

Exploring the Use of Electronic Resources for Undergraduate Learning at the National Open University of Nigeria in Kwara State

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Abstract: - The significance of learning in achieving academic and career success is a well-established reality affirmed by existing literature. The study investigates the use of e-resources for undergraduate education at the National Open University of Nigeria in Kwara State. Employing a survey research method, the study targeted all undergraduates enrolled at NOUN in Kwara State. The Israel Model was used to allocate responses to each NOUN center based on their projected population. The data collection instrument was a modified questionnaire with good psychometric qualities. To address the study questions and evaluate the hypotheses, descriptive and inferential statistics were used in Statistical Product and Service Solution (SPSS) version 20.0 at a significance level of 0.05. The results showed that undergraduate students interacted effectively with electronic learning resources. In addition, no statistically significant differences in the usage of e-resources for learning were detected based on gender or digital age. The study revealed that deploying proper learning tools can considerably improve the learning experience for undergraduates. The study recommends encouraging undergraduates, regardless of gender, to use e-resources for learning. This approach is considered to be advantageous for establishing good learning outcomes.

Key-Words: - academic success, digital age, e-resources, kwara state, learning engagement, learning tools, NOUN, undergraduate education.

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1 Introduction

The advancement of information and communication technology (ICT) has played a significant role in various sectors, particularly education. The evolution of ICT over the years has significantly transformed the landscape of education and rendered teaching and learning more accessible and enjoyable. This has, in turn, led to a reconfiguration of how individuals live, learn, work, and participate in leisure activities, [1], [2]. Through ICT, learning is easily accessible, and knowledge is not solely dependent on the teacher but serves as a primary guide for students. It is noteworthy that there were approximately 4.54 billion active internet users, including 4.18 billion unique mobile internet users, indicating a growth in internet use in developing countries, [3]. Consequently, technology plays a vital role in wealth distribution, enhancing the quality of life, driving genuine economic

progress, and instigating change within any given society, [4], [5]. This highlights the digital divide in the utilization of ICT resources, which separates individuals with access to technology, computers, and the Internet from those who lack such access, [6], [7].

Nations globally recognize the potential of the advancing information era, marked by information and communication technologies (ICTs). These technologies are propelling development agendas worldwide. Both developed and developing countries are exploring strategies to accelerate progress by integrating and using ICT in their economies and societies, [8], [9], [10]. The potential of ICT to enhance educational access and quality is significantly pronounced in developed nations. Broadly, ICT encompasses technologies used for gathering, storing, manipulating, and transmitting information to end-users. In this digital age, ICT is pivotal in education, revolutionizing teaching into a

format that encourages self-directed learning. Functionally, ICT has streamlined information dissemination, enhancing users' operational efficiency. The scope of ICT encompasses more than just devices; it includes electronic technologies used for storing and accessing information, [11]. The primary goal of ICT in the classroom is to improve teaching and learning by providing tools to optimize instructional approaches and support for communication and cooperation, whether in person or online, [12].

According to, [13], [14], ICT can be defined as a comprehensive term that covers all communication technologies, including the internet, wireless networks, cell phones, satellite communication, and digital television, facilitating access to information. ICT plays a pivotal role in enhancing the learning experience for students in the 21st century, [15]. ICT plays a pivotal role in enhancing the learning experience for students in the 21st century, [15]. ICT integration into education systems globally, as highlighted by, [16], emphasizes its significance for effective knowledge transfer. In today's digital era, diverse technological devices like computers, tablets, laptops, and mobile phones are employed for instructional delivery. These tools not only extend learning beyond the classroom but also promote learner autonomy. Furthermore, ICT applications facilitate seamless information exchange between learners and instructors, fostering interactivity and collaboration, [17]. The study, [18], examines the impact of social media on students' academic performance in today's digitally globalized era. They highlight the dual nature of integrating social media into education, noting potential distractions and misinformation. The study emphasizes the need to address privacy concerns regarding student data security. Despite challenges, social media fosters engagement, collaboration, and access to educational resources. The paper suggests balanced usage, digital literacy training, and ongoing monitoring for optimal benefits in education.

The influence of ICT on distance learning has revolutionized traditional methods of information retrieval, particularly through printed library materials. While print resources were once the primary format for meeting library users' needs, electronic or digital resources (e-resources) now take precedence, catering to researchers and information seekers, [19], [20]. This shift, noted by, [21], has prompted investments in electronic infrastructure and connectivity, transforming the academic environment and necessitating innovative approaches to enhance higher education quality. The

International Federation of Library Associations and Institutions defines e-resources as materials accessible via computer devices, whether a PC, mainframe, or handheld mobile device. These are electronic representations of information accessible through electronic systems and computer networks, [22], [23], [24], [25].

E-resources can be accessed either online or locally, encompassing e-journals, e-books, databases (including full-text, aggregated, indexing, and abstracting), reference materials (such as bibliographies, dictionaries, directories, and encyclopedias), numeric and statistical databases, e-images, e-audiovisual resources, and Online Public Access Catalogues (OPACs), among others. These electronic resources, which include texts, audio, visuals, graphics, and animations, are accessible through digital technologies, greatly expanding access to information beyond the confines of traditional print collections in libraries, [26]. They are becoming essential components of library resources in academic institutions and are anticipated to be extensively used by university students across various academic disciplines, [27], [28].

Embracing this approach would diversify the resources accessible to students, available anytime and anywhere. However, for the electronic learning system to effectively enhance learning quality and student performance, it requires thorough planning and clear instruction, [29]. The significance of e-resources in open and distance education (ODE) has been recognized in Nigeria for some time. Studies have identified various factors affecting e-resource utilization, including information literacy, limited resources, fields of interest, skills, awareness, and time commitments, [30], [31], [32], [33], [34], [35]. The study, [36], found that students lacked motivation to use e-resources, as they did not perceive them as an effective means of relaxation. She also pointed out various challenges faced by students, including a shortage of computers in the units, technical issues, and insufficient orientation toward using e-resources. As a result, postgraduate students did not fully utilize e-resources due to factors like limited publicity, inadequate training, access restrictions like passwords and usernames, and limitations such as unreliable internet connections, [37].

The study, [38], investigated the use of electronic resources by postgraduate students at the University of Cape Coast. Their objectives were to assess students' awareness of electronic resources, frequency of usage, computer literacy, and identification of usage problems. Findings showed

students were aware of e-resources but preferred Google Scholar and web databases over library databases. Poor internet connectivity was the primary obstacle to effective e-resource access. The study, [39], explores the impact of undergraduate students' learning skills on electronic resource utilization in private universities in South-west Nigeria. The findings reveal students' difficulties in efficiently using e-resources and emphasize the significance of improving critical skills and subscribing to appropriate databases. The study, [33], investigates electronic resource awareness and usage among Fountain University undergraduates in Osun State, Nigeria. Findings from a descriptive survey of 1000 participants indicate widespread awareness, substantial usage, and proficient skills, emphasizing the crucial role of electronic resources in empowering undergraduates.

They offer diverse search options for users and library management. The advent of e-resources has significantly transformed information handling in Nigerian academic settings, particularly university libraries, [40], [41], revolutionizing how information is delivered to university communities, [42].

The study by, [43], explored e-resource availability and accessibility at the libraries of Michael Okpara University of Agriculture and the National Root Crop Research Institute in Nigeria. The findings demonstrated irregular capacity, and limited accessibility, and identified problems, leading to recommendations for improved facilities and regulations. The study, [44], posited that the term "digital divide" encapsulates the distinction between individuals (digital natives and digital immigrants) with both access to and proficiency in ICT, particularly in Internet resources, and those without such access and opportunity. The significance of incorporating technology in education encompasses the reshaping of the teacher's role and the elimination of obstacles to learning, particularly in the context of distance education, [45]. Likewise, an educational institution's e-learning system uses the internet and associated instructional resources to facilitate learning, teaching, and, notably, course management, [46].

The study, [47], investigates the adoption of e-learning in Nigerian private tertiary institutions, focusing on M-University. While the university's e-learning resources are deemed sufficient and accessible, full utilization is hindered by factors like user attitudes, inadequate internet, and insufficient training. The study suggests continuous upgrades and training to optimize e-learning usage. The study,

[48], examined the use of electronic resources by academic staff at the University of Ilorin, Nigeria. The study found that most academic staff used e-resources for research, curriculum development, and self-education. They primarily accessed electronic information through search engines and private subscriptions. Hindrances included slow Internet, power supply issues, limited e-resource availability, and inadequate online access. The study recommended improving Internet facilities and providing training to encourage more effective use of electronic resources.

In Nigeria, there is a significant disparity between the number of applicants for tertiary education and the actual annual admissions. The rise of information and communication technologies has sparked a need to accommodate qualified students who face limitations in conventional universities due to resource constraints. This prompted the introduction of open and distance education (ODE). Therefore, this study aims to investigate the use of e-resources for learning among undergraduate students at the National Open University of Nigeria.

2 Methodology

The study used a quantitative research design with a survey technique. This design is appropriate since it is based on unbiased observation and description of subject behavior. It also aids in the definition of problems and the collection of relevant data. This design will be used in the research to obtain information and data using a questionnaire. The study's target population consists of undergraduates from Nigeria's National Open University (NOUN) in Kwara State. The sample was chosen using a sequential sampling approach. Initially, NOUN study centers in Ilorin and Offa were purposefully selected as the sample institutions due to their accessibility to a wide range of students. The sample size of 334 was then determined proportionately using, [49], and the research instrument (the questionnaire) was administered using a simple random sampling technique. The Population and Sample Size of NOUN Undergraduates Per Study Centre is presented in Table 1.

Table 1. Population and Sample Size of NOUN Undergraduates Per Study Centre using, [49].

Name of Centre	Population	Sample
NOUN Undergraduates in Ilorin Study Centre	526	222
NOUN Undergraduates in Offa Study Centre	158	112
Total sample size		334

Source: Data Management Office, NOUN Centre, Ilorin and Offa

2.1 Research Instrument

The research used a researcher-designed questionnaire to collect data, chosen for its ability to efficiently gather real-time data from a large sample. The questionnaire comprises four sections: Section A collects demographic information (e.g., gender and specialization); Section B assesses the availability of e-resources, rated as "Available" or "Not Available"; Section C examines undergraduates' e-resource utilization, using a modified Likert Mode Scale with options "Always Used (AU)," "Seldom Used (SU)," "Rarely Used (RU)," and "Never Used (NU)"; and Section D gauges undergraduates' attitudes towards e-resources, rated on a modified Likert Mode Scale with options "Strongly Agree (SA)," "Agree (A)," "Disagree (D)," and "Strongly Disagree (SD)," with weighted scores from 4 to 1. The data was organized using Microsoft Excel and analyzed with SPSS (Statistical Package for Social Sciences).

2.2 Validation of the Research Instruments

This process aimed to validate the questionnaire by ensuring its appropriateness, checking for spelling and grammar errors, and confirming its face and content validity. Participants were asked to make corrections to ensure the questionnaire items aligned with the study's focus. To assess instrument reliability, a pilot test was conducted with 20 NOUN undergraduates at the NOUN Study Centre in Ibadan, Oyo State, Nigeria. This testing occurred outside the intended sample. Twenty questionnaires were administered and completed, and the results were used to establish reliability and internal consistency, calculated using Cronbach's alpha at a significance level of 0.05. The obtained results were 0.694 for Section B (Availability of Institutional-Based E-Resources for Learning), 0.662 for Section C (Undergraduates' Utilisation of E-Resources for Learning), and 0.699 for Section D (Undergraduates' Attitude Towards E-Resources for Learning). The overall instrument's reliability value was 0.811.

2.3 Ethical Consideration

Throughout the data collection process, ethical standards were upheld. The researcher guaranteed that participants were not pressured to complete the questionnaire and had the freedom to participate willingly. Additionally, strict confidentiality and privacy measures were adhered to at all stages, including the administration, compilation, and reporting of research results.

2.4 Data Analysis Techniques

The study used both descriptive and inferential statistical analysis to answer research questions on participant demographics. Descriptive statistics were employed to examine characteristics such as socio-demographic features, digital age group, field of specialization, and the use of electronic resources among undergraduate students. Quantitative variables like gender, age, and area of specialization were analyzed using tools like frequency, percentage, mean, and variance. A four-point Likert-scale questionnaire was used, with responses above 2.50 indicating agreement. Inferential statistics, including independent t-tests and ANOVA, were used to test hypotheses. T-tests compared mean differences between groups (male and female students), while ANOVA identified variations in e-resource utilization across different majors (Arts, Education, Science & Technology, Communication & Languages, and Social Science).

3 Results

Research Question One: What is the utilization of e-resources for learning among NOUN undergraduates in Kwara State? The Utilisation of e-resources for Learning is presented in Table 2.

Table 2. Utilisation of e-resources for Learning

S/N	Item	Always Used Freq. (%)	Seldom Used Freq. (%)	Rarely Used Freq. (%)	Never Used Freq. (%)
1.	Educational CDs	134 (42.1)	113 (35.5)	37 (11.6)	34 (10.7)
2.	e-libraries platform	130 (40.9)	131 (41.2)	37 (11.6)	20 (6.3)
3.	e-books and e-manuscripts	141 (44.3)	123 (38.7)	40 (12.6)	14 (4.4)
4.	e-journals	131 (41.2)	128 (40.3)	42 (13.2)	17 (5.3)
5.	e-magazines	141 (44.3)	128 (40.3)	40 (12.6)	9 (2.8)
6.	Online newspapers	122 (38.4)	140 (44.0)	38 (11.9)	18 (5.7)
7.	Online research report	150 (47.2)	115 (36.2)	39 (12.3)	14 (4.4)
8.	Online news	124 (39.0)	119 (37.4)	41 (12.9)	34 (10.7)
9.	Online maps	140 (44.0)	119 (37.4)	37 (11.6)	22 (6.9)
10.	Online instructional videos	129 (40.6)	124 (39.0)	38 (11.9)	27 (8.5)
11.	Online instructional audio	133 (41.8)	118 (37.1)	36 (11.3)	31 (9.7)
12.	Online catalogues	123 (38.7)	134 (42.1)	40 (12.6)	21 (6.6)
Cumulative Total		1598 (41.9)	1492 (39.1)	465 (12.2)	261 (6.8)

Quantitative variables like gender, age, and area of specialization were analyzed using tools like

frequency, percentage, mean, and variance. A four-point Likert-scale questionnaire was used, with responses above 2.50 indicating agreement. Inferential statistics, including independent t-tests and ANOVA, were used to test hypotheses. T-tests compared mean differences between groups (male and female students), while ANOVA identified variations in e-resource utilization across different majors (Arts, Education, Science & Technology, Communication & Languages, and Social Science).

3.1 Hypotheses Testing

A. Hypothesis One: There is no significant difference between male and female NOUN undergraduates' utilization of e-resources for learning in Kwara State.

Table 3. Independent Sample T-test Analysis of Gender Difference in NOUN Undergraduates' Utilisation of e-resources for Learning.

Gender	N	X	SD	df	t	Sig. (2-tailed)	Remark
Male	11	3.0	.33				
	8	7	4				
				31	3.21	.001	Rejected
Female	20	3.2	.37				
	0	1	9				

The data in Table 3 indicates a noteworthy distinction in the utilization of e-resources for learning between male and female NOUN undergraduates in Kwara State. The results of the hypothesis test (df = 316, t = 3.214, p < 0.05 = 0.001) support this observation. Consequently, the hypothesis positing that "there is no significant difference between male and female NOUN undergraduates' utilization of e-resources for learning in Kwara State" is rejected.

B. Hypothesis Two: There is no significant difference in NOUN undergraduates' utilization of e-resources for learning in Kwara State based on the digital age group.

Table 4. Analysis of Variance (ANOVA) of NOUN Undergraduates' Utilisation of e-resources for Learning based on Digital Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.161	2	.080	.589	.555
Within Groups	42.916	315	.136		
Total	43.077	317			

Table 4 presents the ANOVA analysis of the variance in NOUN undergraduates' utilization of e-resources for learning in Kwara State, categorized by digital age group. The outcome indicates that "there is no difference in NOUN undergraduates' utilization of e-resources for learning in Kwara State based on digital age group" (F(3,317) = 0.589, p>0.05 = 0.555). Consequently, the null hypothesis is accepted.

Table 5. Analysis of Variance (ANOVA) of NOUN Undergraduates' Utilisation of e-resources for Learning based on Area of Specialisation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.265	3	.088	.649	.584
Within Groups	42.811	314	.136		
Total	43.077	317			

Table 5 displays the ANOVA analysis of the variance in NOUN undergraduates' utilization of e-resources for learning in Kwara State, stratified by area of specialization. The outcome suggests that "there is no significant difference in NOUN undergraduates' utilization of e-resources for learning in Kwara State based on area of specialization" (F(3,317) = 0.649, p>0.05 = 0.584). As a result, the null hypothesis is accepted.

4 Discussion

This study investigates the impact of ICT on the ODE system as it transitions from conventional dependency on printed materials to digital resources known as e-resources. Despite efforts to promote e-resource usage in the Nigerian ODE system, a considerable number of NOUN undergraduates still prefer printed materials, deviating from system expectations. As a result, NOUN undergraduates' use of electronic resources remains limited. The study emphasizes the critical role of undergraduate attitudes in generating this hesitation, implying that individual factors such as gender, digital age group, and area of specialization contribute to this tendency. Moreover, the study discovered a wide range of e-resources for learning among NOUN students in Kwara State, including online instructional materials, e-books, e-journals, and more. It also emphasized NOUN undergraduates' regular use of e-resources, emphasizing the need for mobile connectivity for accessing these materials. In addition, the study discovered no significant differences in the utilization and attitude towards e-resources for learning among NOUN undergraduates in Kwara State based on their field

of study. Language competency, computer literacy, and information literacy, according to the researchers, may all contribute to the observed consistency.

5 Conclusion

The impact of electronic resources on undergraduate learning experiences at the National Open University of Nigeria (NOUN) in Kwara State has been discussed in this research using a survey research approach. The study confirms that undergraduates interact well with electronic resources for learning, presenting the important role these resources play in bridging educational gaps, reducing geographical inequities, and combating marginalization. The implementation of e-resources at NOUN has been instrumental in the institution's global prominence. The study reveals that the adoption of digital resources has occurred seamlessly, with no observable gender or age-related differences, emphasizing the favorable effect on students' attitudes and utilization. Practically, this study emphasizes the ongoing imperative to prioritize emerging technologies at NOUN. Stakeholders are urged to empower students by creating an atmosphere that allows for the most effective use of these technologies. The practical application is a consistent commitment to delivering cutting-edge resources and ensuring that students have the requisite abilities to understand and use these technological breakthroughs for academic advantage. Future studies might look at the long-term effects of integrating e-resources and future technology. The present study's practical implications are immediate, advocating for the ongoing improvement of NOUN's digital infrastructure, ensuring students have unrestricted access to evolving resources, and ultimately maximizing their distance education learning experience.

References:

- [1] Adelakun, N. O. (2023, March 15). Impact of information and communication technology on students' academic performance. *Information Matters*, Vol. 3, Issue 3. <http://dx.doi.org/10.2139/ssrn.4417299>.
- [2] Williamson, B. (2017). Big data in education: The digital future of learning, policy and practice. *Big Data in Education*, 1-256.
- [3] Adelakun, N. O., Olanipekun, B. A. & Bakinde, S. A. (2020) Easy Approach to A Responsive Website Design Using Artisteer Application Software, *International Research Journal of Modernization in Engineering Technology and Science*, Vol. 2, Issue 3. Pp 1-6, <http://doi.org/10.5281/zenodo.3930473>
- [4] Babalola, E. O., Boor, C. H., Aladesusi, G. A., & Shomoye, M. A. (2021). Development and validation of digital photo series for the teaching of BT in Ilorin, Nigeria. *Indonesian Journal of Educational Research and Technology*, 1(3), 105-116.
- [5] Ugwu, N. P., & Nnaekwe, K. (2019). The concept and application of ICT to teaching/learning process. *International Research Journal of Mathematics, Engineering and IT*, 6(2).
- [6] Harris, C., Straker, L., & Pollock, C. (2017). A socioeconomic related'digital divide'exists in how, not if, young people use computers. *PloS one*, 12(3), e0175011. <https://doi.org/10.1371/journal.pone.0175011>
- [7] Flynn, S. (2022) Bridging the Age-based Digital Divide: An Intergenerational Exchange during the First COVID-19 Pandemic Lockdown Period in Ireland, *Journal of Intergenerational Relationships*, 20:2, 135-149, <https://doi.org/10.1080/15350770.2022.2050334>
- [8] Matthes, M., & Kunkel, S. (2020). Structural change and digitalization in developing countries: Conceptually linking the two transformations. *Technology in society*, 63, 101428. <https://doi.org/10.1016/j.techsoc.2020.101428>
- [9] Buabeng-Andoh, C. & Issifu, Y. (2015). Implementation Of ICT In Learning: A Study of Students In Ghanaian Secondary Schools, *Procedia - Social and Behavioral Sciences* 191, 1282–1287, <https://doi.org/10.1016/j.sbspro.2015.04.555>
- [10] Adelakun, N. O.; Abdulhamid, G. I. & Mosaku, A. O. (2022), Empirical Study of Digital Technology on Engineering Students' Academic Performance, Paper presented at the 3rd International Conference on Innovative Trends in Business & Technology (iCITBT 2022), October 28th & 29th, Innovative Knowledge Sharing Platform (IKSP) & Sindh Agriculture University, Munchen, Germany.
- [11] Setyowati, W., Widayanti, R., & Supriyanti, D. (2021). Implementation of e-business information system in indonesia: Prospects and challenges. *International Journal of Cyber and IT Service Management*, 1(2), 180-188. <https://doi.org/10.34306/ijcitsm.v1i2.49>

- [12] Chisag, J. C. C., & Cruzado, J. A. G. (2020). Results validation about the adoption model of information and communication technologies applied to the technical University of Cotopaxi. *WSEAS Transactions on Environment and Development*, págs, 158-171.
<https://doi.org/10.37394/232015.2020.16.16>
- [13] Jones, P., Wynn, M., Hillier, D., & Comfort, D. (2017). The sustainable development goals and information and communication technologies. *Indonesian Journal of Sustainability Accounting and Management*, 1(1), 1-15.
<https://doi.org/10.28992/ijSAM.v1i1.22>
- [14] Devi, S. (2018). ICT in Teacher Education Need of the Hour, *International Journal of Innovative Science and Research Technology*, 3(3), 474-476.
- [15] Aleksic-Maslac, K., Sinkovic, B., & Vranesic, P. (2017). Influence of gamification on student engagement on a course-Information and Communication Technologies. *WSEAS Transactions on Advances in Engineering Education*, 13, 113-122.
- [16] Mathew, D., Joro, I. D., & Haruna, M. (2015, February). The Role of Information Communication Technology in Nigeria Education System. *International Journal of Research in Humanities and Social Studies*, 2(2), 64-68.
- [17] Adetunla, G. O. (2016). Perceived Ease and Use of Electronic Information Resources (Eir) By Undergraduate Students of Private Universities in Oyo State Nigeria. *African Journal of Education and Practice*, 1(2), 15-28.
- [18] Adelokun, N. O., Olajide, M. B., Shomoye, M. A., & Adebisi, K. L. (2023, August 22). The significance of social media in shaping students' academic performance: challenges, benefits, and quality assurance outlook. *Information Matters*, Vol. 3, Issue 8.
<http://dx.doi.org/10.2139/ssrn.4576302>.
- [19] Ebinuwele, E. G. (2016). Digital Perseverations of Library Resources in Nigeria. *NG-Journal of Social Development*, 5, 35-40.
- [20] Sima, V., Gheorghe, I. G., Subić, J., & Nancu, D. (2020). Influences of the industry 4.0 revolution on the human capital development and consumer behavior: A systematic review. *Sustainability*, 12(10), 4035.
<https://doi.org/10.3390/su12104035>.
- [21] Joel, A. P. (2020). Awareness and Purpose of Electronic Information Resources among Postgraduate Students of Library and Information Science in Borno State, East African Scholars J Edu Humanit Lit, 3(8), 362-366,
<https://doi.org/10.36349/EASJEHL.2020.v03i08.004>
- [22] Johnson, S., Evensen, O. G., Gelfand, J., Lammers, G., Sipe, L., & Zilper, N. (2012). Key Issues for E-resources Collection Development: A Guide for Libraries. International Federation of Library Association and Institution.
- [23] Dourish, P. (2022). The stuff of bits: An essay on the materialities of information. *MIT Press*.
- [24] Okogwu, F. I., & Mole, A. J. C. (2019). Difficulties of accessing electronic resources among postgraduate library users in university libraries in southeast Nigeria. *Library Philosophy and Practice*, 49(1), 15-33.
- [25] Olansile, R., & Pelemo, R. G. D. (2020). Availability, accessibility, and Use of electronic information resources among Undergraduate students in Fountain University Library, Osogbo. *Journal of Library and Information Sciences*, 8(1), 100-110.
<https://doi.org/10.15640/jlis.v8n1a11>
- [26] Mallikarjuna, A., & Padmini, K. (2018). A Study of e-Resources in Business School Libraries at Hyderabad. *Pearl: A Journal of Library and Information Science*, 12(1), 53-66.
<https://doi.org/10.5958/0975-6922.2018.00007.4>
- [27] Al-Adwan, A., Al-Adwan, A., & Smedley, J. (2013). Exploring Students Acceptance of Model in Jordanian University. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT)*, 9(2), 4-18.
- [28] Mungwabi, H. (2023). Assessment on Usage of the Library Website Resources by Students in the Information Studies Programme at the University of Dar es Salaam, Tanzania *Journal of Engineering and Technology* 2023, 42(2): 224-237.
<https://doi.org/10.52339/tjet.v42i2.917>
- [29] Adelokun, N. O. & Omolola S. A. (2020), A Pragmatic Study on E-Learning System for Higher Education in Developing Countries, *Proceedings of the 1st National Conference Nigerian Society of Engineer, Ilaro Branch, November 2020. Pp 14-20*
<https://doi.org/10.6084/m9.figshare.14702739.v1>

- [30] Daramola, F. O. (2022). Utilization of E-Resources for Learning Among Undergraduates. *Indonesian Journal of Educational Research and Technology*, 3(1), 35-44.
- [31] Aramide, K. A., & Ogunjobi, T. E. (2021, July). Ibadan school library digital resource system: the long-awaited solution for Nigerian schools. In Proceedings of the ICTeSSH 2021 conference. PubPub.
- [32] Aribisalaa, R. M., Fakomogbon, M. A., Onojah, A. O., & AderogbaOnojaha, A. (2022). Assessment of the Availability of E-Learning Resources for African Undergraduates: An Approach to the Issue. *International Journal of Educational Excellence*, 8(1), 15-32.
- [33] Adenariwo, F. K. (2022). Awareness And Usage Of E-Resources Among Undergraduate In Fountain University, Osun State, Nigeria. *Library Philosophy and Practice*, 1-13.
- [34] Dadzie, P. S. (2017). Information Literacy: Assessing the Readiness of Ghanaian Universities. *Information Development*, 2(4), 290-297.
- [35] Issa, A. O., Ajibola, T. S., Nuhu, S. R., Saliu, U. A., & Oguntayo, S. A. (2023). Effects Of Demographic Factors and ICT Skills on The Utilization Of E-Resources by University Undergraduate Students In Kwara State, Nigeria. *International Journal of Information Library & Society*, 12(1).
- [36] Daramola, C. F. (2016) Perception and Utilization of Electronic Resources by Undergraduate Students: The Case Study of the Federal University of Technology Library, Akure. *Journal of Education Research*. 4(5), 366-370.
- [37] Adeleke, D. S. & Nwalo, K. I. (2017) Availability, Use and Constraints to use of Electronic Information Resources by Postgraduate Students at the University of Ibadan. *International Journal of Knowledge Content Development and Technology*, 7(4), 51-69.
<http://doi.org/10.5865/IJKCT.2017.7.4.051>
- [38] Ankrah, E & Atuase, D (2018). The Use of Electronic Resources Postgraduate Students of University of Cape Coast. *Library Philosophy and Practice (E-Journal)*, 1-37.
- [39] Ayankola, I. A. (2022). Influence Of Undergraduates' Learning Skills on Electronic Resources Usage in Private Universities in South-West Nigeria. *Owena Journal of Library and Information Science (OJOLIS)*, 9(1).
- [40] Odu, J. C. A., & Kakulu, O. E. (2021). Electronic Resources and Academic Research: A Survey of Research Publications in Private University in Nigeria. *Information Technologist*, 18(2).
- [41] Oseghale, O. (2023). Digital information literacy skills and use of electronic resources by humanities graduate students at Kenneth Dike Library, University of Ibadan, Nigeria. *Digital Library Perspectives*, 39(2), 181-204.
<https://doi.org/10.1108/DLP-09-2022-0071>
- [42] Albarracin, D., & Shavitt, S. (2018). Attitude and Attitude Change. *Annual Review of Psychology*, 69:1, 299-327
<https://doi.org/10.1146/annurev-psych-122216-011911>
- [43] Nnadozie, C. O., Aniebo, M. U., & Chukwueke, C. (2017). Availability of E-resources and Accessibility of E-services in Academic and Special Libraries in Abia State, Nigeria. *Journal of Library and Information Science*, 3(1).
- [44] Anekwe, J. U. & Anyanwu, J. (2017). Bridging the Digital Divide Among the Net Generation Students and Digital Immigrant Teachers Using Social Media. *British Journal of Education*. 5(5), 38-52.
- [45] Moser, K. M., Wei, T., & Brenner, D. (2021). Remote teaching during COVID-19: Implications from a national survey of language educators. *System*, 97, 102431.
<https://doi.org/10.1016/j.system.2020.102431>
- [46] Adelakun, N. O., Omolola, S. A., Mosaku, A. O. & Adebola, M. S. (2022). Empirical Study on Electronic Learning System: Benefits, Challenges and Prospects. *International Journal of Science Education and Cultural Studies*, Vol. 1, Issue 2, 109-199.
<https://doi.org/10.58291/ijsecs.v1i2.58>
- [47] Eze, S. C., Chinedu-Eze, V. C., & Bello, A. O. (2018). The utilisation of e-learning facilities in the educational delivery system of Nigeria: a study of M-University. *International Journal of Educational Technology in Higher Education*, 15(1), 1-20.
- [48] Tella, A., Orim, F., Ibrahim, D. M., & Memudu, S. A. (2018). The use of electronic resources by academic staff at The University of Ilorin, Nigeria. *Education and Information Technologies*, 23, 9-27.
- [49] Research Advisor (n.d.), Statistical Analysis, [Online]. <https://www.research->

advisors.com/tools.php (Accessed Date:
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Mariam A. Shomoye Najeem O. Adelakun and Kehinde L. Adebisi worked on the methodology.

Mariam A. Shomoye and Najeem O. Adelakun analyzed the data.

Mariam A. Shomoye and Najeem O. Adelakun organized and worked on the results and discussion section.

Mariam A. Shomoye and Kehinde L. Adebisi worked on the conclusion.

Mariam A. Shomoye Najeem O. Adelakun and Kehinde L. Adebisi were responsible for the proofreading of the manuscript.

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