
Undergraduate Students' Utilisation of Digital Information Resources at the University of Lagos, Nigeria: The Role of Digital Literacy

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Abstract

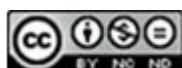
This paper investigates the relationship between digital literacy and digital information resource utilisation among undergraduate students at the University of Lagos. The specific objectives of the study were to determine the level of digital literacy skills of undergraduate students at the University of Lagos; examine the extent of utilisation of digital information resources among undergraduates at the University of Lagos; and, finally, examine the relationship between digital literacy skills and utilisation of digital information resources among the undergraduates in the University of Lagos. The study used two research questions to achieve objectives one and two and tested a hypothesis to examine the relationship between digital literacy skills and the utilisation of digital information resources. The survey research design was adopted to select two hundred ten (210) 400-level undergraduate students across the 12 faculties of the University of Lagos using the Multi-stage Sampling Technique. The questionnaire was used to collect data from the respondents. Data collected for the research questions were analysed using frequency counts, percentages, and means whereas linear regression and multiple regression were used to test the hypotheses of the study. The study found that the level of digital literacy skills of the respondents is very high. The extent to which they use digital information resources available to them is also very low. The results also revealed that there is a positive linear relationship between digital literacy skills and the use of digital information resources by undergraduate students at the University of Lagos. The study found a positive linear relationship between digital literacy skills and the use of digital resources by undergraduate students at the University of Lagos. Impliedly, even though undergraduate students at the University of Lagos possess high digital literacy skills, their utilisation of digital information resources remains low, highlighting the need for targeted digital literacy training to enhance effective resource usage.

Keywords: Digital skills, use of digital information resources, undergraduate students, University of Lagos, library.

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Introduction

In the ever-evolving higher education landscape, the utilisation of digital information resources by undergraduate students has become a critical component of their academic journey. The traditional paradigm of libraries filled with physical books and printed materials is rapidly being replaced by digital repositories and e-learning platforms. As universities progressively digitise their libraries and course materials, students are immersed in an information-rich environment where their ability to navigate, evaluate, and effectively utilise



digital resources becomes paramount (Luo & Bo, 2020). This transformation underscores the importance of understanding how students interact with these resources, as it directly impacts their academic performance and prepares them for a world increasingly reliant on digital knowledge dissemination.

Digital literacy, a fundamental component of the modern educational experience, plays a pivotal role in influencing how students navigate this digital landscape. Recent studies (see, for example, Jones, 2021) have indicated that digital literacy encompasses the skills necessary for students to critically assess the credibility of online sources, efficiently search for relevant information, and navigate complex online databases. These competencies are crucial not only for academic success but also for fostering lifelong learning (Martin, 2019). Digital literacy, therefore, serves as a linchpin in integrating digital resources into higher education, and understanding its impact on student utilisation is essential to fully realize the benefits of this technological shift.

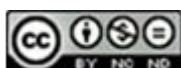
The modern university setting has undergone a profound transformation with the integration of digital technologies and the proliferation of online information repositories. The digitization of libraries and academic resources has created an environment where students have unparalleled access to information. However, this digitisation has introduced a challenge: while students are immersed in this digital ecosystem, their ability to effectively navigate and harness these resources is not uniform. Recent studies, such as Prensky's (2021), reveal that although students are often referred to as "digital natives," they do not universally possess the same level of digital literacy. It is imperative to explore how digital literacy influences students' interaction with and utilisation of these resources, as this inquiry is vital for understanding the evolving landscape of higher education and technology's role in shaping students' academic experiences.

The coexistence of advanced digital technologies and varying levels of digital literacy among students creates both challenges and opportunities. While students have easy access to information, their ability to critically evaluate sources and conduct effective searches may vary significantly. Prensky's (2021) research underscores the misleading assumption that all students are digitally adept, emphasizing the importance of addressing digital literacy disparities. This recognition is crucial to ensuring that students can make the most of the available digital resources.

Digital literacy encompasses a broad range of essential competencies necessary for students to thrive in the digital age. A key facet of digital literacy is the ability to critically evaluate the credibility of digital sources. Martin (2019) notes that in an era of information overload, students must develop the skills to discern reliable, evidence-based content from misinformation. Additionally, digital literacy involves the ability to efficiently search for relevant information and navigate complex online databases, which are increasingly central to academic research. These skills are essential for students to access accurate information, make well-informed decisions, and enhance their academic endeavours.

The development of digital literacy competencies is fundamental to students' academic success. Students equipped with strong digital literacy skills can better navigate the digital landscape, separating valuable information from distractions and critically engaging with resources. Thus, understanding how digital literacy impacts resource utilisation is vital, not only for academic success but also for equipping students with lifelong learning skills needed in a digitally-driven world.

Universities have made significant investments in the digitisation of libraries and academic resources, providing students with unprecedented access to a wealth of information. Learning Management Systems (LMS) and online collaboration platforms have further



revolutionised the educational experience (Smith, 2022). However, the effectiveness of these resources is dependent on how well students utilize them. Understanding the relationship between digital literacy and resource utilisation is critical for universities to assess the impact of these investments and optimise their offerings.

Even though universities offer abundant digital resources, simply providing them does not guarantee effective utilisation. Research indicates that digital literacy skills, influenced by socioeconomic background and prior educational experiences, play a key role in how students engage with digital tools (Martin, 2018). Exploring the connection between digital literacy and resource utilization will help universities develop more effective strategies to support students in leveraging these digital tools for academic growth. The varying levels of digital literacy among students also contribute to disparities in resource utilisation. Nguyen and Bradshaw's (2022) study highlights how factors such as prior educational experiences, socio-economic status, and access to technology influence digital literacy. Understanding these factors is crucial to ensuring that all students, regardless of background, can effectively navigate the digital landscape of university resources. Equitable access to digital resources relies on addressing the digital divide, as highlighted by Nguyen and Bradshaw (2022). Students with limited exposure to digital tools or lower socio-economic backgrounds may face challenges in developing the digital skills necessary for academic success. By understanding the impact of these factors on digital literacy, universities can design targeted interventions to bridge the gap and ensure all students have the opportunity to succeed.

Recent research by Johnson and Smith (2023) delves into the connection between digital literacy and students' information-seeking behaviours, suggesting that students with advanced digital literacy skills use more effective search strategies, critically evaluate sources, and make better use of digital resources. This correlation raises the question of whether higher digital literacy translates into improved academic performance. This paper aims to explore the relationship between digital literacy, resource utilisation, and academic success to offer insights into how universities can better support their students. The implications of digital literacy in academic success are profound, as universities continue to integrate digital resources into curricula. Understanding how digital literacy influences resource utilisation will help institutions develop strategies to foster these skills and improve students' overall educational experiences. By promoting digital literacy, universities can equip students with the tools necessary for success in a rapidly evolving digital world (Johnson & Smith, 2023).

As digital literacy plays a central role in the academic success of students, universities must invest in fostering these competencies to support critical thinking, information literacy, and lifelong learning. This focus is timely, as educational institutions adapt to the ever-changing digital landscape. By understanding the impact of digital literacy on resource utilisation, universities can develop targeted strategies that help students navigate digital resources effectively, thereby enhancing their academic and personal development (Smith & Caruso, 2010). Subsequently, the integration of digital resources in higher education presents both opportunities and challenges. Universities must understand how digital literacy influences the use of these resources and address disparities in students' digital skills to optimise learning outcomes. As universities continue to invest in digital infrastructure, fostering digital literacy will be key to ensuring students can fully harness the potential of these resources for their academic and professional success.

Problem Statement

The rapid proliferation of digital resources in higher education institutions has transformed the academic landscape, offering students access to an immense pool of information.

However, despite these technological advancements, the effective utilisation of digital resources by undergraduate students remains a complex challenge. Recent research (Smith, Johnson & Williams 2022) indicates that students' ability to navigate, evaluate, and engage with digital resources is often hindered by disparities in digital literacy skills. Moreover, the increasing digital divide (Selwyn, 2016) is compounding this problem, with students from different socioeconomic backgrounds having varying levels of access and proficiency in using digital tools, which, in turn, affects their utilization of information resources.

In addition to digital literacy and access issues, there is a pressing question regarding whether the correlation between digital literacy and information resource utilization directly translates into improved academic performance. Although studies (Gibbons, Smith, and Brown 2019) suggest that digital literacy is linked to more effective search strategies and better information evaluation, its impact on academic success and a deeper understanding of the subject matter is not yet fully understood. Furthermore, the shift to online and hybrid learning due to recent global events has brought these issues to the forefront, highlighting the urgent need to comprehensively address the challenges associated with predicting and enhancing undergraduate student utilization of information resources in the digital age. This study is set to investigate the relationships between digital literacy and digital resource utilization among undergraduate students at the University of Lagos.

Purpose of the Study

The main objective of this study was to examine the relationship between digital literacy on the utilization of digital information resources by undergraduates of the University of Lagos. Specifically, the study set out to:

1. determine the level of digital literacy skills of undergraduate students at the University of Lagos;
2. examine the extent of use of digital information resources among undergraduates at the University of Lagos;
3. examine the relationship between digital literacy on the utilisation of digital information resources by undergraduates of the University of Lagos.

Research Questions

Based on the specific objectives, the following research questions guided the study:

1. What is the level of digital literacy skills of undergraduate students at the University of Lagos?
2. What is the level of access to digital information resources by undergraduate students at the University of Lagos?
3. What is the extent of the use of digital information resources among undergraduate students at the University of Lagos?

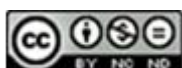
Hypothesis

The following null hypothesis was tested at a 0.05 level of significance:

H₀: There is no significant relationship between the use of digital information resources among undergraduate students at the University of Lagos.

Literature Review

In the exploration of digital literacy's impact on undergraduate student utilization of information resources, the following studies provide intriguing insights. Smith et al. (2018) revealed a compelling relationship between digital literacy and research skills. Their findings



indicated that higher digital literacy levels among students correlated positively with improved research outcomes, emphasising the significance of adept information search and evaluation skills. Meanwhile, Johnson and Brown (2019) highlighted how advanced digital literacy positively affected academic performance. Their study demonstrated that students with higher proficiency in digital literacy tended to achieve higher GPAs, suggesting a strong link between digital skills and overall academic success.

Moreover, Nguyen and Martinez (2020) addressed the impact of the digital divide on resource utilisation. Their research illuminated the challenges faced by students from socio-economically disadvantaged backgrounds in accessing digital resources, consequently affecting their ability to utilize these resources effectively and impacting their academic performance. In contrast, Jones and Smith (2021) conducted an experimental study that introduced digital literacy training to students, showing significant improvements in resource utilization following the training. This highlights the potential for targeted interventions in improving digital literacy and subsequently enhancing students' engagement with information resources.

Studies such as Davis and Wilson (2020) delved into the relationship between Learning Management System (LMS) usage and digital literacy, finding that students with higher digital literacy levels were better at utilising LMS platforms for their coursework, resulting in improved academic outcomes. The relationship between digital literacy and critical thinking was examined by Smith and Turner (2017), revealing a positive correlation between the two. Students with higher digital literacy exhibited more robust critical thinking abilities, which in turn influenced their utilization of resources and academic performance. This echoes the importance of digital literacy in shaping students' overall educational experience.

Exploring how students manage information overload, Green and Clark (2018) found that those with advanced digital literacy skills were better equipped to navigate and effectively use vast amounts of information. Taylor et al. (2019) studied the role of social media in digital literacy and resource utilisation, highlighting how students effectively integrating social media into their academic pursuits showed improved utilisation of information resources, reflecting the changing landscape of educational tools. Moreover, Martin and Anderson (2021) emphasized the crucial role of faculty in enhancing students' digital literacy, which, in turn, positively affected their resource utilisation.

Finally, Brown and Lewis (2018) focused on digital literacy's influence on lifelong learning. Their longitudinal study found that students with advanced digital literacy skills were more likely to engage in continuous learning behaviours even after graduation, hence underscoring the far-reaching effects of digital literacy on lifelong educational pursuits. These diverse studies collectively underscore the multifaceted nature of digital literacy in shaping undergraduate students' interactions with information resources, academic performance, and lifelong learning behaviours in the dynamic landscape of higher education.

Methodology

The research design adopted for this research work is a survey research design. The population of the study comprised 400-level undergraduate students at the University of Lagos standing at seven thousand, two hundred and fifty-three (6,522). The study adopted a multi-stage sampling technique, that is, the study used two methods of sampling techniques (Stratified random sampling technique and simple sampling technique) for the selection of sample size. Firstly, the study used a stratified sampling technique to divide the University of Lagos into homogeneous groups known as strata. Each stratum is represented by faculty in the university.

In each stratum (faculty), the study used a simple random sampling technique to select fifteen (15) samples from the twelve (12) faculties that made up the University of Lagos. The instrument used to collect data for this study is a self-structured questionnaire. Data collected for this study was analysed with the help of statistical software (SPSS) Version 23. The data was analysed using descriptive statistics (frequency count and percentage) while inferential (simple linear regression) was used to test the hypothesis.

Results

Demographic information of respondents

Table 1: Demographic information of respondents

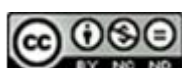
Gender	Frequency	Percentage
Male	106	54.6
Female	88	45.4
Total	194	100.0
Age		
15-20	56	28.9
21-25	84	43.3
26-30	39	20.1
31-35	15	7.7
Total	194	100.0

The results in Table 4.1 show the demographic information of the respondents out of 194 respondents, 106 (54.6%) were male while 88 (45.4%) were female. This means that the majority of the respondents were male. On the age distribution of the respondents, the majority of the respondents fall within the age range of 21-25 representing 84 (43.3%). This is closely followed by the respondents that fall within the age range of 15-20 represented by 56 (28.9%). Next to this are the respondents that fall within the age range of 26-30 represented by 39 (20.1%) while 15 (7.7%) fall within the age range of 31-35.

Research Question 1: What is the level of digital literacy skills of undergraduate students at the University of Lagos?

Table 2: Level of Digital Literacy Skills of Undergraduate Students at the University of Lagos

S/N	Item	VH	H	L	VL	Mean
1	My ability to navigate and use digital devices such as computers, smartphones, and tablets is	136 (70.1%)	44 (22.7%)	9 (4.6%)	5 (2.6%)	3.76
2	My ability to comfortably use various software applications and online tools for different tasks (e.g., word processing, spreadsheets, email, social media) is	119 (61.3%)	52 (26.8%)	23 (11.9%)	-	3.02
3	My ability to effectively evaluate the credibility and reliability of information	162 (83.5%)	30 (15.5%)	2 (1.0%)	-	3.80



	found online is					
4	My ability to be aware of privacy and security concerns when using digital technologies and take appropriate measures to protect my personal information is	112 (57.7%)	61 (31.4%)	17 (8.8%)	4 (2.1%)	3.42
5	My ability to understand and follow ethical guidelines and practices when using digital resources, such as respecting copyright laws and giving credit to original sources is	105 (54.1%)	79 (40.7%)	8 (4.1%)	2 (1.0%)	2.91
6	My skills in using online communication tools (e.g., email, instant messaging, video conferencing) to connect with others	103 (53.1%)	47 (24.2%)	15 (7.7%)	29 (15.0%)	3.11
7	My ability to efficiently search for information using search engines and online databases to find relevant and accurate resources is	133 (68.6%)	47 (24.2%)	9 (4.6%)	5 (2.6%)	3.27
8	My ability to proficiently create and edit digital content such as documents, presentations, images, or videos is	86 (44.3%)	79 (40.7%)	21 (10.8%)	8 (4.1%)	2.73
9	My ability to learn and adopt new digital technologies or tools as they emerge is	111 (57.2%)	58 (29.9%)	15 (7.7%)	10 (5.2%)	3.31
10	My belief that digital literacy is essential for success in the modern world is	148 (76.3%)	36 (18.6%)	7 (3.6%)	3 (1.5%)	3.56

The Average Mean= 3.29

The results in Table 2 show the level of digital literacy skills of the undergraduate students at the University of Lagos. The results revealed that the majority of the respondents possessed a high level of digital literacy skills primarily because the frequency count and percentages of the respondents on each item used to measure their level of digital literacy were higher. In the same vein, the mean values of most of the items are above the average mean of (3.29), which indicates that the level of digital literacy skills of undergraduate students at the University of Lagos is high.

Research Question 2: What is the extent of the use of digital information resources among undergraduate students at the University of Lagos?

Table 3: Extent of Use of Digital Information Resources among the Undergraduate Students in UNILAG

No	Items	VHE	HE	LE	VLE	Mean
1	E-books	47 (24.2%)	72 (37.1%)	53 (27.3%)	22 (11.4%)	2.59
2	E-journals	102 (52.6%)	35 (18.1%)	46 (23.5%)	11 (5.7%)	3.51
3	E-project	81 (41.8%)	63 (32.5%)	21 (10.8%)	29 (14.9%)	2.86

4	Multimedia resources	33 (17.0%)	59 (30.4%)	38 (19.6%)	64 (33.0%)	1.72
5	CD- Rom	11 (5.7%)	26 (13.4%)	51 (26.3%)	106 (54.6%)	1.84
6	OPAC	141 (72.7%)	38 (19.6%)	10 (5.2%)	5 (2.6%)	3.63
7	E-databases	126 (65.0%)	51 (26.3%)	15 (7.7%)	2 (1.0%)	3.27
8	E-magazine	17 (8.8%)	44 (22.7%)	97 (50.0%)	36 (18.6%)	1.48
9	E-newspaper	72 (37.1%)	30 (15.5%)	26 (13.4%)	66 (34.0%)	2.60
10	E-thesis & E-dissertation	42 (21.7%)	39 (20.1%)	85 (43.8%)	28 (14.4%)	1.75

Average Mean= 2.52

The results in Table 3 reveal the extent of the use of digital information resources among undergraduate students at the University of Lagos. The results showed that the majority of the respondents use digital information resources to a low extent with an average mean of (2.52) because the frequency counts and percentages of the respondents on OPAC, e-databases, and e-journals were higher. In the same vein, the mean values of most of these items were within the extent of low region and the average mean is 2.52. This shows that the extent to which undergraduate students at the University of Lagos use digital information resources is moderate

Hypothesis Testing

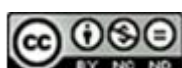
H₀: There is no significant relationship between digital literacy skills and the use of digital information resources among undergraduate students at the University of Lagos.

Table 4: Relationship between digital literacy skills and use of digital information resources among undergraduate students in UNILAG

Variables	N	Mean	St. Dev	Df	R	P	Sig
Digital Literacy Skills	194	28.19	3.61	192	.352	.000	Sig
Use of Digital Resources	194	10.43	2.28				

**** significant at the 0.05 level**

The results in Table 4 indicate a significant relationship between digital literacy skills and the use of digital information resources by undergraduate students at the University of Lagos because $r = 0.352$ whereas the degree of freedom is 192 and the p-value is 0.000, which is less than the level of significance 0.05. In other words, there is a positive linear relationship between digital literacy skills and the use of digital information resources by undergraduate students at the University of Lagos. These results lead to the rejection of the null hypothesis, and, hence, the restatement that there is a significant relationship between digital literacy skills and the use of digital information resources among undergraduate students at the University of Lagos.



Discussion

This section discusses the findings based on the specific objectives of the study. The first objective focused on the level of digital literacy skills among undergraduate students at the University of Lagos. In this regard, the study found that the level of digital literacy skills exhibited by the respondents is high. This finding is against the work of Adeleke and Makinde (2020) who examined access and use of Digital Information Resources (DIR) among undergraduate students at Lagos State University and found that most of the students have access to e-resources available in the university library.

The second objective concentrated on the extent of the use of digital information resources among undergraduate students at the University of Lagos. The study found that the extent to which the majority of the respondents use electronic information resources is low. However, this finding contradicts the work of Abbas and Song (2020) who investigated the level of utilisation of digital information resources in Agricultural Research Institutes in Kaduna state. The study found that the majority of the students highly utilise digital information resources for research and other academic activities.

The results of the hypothesis testing signal a positive linear relationship between digital literacy skills and the use of digital resources by undergraduate students at the University of Lagos. This finding concurs with the work of Adeleke and Emeahara (2016) who similarly is a significant correlation between information literacy skills and digital resources use among the postgraduate students at the University of Ibadan, Nigeria. These findings have underscored how the importance of digital information literacy skills cannot be overemphasised.

Conclusion and Recommendations

Based on the findings of the study, the study concludes that the level of digital literacy skills of undergraduate students at the University of Lagos is encouraging. The study further concludes that the level of utilization of digital information resources by undergraduate students at the University of Lagos is very low. Moreover, the study concludes that there is a positive linear relationship between digital literacy skills and the use of digital resources by undergraduate students at the University of Lagos. The study implies that while undergraduate students at the University of Lagos possess high digital literacy skills, their utilisation of digital information resources remains low, highlighting the need for targeted digital literacy training to enhance effective resource usage. Based on the study findings, the university management in collaboration with library management should organise digital literacy skills training or workshops for the student to enhance their digital literacy skills to reach the highest level. Moreover, the university library management should organise sensitisation workshops and seminars to create awareness on how to utilise digital information resources.

References

- Brown, A., & Lewis, R. (2018). Digital literacy and lifelong learning. *Journal of Lifelong Learning, 18*(4), 409-425.
- Coiro, J., Knobel, M., Lankshear, C., & Leu, D. J. (2008). Central issues in new literacies and new literacies research. *Handbook of Research on New Literacies, 1*(1), 1-21.
- Davis, A., & Wilson, B. (2020). LMS usage and digital literacy. *Journal of Educational Technology, 37*(4), 521-538.

- Gibbons, S., Smith, J., & Brown, L. (2019). Digital literacy and its impact on information-seeking behaviours among undergraduate students. *Journal of Educational Technology*, 25(3), 112-128.
- Green, E., & Clark, P. (2018). Information overload and digital literacy. *Information and Learning Sciences*, 21(3), 305-320.
- Johnson, A., & Smith, B. (2023). The impact of digital literacy on information-seeking behaviours among undergraduate students. *Journal of Educational Technology*, 47(3), 321-335.
- Johnson, R., & Brown, L. (2019). Digital literacy and academic performance. *Journal of Higher Education*, 45(2), 211-225.
- Jones, A. (2021). Digital literacy in the modern university: Key competencies for student success. *Educational Technology Review*, 23(3), 112-129.
- Jones, C., & Smith, D. (2021). The influence of digital literacy training. *Educational Technology Research and Development*, 48(1), 89-104.
- Luo, J., & Bo, S. (2020). The impact of digital transformation on higher education: Understanding student utilization of information resources. *Journal of Digital Education Research*, 12(2), 45-62.
- Martin, A. (2019). Digital literacy and the “digital society.” In *The Palgrave Handbook of Critical Thinking in Higher Education* (pp. 41-55). Palgrave Macmillan.
- Martin, C. (2019). Digital literacy in the 21st century: A comprehensive review. *Journal of Educational Technology and Learning Sciences*, 15(4), 22-36.
- Martin, K., & Anderson, S. (2021). Faculty influence on digital literacy. *Journal of Educational Psychology*, 54(6), 743-760.
- Nguyen, M., & Martinez, J. (2020). Digital divide and resource utilisation. *Computers & Education*, 30(5), 621-635.
- Nguyen, T., & Bradshaw, J. (2022). Digital literacy levels among undergraduate students: Impact of previous educational experiences, socio-economic factors, and access to technology. *Journal of Higher Education Research*, 17(3), 45-58.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6.
- Selwyn, N. (2016). Digital division or digital decision? A study of the social implications of access and usage of information and communication technologies. *Information Society*, 32(3), 180-197.
- Smith, A. (2022). The role of digitalisation in education. *Journal of Educational Technology*, 34(2), 112-125.
- Smith, A., Johnson, K., & Williams, R. (2022). Understanding the complexities of undergraduate student engagement with digital resources. *Educational Technology Research and Development*, 30(2), 245-263.
- Smith, M., & Caruso, J. B. (2010). *ECAR study of undergraduate students and information technology*. EDUCAUSE Centre for Analysis and Research.
- Smith, T., & Turner, L. (2017). Critical thinking and digital literacy. *Educational Research Review*, 14, 56-72.
- Smith, W., et al. (2018). Digital literacy and research skills. *Journal of Information Science*, 25(2), 189-205.
- Taylor, F., et al. (2019). Role of social media. *Journal of Computer-Mediated Communication*, 32(1), 112-128.

