as the most popular resources. Oduwole and Akpati (2003) identified OPAC, CD-ROMs, databases, email, internet browsing, e-journals, online databases (Agora, Jstor, Ebscohost, Ajol, Hinari), e-books, websites, and e-abstracting databases like MEDLINE, E-news, E-pictures, and E-music. Thanuskodi (2012) listed e-books, digital libraries, online journals and magazines, e-learning tutors, and online tests. Ajayi, Shorunke, and Aboyade (2014) highlighted databases, e-books, e-journals, CD-ROMs, mailing lists, and electronic magazines and newspapers. Marasinghe (2025) found search engines, e-mail, e-books, e-reference sources, e-journals, e-newspapers, e-magazines, OPAC, e-seminar, e-conference papers, online databases, e-theses, e-dissertations, and CD/DVD popular among distance learners. Naick and Bachalla (2016) found heavy reliance on e-books, e-journals, e-newspapers, e-magazines, e-projects, e-theses, e-dissertations, e-reports, websites, and World Wide Web resources. Paul, Singha, and Choudhary (2015) found e-books (65.38%), online databases (38.46%), and e-journals (28.85%) most popular at Assam University, with only 12.5% using e-theses and e-dissertations.

Regarding purposes, Bhukuvhani et al. (2012) found that 86.7% of lecturers used EIRs for teaching and research. Adetimirin (2008) found staff and students used e-resources for study (e-books), research (e-journals), information/pleasure (e-newspapers/magazines), and reference (Wikipedia). Sohail and Ahmad (2017) reported significantly increased e-resource use in Indian higher education for studies, teaching, and research. Kaur (2000) found students, research scholars, and faculty used the internet for education and research. Madhusudhan (2007) found research scholars at Delhi University used search engines more than subject gateways. Das and Mahapatra (2019) reported e-resources used for latest information, project reports, and communication. Anyim (2020) found students perceive e-resources as beneficial for up-to-date information, learning efficiency, self-learning, unlimited information, and speedy access.

Akpojotor (2016) found students used EIRs to a very large extent for academic and research work. Adeniran (2013) found EIRs

had tremendous impact on academic performance at Redeemer's University, mainly for research, assignment, current awareness, information acquisition, e-mail, and news. Daramola (2016) found major purposes at the Federal University of Technology were assignment writing and research. Liu and Yang (2004) identified writing course-related papers, assignments, and research as major purposes. Lavanya and Santharooban (2018) reported over 90% used online resources for presentations and assignments. Kakai et al. (2004) found Makerere University undergraduates used e-resources for coursework, assignments, examinations, tests, final year research, updating knowledge, general information, supplementary reading, communication, and leisure.

Despite these benefits, challenges limit effective usage. Yebowaah and Plockey (2017) found 52.5% faced password issues, 38.8% low internet speed, 12.5% inadequate library staff and lack of librarian assistance, 11.3% lack of computers, 6.3% insufficient bandwidth, and 2.5% poor staff attitude. Bashorun, Isah, and Adisa (2011) found lecturers at the University of Ilorin rarely used e-resources due to short time, ignorance, inefficient communication, slow network, poor ICT services, unreliable electricity, and inadequate training. Gakibayo et al. (2013) identified inadequate training, unsatisfactory technical support, poor infrastructure, lack of power supply, and slow internet connectivity as major barriers. Manjack et al. (2019) identified intermittent power outages, poor internet connectivity, and lack of required tools. Ozoemelem (2009) found concerns about slow downloads, navigation difficulty, difficulty finding information, poor search abilities, expensive access, power interruptions, and inaccessible websites. Bashorun (2011) found low utilisation at the University of Ilorin due to lack of awareness, power outage, ineffective communication, inadequate searching skills, lack of ICT knowledge, difficulties reading from screens, insufficient ICT facilities, and poor network connectivity.

Methodology

This study adopted a survey research design. According to Creswell (2014), a survey design is appropriate for studies that seek to describe the characteristics, opinions, or behaviours of a population based on data collected from a sample. The design was considered suitable because the study sought to examine the use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State. The population of the study comprised 2,735 staff and students of Nigeria Maritime University, Okerenkoko, in the research study year. The stratified random sampling technique was used to select a representative sample size of 117 staff and students from the total population. Stratified random sampling was considered appropriate because it ensures that different subgroups within the population (staff and students) are adequately represented in the sample, thereby reducing sampling bias and improving the representativeness of the findings (Etikan, Musa, & Alkassim, 2016).

A structured questionnaire was used as the instrument for collecting primary data for the study. The questionnaire was designed to elicit information on the electronic information resources used by staff and students, the purposes for which they use these resources, and the challenges they encounter in using them. The use of a structured questionnaire ensured uniformity in the data collection process and facilitated easy analysis of responses. Data collected through the questionnaire were analyzed descriptively. The results were presented in frequency tables and percentages, as well as statistical mean. Descriptive analysis was considered appropriate because it provides a clear and concise summary of the data, making it easy to identify patterns and draw meaningful conclusions regarding the use of electronic information resources among the respondents.

Data Analysis and Result Presentation

Table 1: Questionnaire Return Rate

No. of Questionnaire Distributed	No. of Questionnaire Retrieved	Percentage (%) of the Returned Questionnaire
117	109	93.16%

Table 1 presents the questionnaire return rate for the study. A total of 117 copies of the questionnaire were distributed to the respondents, comprising both staff and students of Nigeria Maritime University, Okerenkoko, Delta State. Of this number, 109 copies, representing 93.16%, were retrieved and considered suitable for the research. This high return rate indicates a strong level of cooperation and responsiveness from the respondents, which enhances the credibility and reliability of the data collected.

Section A: Respondents' Demographic Characteristics

Table 2 reveals the category of respondents that responded to the questionnaire. As revealed, 46 respondents which accounted for 42.20% were staff, while 63 respondents which accounted for 57.80% were students. This implies that more students responded to the questionnaire than staff.

Table 1: Gender Distribution of the Respondents

Gender	No. of Respondents	Percentage (%)
Male	71	65.14%
Female	38	34.86%
Total	**109**	**100%**

Table 2 reveals the distribution of respondents by category. As shown in the table, 46 respondents, representing 42.20%, were staff of Nigeria Maritime University, while 63 respondents, representing 57.80%, were students. This indicates that more students responded to the questionnaire than staff. The higher proportion of student respondents may be attributed to the fact that students constitute a larger segment of the university population and are more readily accessible for data collection. Nevertheless, the representation of both staff and students ensures that the study captures the perspectives of the two major groups of electronic information resource users in the institution. This balanced representation strengthens the validity of the findings, as it reflects the experiences and opinions of both academic staff and students regarding the use of electronic information resources.

Research Question 1: What are the electronic information resources used among staff and students of Nigeria Maritime University, Okerenkoko, Delta State?

Table 3: Electronic information resources used among staff and students of Nigeria Maritime University

Note: SA (Strongly Agree); A (Agree); D (Disagree); SD (Strongly Disagree)

S/N	Electronic Information Resources	SA	A	D	SD	Mean	Decision
1	E-books, e-journals	76	21	9	3	3.56	Accept
2	E-theses, e-dissertations	53	28	17	11	3.13	Accept
3	Online databases (Emerald, Science Direct, Hinari, Agora, Research4Life, ProQuest,	81	15	9	4	3.59	Accept

	Ebscohost, Jstor, ERIC, Elsevier)						
4	E-newspapers, e-magazines	62	23	13	11	3.25	Accept
5	Internet resources (email, Wikipedia, Google search, World Wide Web)	74	35	-	-	3.68	Accept
6	CD/DVD, CD-ROM	15	17	52	25	2.20	Reject
	Aggregate Mean					**3.23**	
	Criterion Mean					**2.50**	

Table 3 shows that internet resources (email, Wikipedia, Google search, World Wide Web) had the highest mean score of 3.68, making them the most widely used electronic information resources. Online databases (Emerald, Science Direct, Hinari, Agora, Research4Life, ProQuest, Ebscohost, Jstor, ERIC, Elsevier) followed closely with a mean of 3.59, while e-books/e-journals ranked third with 3.56. E-newspapers/e-magazines (3.25) and e-theses/e-dissertations (3.13) were also accepted but less frequently used. CD/DVD and CD-ROM had a mean score of 2.20, below the criterion mean of 2.50, and were therefore rejected, indicating that staff and students do not use these storage media. This decline reflects the global shift toward online and internet-based resources.

With an aggregate mean of 3.23 (above the criterion mean of 2.50), the study concludes that staff and students of Nigeria Maritime University use electronic information resources, with a clear preference for internet-based and online database resources over physical electronic storage media.

Research Question 2: What are the purposes for which staff and students use electronic information resources in Nigeria Maritime University, Okerenkoko, Delta State?

Table 4: Purposes for which staff and students use electronic information resources
Note: SA (Strongly Agree); A (Agree); D (Disagree); SD (Strongly Disagree)

S/N	Purposes	SA	A	D	SD	Mean	Decision
1	Teaching and learning	92	17	-	-	3.84	Accept
2	Test preparation	53	38	11	7	3.26	Accept
3	Research work	96	13	-	-	3.88	Accept
4	Leisure reading	59	43	5	2	3.46	Accept
5	Assignment writing	66	28	10	5	3.42	Accept
6	Examination preparation	61	12	24	12	3.12	Accept
7	Seminar preparation	59	37	9	4	3.38	Accept
8	Updating knowledge	83	26	-	-	3.76	Accept
9	General information gathering	64	36	6	3	3.48	Accept
10	Updating lecture notes	51	43	9	6	3.27	Accept
	Aggregate Mean					**3.49**	
	Criterion Mean					**2.50**	

Table 4 reveals that research work had the highest mean score of 3.88, indicating that research is the primary purpose for using electronic information resources. Teaching and learning followed closely with 3.84, and updating knowledge ranked third with 3.76. These three purposes highlight the academic nature of electronic resource usage in the

institution. Other accepted purposes include general information gathering (3.48), leisure reading (3.46), assignment writing (3.42), seminar preparation (3.38), updating lecture notes (3.27), test preparation (3.26), and examination preparation (3.12). Although examination preparation had the lowest mean, it still exceeded the criterion mean of 2.50.

With an aggregate mean of 3.49, the study concludes that staff and students use electronic information resources for multiple purposes, with academic activities particularly research, teaching, learning, and knowledge updating being the primary drivers.

Research Question 3: What are the challenges of the use of electronic information resources among staff and students of Nigeria Maritime University, Okerenkoko, Delta State?

Table 5 Challenges of the use of electronic information resources among staff and students

Note: SA (Strongly Agree); A (Agree); D (Disagree); SD (Strongly Disagree)

S/N	Challenges	SA	A	D	SD	Mean	Decision
1	Unavailability of network to access e-resources	53	49	5	2	3.40	Accept
2	Poor network connectivity	63	46	-	-	3.58	Accept
3	Insufficient ICT facilities	49	51	6	3	3.34	Accept
4	Difficulties in reading from the screen	54	23	21	11	3.10	Accept
5	Poor ICT knowledge	17	19	47	26	2.25	Reject
6	Restrictions to e-resources	55	38	9	7	3.29	Accept
7	Poor power supply	66	43	-	-	3.60	Accept
8	Slow downloads	59	41	6	3	3.43	Accept
9	Difficulty in navigation	43	39	18	9	3.06	Accept
	Aggregate Mean					**3.23**	
	Criterion Mean					**2.50**	

Table 5 identifies poor power supply as the most significant challenge, with the highest mean score of 3.60. Poor network connectivity (3.58) and slow downloads (3.43) followed closely. These findings indicate that infrastructural deficiencies are the primary obstacles to effective electronic resource usage. Other accepted challenges include unavailability of network to access e-resources (3.40), insufficient ICT facilities (3.34), restrictions to e-resources (3.29), difficulties in reading from the screen (3.10), and difficulty in navigation (3.06). Poor ICT knowledge had a mean score of 2.25, below the criterion mean of 2.50, and was therefore rejected, suggesting that respondents are confident in their ICT skills and are hindered mainly by external, infrastructural factors.

With an aggregate mean of 3.23, the study concludes that staff and students encounter significant challenges in using electronic information resources, predominantly due to poor power supply, weak network connectivity, and inadequate ICT facilities issues consistent with infrastructure deficits common in developing countries.

Discussion of Findings

The findings revealed that staff and students of Nigeria Maritime University, Okerenkoko use electronic information resources such as e-books/e-journals, e-theses/e-dissertations,

online databases (Emerald, Science Direct, Hinari, Agora, Research4Life, ProQuest, Ebscohost, Jstor, ERIC, Elsevier), e-newspapers/e-magazines, and internet resources (email, Wikipedia, Google search, World Wide Web). The findings corroborate the findings of Daramola (2016) who found that e-journals, e-books, e-magazines, e-newspapers and e-mail constitute the most frequently used e-resources among undergraduate students. In the same vein, Prangya and Rabindra (2013) reported the electronic information resources, specifically online databases, commonly used by staff and students in higher institutions to include Emerald, Science Direct, Ebscohost, Academic Search Premier, Oare Sciences, Hinari, Virtual Library, collections of e-books, e-journals covering a range of subjects, and significant bibliographic databases like AGORA. Similarly, Ajayi, Shorunke and Aboyade (2014) highlighted the electronic information resources used among staff and students to include online databases, e-books, e-journals, mailing lists, electronic magazines and electronic newspapers.

The findings revealed that staff and students of Nigeria Maritime University use electronic information resources for different purposes such as for teaching/learning, test preparation, research work, leisure reading, assignment writing, examination preparation, seminar preparation, updating knowledge, general information gathering, and updating of lecture notes. This finding is in agreement with the findings of Adetimirin (2008) who found that majority of staff and students used e-resources for study, research, information/pleasure, and reference purposes. Also, Bhukuvhani, Chiparausha, and Zuvalinyenga (2012) found that staff and students used at least one or more electronic information sources to find information for their teaching and/or research. Sohail and Ahmad (2017) reported that majority of students and faculty members utilize electronic information resources for their studies, teaching and research. Kaur (2000) found that students, research scholars, and faculty members used the internet and other e-resources for education and research purposes.

The findings revealed that staff and students of Nigeria Maritime University encounter challenges in the use of electronic information resources. Prominent among the challenges are unavailability of network to access e-resources, poor network connectivity, insufficient ICT facilities, difficulties in reading from the screen, restrictions to e-resources, poor power supply, slow downloads, and difficulty in navigation. This finding is very much in line with the findings of Yebowaah and Plockey (2017) who found that low internet speed, lack of ICT facilities, insufficient or no bandwidth constitute the major challenges in the use of e-resources among staff and students. Corroborating this view, Bashorun, Isah, and Adisa (2011) found that lecturers at the University of Ilorin rarely use electronic resources due to challenges of slow network speeds, poor ICT services, unreliable electricity supplies, and inadequate training. Ozoemelem (2009) found that students encounter problems of slow downloads, difficulty in navigation of e-resources, poor search abilities, power interruptions, and unavailable or inaccessible websites in the use of e-resources.

Conclusion and Recommendations

Conclusion and recommendations

Based on the findings of the study, it is concluded that staff and students of Nigeria Maritime University, Okerenkoko, Delta State, use electronic information resources for academic, research, and personal development purposes. However, the effective use of these resources is significantly hampered by infrastructural and technical challenges, particularly poor power supply, poor network connectivity, and inadequate ICT facilities. Addressing these challenges is essential to enhancing the utilisation of electronic information resources and, consequently, improving teaching, learning, and research outcomes in the institution. In line with the findings of this study, the following recommendations are

made:

1. The management of Nigeria Maritime University should endeavour to improve power supply within the university community. This will encourage and foster increased usage of electronic information resources among staff and students, as reliable electricity is fundamental to the operation of ICT facilities and electronic resource access.

2. The provision of adequate and relevant ICT facilities should be prioritised by the Nigeria Maritime University. This will assist staff and students in the satisfactory use of electronic information resources, thereby enhancing their academic and research productivity.

3. Reliable network connectivity should be provided in Nigeria Maritime University to eradicate the incessant network failure experienced by staff and students in the use of electronic information resources. Stable internet access is critical to ensuring seamless and efficient access to online databases, e-journals, and other electronic resources.

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