Digital Literacy Skills and Mobile Technology Devices Use among College of Education Students in Oyo State, Nigeria

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Abstract: Digital literacy has become an essential competence for effective participation in technology-driven learning environments in the 21st century. This study examined the relationship between digital literacy and the use of mobile technology devices for academic activities among students of Emmanuel Alayande College of Education, Oyo State, Nigeria. A descriptive survey research design was adopted for the study. Using simple random sampling and a sampling fraction of 9%, a sample of 219 students was selected from a population of 8,727 students. A structured questionnaire was used for data collection, and 208 completed questionnaires were returned, representing a response rate of 95%. Data were analyzed using descriptive statistics (frequency and percentage) and inferential statistics (Pearson Correlation). The findings revealed that the majority of respondents possessed moderate levels of digital literacy. Students reported frequent use of mobile technology devices for academic activities such as searching for information, completing assignments, and downloading scholarly materials. The correlation analysis showed a significant positive relationship between digital literacy and academic use of mobile technology devices ($r = .367$, $p < .001$). In addition, a strong positive relationship was found between mobile technology device use and students' academic activities ($r = .640$, $p < .001$). The study concludes that digital literacy plays a critical role in enabling students to utilize mobile technology devices effectively for academic purposes. It is therefore recommended that educational institutions strengthen digital literacy training and integrate technology-supported learning practices into their instructional strategies to enhance students' academic activities.

KEYWORDS: Digital literacy, mobile technology devices, academic activities, Emmanuel Alayande College of Education.

1. INTRODUCTION

The 21st century has witnessed rapid technological transformation, shifting society from the industrial age to the information age. Information is no longer confined to physical and printed formats but has become increasingly digital, virtual, and electronically accessible. As technology continues to evolve, the skills required to access and utilize information have also expanded beyond traditional literacy. Digital literacy has therefore emerged as a critical survival skill in the modern era (Gilster, 1997). Information has even been described as the fourth and most important factor of production after land, labour, and capital (Aina, 2003), underscoring its central role in development. Digital literacy encompasses the ability to use digital technologies, communication tools, and networks to locate, evaluate, create, and communicate information effectively. It involves not only technical skills but also cognitive and socio-emotional competencies necessary for functioning in digital environments (Eshet-Alkalai, 2004; Bali, 2016).

Mobile technology devices such as smartphones, laptops, tablets, and personal digital assistants have become embedded in everyday life and educational practice. These devices provide students with access to vast information resources and enable communication, collaboration, and learning beyond classroom walls (Naismith et al., 2004). The increasing integration of mobile technologies into education has led to the emergence of mobile learning (Al Hamdani, 2013), further emphasizing the need for students to possess the competencies required to use these tools productively. However, effective utilization of mobile technology devices for academic purposes depends largely on students' level of digital literacy. As Hague and Williamson (2009) argue, digital literacy extends beyond the mere acquisition of technical skills to include critical thinking, evaluation, and informed use of digital media.

Despite the widespread ownership of mobile technology devices among students, many primarily use them for social networking, entertainment, voice calls, and messaging rather than for academic engagement. While information is abundantly available online, the ability to evaluate its credibility and relevance has become increasingly essential (Salomon, 2000; Eshet-Alkalai, 2004). Without adequate digital literacy skills, students may struggle to search effectively, assess sources critically, and apply information

appropriately to their academic tasks. The modern digital environment, characterized by easily manipulated and rapidly disseminated information, demands higher-order cognitive skills that many students may not fully possess. This gap between access to technology and effective academic use constitutes a significant problem within higher education institutions.

This study is significant because it highlights the necessity of developing digital literacy skills among students to ensure meaningful academic engagement with mobile technologies. As digital literacy has become a prerequisite for participation in academic, professional, and civic life (Hague & Williamson, 2009), understanding its relationship with students' use of mobile technology devices is essential. The findings of this study can inform educators and policymakers about the need to integrate digital literacy training into curricula, thereby enabling students to become critical, informed, and responsible users of digital tools. Enhancing digital literacy skills will not only improve students' academic performance but also prepare them for lifelong learning in a technology-driven society.

The main objective of this study is to examine the relationship between digital literacy skills and the use of mobile technology devices for academic activities among students of Emmanuel Alayande College of Education, Oyo State, Nigeria. Specifically, the study seeks to determine students' level of digital literacy and assess how these skills correlate with their use of mobile technology devices in supporting their academic work.

To this end, the following research questions were formulated:

1. What is the level of digital literacy among students of Emmanuel Alayande College of Education?
2. To what extent do students use mobile technology devices for academic activities?
3. What relationship exists between students' level of digital literacy and their use of mobile technology devices for academic activities?
4. To what extent does the use of mobile technology devices influence students' academic activities? Or academic performance and learning activities?

2. LITERATURE REVIEW

This section reviews scholarly works related to digital literacy and the use of mobile technology devices for academic activities. The review focuses on conceptual definitions, theoretical perspectives, and empirical studies that examine the importance of digital literacy, students' level of digital competence, the educational relevance of mobile technologies, and patterns of use among students. The literature is organized under the following sub-headings: importance of digital literacy to students, students' level of digital literacy, relevance of mobile technology devices in education, students' use of mobile technology devices, mobile technology devices use for academic activities, and appraisal of the literature reviewed.

2.1 Importance of Digital Literacy to Students

Literacy has traditionally been defined as the ability to read and write; however, in contemporary society, literacy extends beyond print-based competencies to include digital environments (Alsalem, 2016). Digital literacy has emerged as a critical survival skill in the information age (Gilster, 1997). According to the ALA Digital Literacy Taskforce (2011), digital literacy is the ability to use information and communication technologies (ICTs) to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

Gilster (1997) conceptualizes digital literacy as literacy for a digital age, emphasizing critical understanding rather than mere technical proficiency. Similarly, Eshet-Alkalai (2004) argues that digital literacy encompasses complex cognitive, motor, sociological, and emotional skills necessary for effective functioning in digital environments. Bali (2016) distinguishes between digital skills and digital literacies, noting that while skills focus on technical operations, digital literacies involve critical awareness of context, purpose, and audience.

Eshet-Alkalai (2004) proposes five dimensions of digital literacy: photo-visual literacy, reproduction literacy, information literacy, branching literacy, and socio-emotional literacy Adedoyin, O. (2021). Photo-visual literacy refers to the ability to interpret and construct meaning from visual representations (Gray, 2012; Finley, 2014). In an increasingly image-rich world, students must be able to analyze charts,

graphs, digital images, and multimedia content critically (Felten, 2008).

Reproduction literacy involves the creative and ethical use of existing digital materials to generate new knowledge (Benjamin, 1994; Whitneyh, 2006). This is particularly relevant in academic writing, where issues of originality and plagiarism are central. Information literacy, closely linked to digital literacy, involves the ability to evaluate the credibility, relevance, and reliability of digital information (Salomon, 2000; Cordell, 2013). Given the vast amount of information available online, critical evaluation has become a necessary scholarly competence.

Branching literacy, also known as hypermedia literacy, refers to the ability to navigate nonlinear digital environments effectively (Eshet-Alkalai, 2004; Jonassen & Henning, 1999). As learners interact with hyperlinked digital systems, multidimensional thinking becomes essential. Socio-emotional literacy involves responsible participation in digital communities and the ability to detect online risks such as misinformation and malicious content (Scardamalia & Bereiter, 1996; Eshet-Alkalai, 2004).

Collectively, these dimensions demonstrate that digital literacy is not optional but fundamental to students' academic engagement, lifelong learning, and participation in a technology-driven society (Hague & Williamson, 2009; Karpati, 2011).

2.2 Students' Level of Digital Literacy

Despite growing access to digital technologies, students' digital literacy levels vary considerably. Erstad (2010) argues that exposure to technology does not automatically translate into digital competence. While many students are comfortable using digital devices socially, their ability to critically evaluate information and apply digital tools for academic purposes may be limited Ibitoye, J. S. (2018).

Empirical studies examining digital literacy across age groups found variations in performance across different dimensions of digital literacy (Eshet, 2002; Eshet-Alkalai & Amichai-Hamburger, 2004). Younger users often demonstrate strong technical navigation skills but may lack critical evaluation abilities.

The abundance of information increases the need for evaluative skills (Kerka,1999; Salomon, 2000). Without adequate digital literacy, students may struggle with assessing the credibility of sources, distinguishing scholarly materials from unreliable content, and managing information effectively. Owen et al. (n.d.) further suggest that digital literacy must evolve as ICT changes, highlighting the need for continuous skill development.

Therefore, while access to devices may be widespread, disparities in digital literacy competence can affect students' academic performance and information use behaviours.

2.3 Relevance of Mobile Technology Devices in Education

Mobile technology devices have transformed educational practices. Devices such as smartphones, tablets, laptops, and personal digital assistants have become embedded in everyday life (Naismith et al., 2004; Pinchot, Paullet & Rota, 2010). These devices offer portability, connectivity, and interactive capabilities that extend learning beyond classroom boundaries.

Mobile learning (m-learning) refers to the use of mobile devices as mediators in teaching and learning processes (Al Hamdani, 2013). Rapid technological advancements have increased memory capacity, performance speed, and internet accessibility, making mobile devices viable tools for educational purposes (Paulinsa, Balina & Arhipova, 2015).

Sharples (2003) argues that rather than viewing mobile devices as distractions, educators should harness their potential to enhance learning. Poll (2015) suggests that mobile technologies can transform course delivery, increase engagement, and promote collaborative learning. Rheingold (2003) describes this transformation as a social revolution characterized by constant connectivity and access to information.

Mobile technologies enable students to access online databases, download educational materials, participate in discussion forums, and engage in collaborative research activities. Their relevance lies in their ability to bridge formal and informal learning environments.

2.4 Students' Use of Mobile Technology Devices

Research indicates that students are among the most active users of mobile technology devices. Harris Poll (2015) reports that laptops and smartphones are widely used for school-related activities, although patterns of use vary.

While mobile devices provide educational opportunities, students often use them predominantly for communication, social networking, and entertainment. Agre (2001) notes that modern mobile devices function as pocket-sized computers capable of diverse applications. However, the mere presence of technology does not guarantee productive academic use.

Established applications such as web searching, email, and SMS messaging are frequently utilized by students (Naismith et al., 2004). However, students may lack the critical digital literacy skills required to use these tools effectively for academic research, data analysis, and knowledge production.

Thus, there exists a potential gap between technological access and meaningful academic utilization.

2.5 Mobile Technology Devices Use for Students' Academic Activities

Mobile technology devices support various academic tasks, including assignment preparation, project collaboration, information retrieval, and presentation development. Students use laptops for word processing, data analysis, graphic design, and presentation software Adejumobi, A. M. (2018). Smartphones and tablets facilitate access to online materials, lecture recordings, and educational applications.

According to Agre (2015), digital textbooks and online materials enhance students' engagement and learning efficiency. Mobile technologies also allow students to download academic resources, participate in virtual discussions, and conduct research in real time.

Brick and Cervi-Wilson (2015) argue that digital literacy enhances students' ability to find, interpret, evaluate, and share information using mobile devices. Without digital literacy, however, students may struggle to navigate databases, evaluate sources, and apply information ethically.

Therefore, a direct relationship exists between digital literacy and effective use of mobile technology devices for academic activities. ICT serves as the common factor linking these constructs. Students who are digitally literate are better

positioned to maximize the academic potential of mobile technologies.

2.6 Appraisal of Literature Reviewed

The literature reviewed demonstrates that digital literacy is a multidimensional construct encompassing cognitive, technical, and socio-emotional competencies. Scholars consistently emphasize its importance in navigating digital environments and evaluating information critically. Research also highlights the increasing relevance of mobile technology devices in education and their potential to enhance academic engagement.

However, while numerous studies discuss digital literacy conceptually and examine mobile learning broadly, fewer studies specifically investigate the correlation between students' level of digital literacy and their use of mobile technology devices for academic activities within Nigerian Colleges of Education. This gap justifies the present study, which seeks to examine this relationship empirically among students of Emmanuel Alayande College of Education.

3. METHODOLOGY

This study adopted a descriptive survey research design to examine the relationship between digital literacy skills and the use of mobile technology devices for academic activities among students of Emmanuel Alayande College of Education, Oyo State, Nigeria. The population comprised 8,727 Nigerian Certificate in Education (NCE) students, from which a sample of 219 respondents (9% sampling fraction) was selected using simple random sampling to ensure representativeness. Data were collected using a structured questionnaire designed to measure students' level of digital literacy and their extent of mobile technology device use for academic purposes. The instrument included items assessing dimensions of digital literacy and patterns of device usage relevant to academic activities. Content validity was ensured through expert review, and the instrument's reliability was established prior to full administration.

Data were analyzed using both descriptive and inferential statistical techniques. Frequency counts and percentages were used to summarize respondents' demographic characteristics and patterns of device usage. To examine the relationship

between digital literacy and the use of mobile technology devices for academic activities, the Pearson Correlation coefficient was employed at the 0.05 level of significance. This approach enabled the study to determine both the strength and direction of the relationship between the variables, thereby providing empirical evidence to address the central research question.

4. RESULTS
4.1 Questionnaire Administration and Response Rate

A total of 219 questionnaires were administered to students of Emmanuel Alayande College of Education in accordance with the determined sample size. Of these, 208 questionnaires were returned, representing a response rate of 95.0%. All returned questionnaires were used for analysis. Consequently, all statistical analyses in this study are based on the 208 valid responses.

4.2 Demographic Characteristics of Respondents

The demographic characteristics of respondents are presented in Table 4.1. A total of 219 students participated in the study. The distribution across schools shows that 120 respondents (57.7%) were from the School of Arts and Social Sciences, while 88 respondents (42.3%) were from the School of Early Childhood Care and Primary Education.

In terms of gender, the majority of respondents were female (n = 131, 63%), whereas male respondents constituted 37% (n = 77) of the sample. With respect to age distribution, the largest proportion of respondents fell within the 20–23 years age range (n = 105, 50.5%), followed by those aged 16–19 years (n = 64, 30.8%), while respondents aged 24 years and above represented the smallest group (n = 39, 18.8%).

Regarding level of study, most respondents were in 100 level (n = 109, 52.4%), followed by 200 level students (n = 72, 34.6%), and 300 level students (n = 27, 13%). The demographic distribution suggests that the sample reflects a broad cross-section of the student population and provides a sufficient basis for subsequent inferential analysis.

4.3 RQ1: What is the level of digital literacy among students of Emmanuel Alayande College of Education?

The level of digital literacy among respondents is presented in Table 4.2. Overall, the findings indicate that students demonstrate moderate digital literacy competence.

Regarding awareness of the concept, a majority of respondents strongly agreed that they were aware of the phrase "digital literacy" (n = 112, 53.8%), while 74 (35.6%) agreed. Only 16 (7.7%) and 6 (2.9%) disagreed and strongly disagreed, respectively. Similarly, 106 respondents (51.0%) agreed that they are digitally literate, and 69 (33.2%) strongly agreed, whereas 19 (9.1%) and 14 (6.7%) disagreed and strongly disagreed, respectively.

In terms of operational competence, 106 respondents (51.0%) agreed and 74 (35.6%) strongly agreed that they could manoeuvre their way around a computer. Only 18 (8.7%) and 10 (4.8%) reported disagreement and strong disagreement. Furthermore, 102 respondents (49.0%) agreed and 83 (39.9%) strongly agreed that they could obtain information independently without assistance.

With respect to online search skills, 112 respondents (53.8%) agreed and 66 (31.7%) strongly agreed that they could use various search engines effectively, while 25 (12.0%) and 5 (2.4%) reported difficulty. However, 89 respondents (42.8%) agreed and 62 (29.8%) strongly agreed that they encounter problems when browsing the web, suggesting that challenges still exist despite general competence. Encouragingly, 96 respondents (46.2%) agreed and 66 (31.7%) strongly agreed that they know how to overcome browsing difficulties.

Additionally, 115 respondents (55.3%) agreed and 72 (34.6%) strongly agreed that they know the appropriate keywords to use during online searches. Similarly, 104 respondents (50.0%) agreed and 72 (34.6%) strongly agreed that they possess the ICT skills required for digital engagement.

In all, these findings suggest that students possess basic to intermediate digital competencies across several operational dimensions, including awareness, search engine usage, keyword identification, and general ICT skills. However, the presence of respondents who reported encountering browsing challenges indicates that digital literacy may not be uniformly advanced across all skill domains. The overall pattern therefore supports the classification of respondents as fairly digitally literate, with identifiable areas requiring further

development, particularly in problem-solving and other higher evaluative skills.

Table 1: Level of Digital Literacy among Students of Emmanuel Alayande College of Education

S/N	Items	SA (F)	SA (%)	A (F)	A (%)	D (F)	D (%)	SD (F)	SD (%)
1	I am aware of the phrase "digital literacy."	112	53.8	74	35.6	16	7.7	6	2.9
2	I am digitally literate	69	33.2	106	51.0	19	9.1	14	6.7
3	I can maneuver my way around a computer	74	35.6	106	51.0	18	8.7	10	4.8
4	I can get any information I want online without help from anybody	83	39.9	102	49.0	15	7.2	8	3.8
5	I can use various search engines to search for information on the web	66	31.7	112	53.8	25	12.0	5	2.4
6	I encounter problems when browsing the web for information	62	29.8	89	42.8	48	23.1	9	4.3
7	I know how to overcome any problems I face when browsing the internet	66	31.7	96	46.2	40	19.2	6	2.9
8	I know the exact keywords to use for	72	34.6	115	55.3	18	8.7	3	1.4

S/N	Items	SA (F)	SA (%)	A (F)	A (%)	D (F)	D (%)	SD (F)	SD (%)
	my search								
9	I have the skills required for using ICT	72	34.6	104	50.0	22	10.6	10	4.8

4.4 RQ2: To what extent do students use mobile technology devices for academic activities?

Students' use of mobile technology devices for academic activities is presented in **Table 4.5**. The results indicate that mobile technology devices are widely used by students to support their academic work. A majority of respondents strongly agreed (n = 107, 51.4%) and agreed (n = 86, 41.3%) that they use mobile devices for their school work, while only 13 respondents (6.2%) disagreed and 2 respondents (1.0%) strongly disagreed. Similarly, 102 respondents (49.0%) agreed and 89 (42.8%) strongly agreed that they use computers for school assignments and projects. Only a small proportion of respondents reported otherwise (13 respondents, 6.2% disagreed; 4 respondents, 1.9% strongly disagreed).

Findings further show that smartphones play an important role in students' academic information search. A combined majority of respondents agreed (n = 94, 45.2%) and strongly agreed (n = 92, 44.2%) that they use smartphones to search for information related to their schoolwork, whereas 19 respondents (9.1%) and 3 respondents (1.4%) disagreed and strongly disagreed respectively. In addition, 87 respondents (41.8%) agreed and 80 respondents (38.5%) strongly agreed that they download academic books, scholarly journals, and articles using their mobile devices.

The results also indicate a high level of reliance on mobile devices in students' daily activities. For instance, 63 respondents (30.3%) agreed and 55 respondents (26.4%) strongly agreed that they cannot do without their laptops for a day, while 59 (28.4%) and 31 (14.9%) disagreed and strongly disagreed respectively. Similarly, 76 respondents (36.5%) agreed and 58 respondents (27.9%) strongly agreed that they cannot do without their smartphones for a day. With respect to tablet usage, 58 respondents (27.9%) agreed and 55

respondents (26.4%) strongly agreed that their tablet devices are always with them.

However, the findings also reveal that mobile technology devices are used extensively for non-academic purposes. A majority of respondents agreed (n = 86, 41.3%) and strongly agreed (n = 70, 33.7%) that they use smartphones daily for non-academic activities. Likewise, many respondents reported daily use of mobile devices for communication and social interaction, including calling and sending SMS (87 respondents, 41.8% strongly agreed; 84 respondents, 40.4% agreed), chatting on social media (92 respondents, 44.2% agreed; 70 respondents, 33.7% strongly agreed), and surfing the internet to stay informed about current events (97 respondents, 46.6% agreed; 61 respondents, 29.3% strongly agreed).

In terms of academic engagement, 82 respondents (39.4%) agreed and 68 respondents (32.7%) strongly agreed that mobile devices readily come to mind whenever academic work arises. Similarly, 70 respondents (33.7%) agreed and 61 respondents (29.3%) strongly agreed that they read their school books using mobile devices. Furthermore, 105 respondents (50.5%) agreed and 57 respondents (27.4%) strongly agreed that they often use mobile technology devices because they feel more assured about their academic activities when using them.

Nevertheless, a mixed perception was observed regarding sustained academic use of mobile devices. While many respondents use mobile devices for learning, some reported losing interest during academic engagement. Specifically, 62 respondents (29.8%) agreed and 43 respondents (20.7%) strongly agreed that they feel bored when using mobile devices for academic work, whereas 61 respondents (29.3%) disagreed and 42 respondents (20.2%) strongly disagreed.

Overall, the findings suggest that mobile technology devices are widely integrated into students' academic activities, particularly for information searching, assignment completion, and access to academic resources. However, the results also indicate that mobile devices serve multiple purposes and are frequently used for non-academic activities. This suggests that although access to mobile technology is widespread, academic utilization competes with other forms of digital engagement.

Table 2: Use of Mobile Technology Devices for Academic Activities among Students

S/N	Items	SA (F)	SA (%)	A (F)	A (%)	D (F)	D (%)	SD (F)	SD (%)
1	I use mobile devices for my school work	107	51.4	86	41.3	13	6.2	2	1.0
2	I use the computer for my school assignments and projects	89	42.8	102	49.0	13	6.2	4	1.9
3	I use my smartphone to search for information related to my school work	92	44.2	94	45.2	19	9.1	3	1.4
4	I use my smartphone everyday for non-academic activities	70	33.7	86	41.3	44	21.2	8	3.8
5	I can't do without my laptop for a day	55	26.4	63	30.3	59	28.4	31	14.9
6	I can't do without my smartphone for a day	58	27.9	76	36.5	48	23.1	26	12.5
7	My tablet is always with me no matter what	55	26.4	58	27.9	55	26.4	40	19.2
8	I download academic books, scholarly journals and articles with my mobile devices	80	38.5	87	41.8	28	13.5	13	6.2
9	I call and send SMS on my smartphone everyday	87	41.8	84	40.4	25	12.0	12	5.8
10	I chat on social media with my mobile devices everyday	70	33.7	92	44.2	36	17.3	10	4.8

S/N	Items	SA (F)	SA (%)	A (F)	A (%)	D (F)	D (%)	SD (F)	SD (%)
11	I surf the internet everyday to keep abreast of current happenings	61	29.3	97	46.6	38	18.3	12	5.8
12	Anytime academic work comes up, mobile devices comes to my mind	68	32.7	82	39.4	36	17.3	22	10.6
13	I read my school books on my mobile devices	61	29.3	70	33.7	62	29.8	15	7.2
14	I feel assured of my academic activities when using mobile technology devices so I use it often	57	27.4	105	50.5	34	16.3	12	5.8
15	I feel bored and fed up when using mobile devices for my academic work so I stopped using it	43	20.7	62	29.8	61	29.3	42	20.2

4.5 RQ3: What relationship exists between students' level of digital literacy and their use of mobile technology devices for academic activities?

The relationship between digital literacy and the academic use of mobile technology devices is presented in Table 4.3. A Pearson Correlation analysis was conducted to examine the association between the two variables. The results revealed a significant positive correlation between digital literacy and academic use of mobile technology devices, r(206) = .367, p < .001.

This finding indicates that students with higher levels of digital literacy are more likely to utilize mobile technology devices for academic purposes. Although the correlation is moderate in magnitude, it suggests that digital literacy plays an important role in facilitating effective academic engagement with mobile technologies. The result supports theoretical perspectives which argue that digital literacy

enhances individuals' ability to navigate digital environments and use technological tools productively for educational activities (Eshet-Alkalai, 2004; Hague & Williamson, 2009).

Table 3: Pearson Correlation between Digital Literacy and Academic Use of Mobile Technology Devices

Variables		Digital Literacy	Use of Mobile Technology Devices
Digital Literacy	Pearson Correlation	1	.367**
	Sig. (2-tailed)		.000
	N	208	208
Use of Mobile Technology Devices	Pearson Correlation	.367**	1
	Sig. (2-tailed)	.000	
	N	208	208

Note: Correlation is significant at the 0.01 level (2-tailed).

4.6 RQ4: To what extent does the use of mobile technology devices influence students' academic activities?

The influence of mobile technology device use on students' academic activities is presented in Table 4.7. A Pearson Product–Moment Correlation analysis revealed a significant positive relationship between the use of mobile technology devices and students' academic activities, r(206) = .640, p < .001.

The result indicates a strong positive association, suggesting that increased use of mobile technology devices is linked with higher levels of academic engagement among students. Respondents reported that mobile technology devices support a range of academic activities, including assignment preparation, information retrieval, and general learning support Akinola, O. (2021).

This finding implies that when effectively utilized, mobile technology devices can enhance students' academic practices and contribute positively to their learning outcomes.

Table 4: Pearson Correlation between Mobile Technology Devices Use and Students' Academic Activities

Variables		Mobile Technology Devices Use	Academic Activities
Mobile Technology Devices Use	Pearson Correlation	1	.640**
	Sig. (2-tailed)		.000
	N	208	208
Academic Activities	Pearson Correlation	.640**	1
	Sig. (2-tailed)	.000	
	N	208	208

Note: Correlation is significant at the 0.01 level (2-tailed).

5. DISCUSSION

This study examined the relationship between digital literacy and the use of mobile technology devices for academic activities among students of Emmanuel Alayande College of Education. The findings provide empirical insight into how students' digital competencies influence their engagement with mobile technologies for learning purposes.

The results revealed that students possess a moderate level of digital literacy. Most respondents demonstrated awareness of the concept of digital literacy and reported competence in navigating digital tools, using search engines, identifying appropriate keywords, and accessing information independently. However, the findings also indicated that a notable proportion of students still encounter difficulties when browsing the internet for information. This suggests that while students may possess foundational operational skills, their digital literacy may not be uniformly advanced across all dimensions. This finding aligns with Eshet-Alkalai's (2004) conceptualization of digital literacy as a multidimensional competence that extends beyond basic technical skills to include higher-order cognitive and evaluative abilities. Similarly, Hague and Williamson (2009) emphasize that digital literacy involves critical thinking and informed engagement with digital information rather than mere familiarity with digital tools.

The study further revealed that mobile technology devices are widely used by students for academic activities. A majority of respondents reported using mobile devices for tasks such as completing assignments, searching for academic information, downloading scholarly resources, and accessing learning materials Opalana, T. (2021). These findings suggest that mobile technology devices have become an integral part of students' academic practices. This supports the observations of Naismith et al. (2004), who argued that mobile technologies enable learners to access information and learning resources regardless of time or location. Likewise, Al Hamdani (2013) noted that mobile learning facilitates flexibility and accessibility in educational environments by allowing students to engage with learning materials through portable digital devices.

Despite the substantial academic use reported in the study, the findings also indicate that mobile devices are frequently used for non-academic activities such as communication, social networking, and general internet browsing. This reflects the multifunctional nature of mobile technologies in contemporary society. As noted by Naismith et al. (2004), mobile technologies are deeply embedded in everyday life and are used for a wide range of purposes beyond formal learning. Consequently, the presence of mobile technology devices does not automatically guarantee their optimal use for academic purposes.

A key finding of the study is the significant positive relationship between digital literacy and academic use of mobile technology devices. The correlation analysis indicates that students with higher levels of digital literacy are more likely to use mobile devices for academic purposes. This result supports the argument that digital literacy serves as a critical enabling skill for effective participation in technology-mediated learning environments. According to Brick and

Cervi-Wilson (2015), digital literacy equips individuals with the skills needed to locate, evaluate, manage, and share information using digital technologies. In the absence of these competencies, students may struggle to utilize digital tools productively for academic activities.

The study also found a strong positive relationship between mobile technology device usage and students' academic activities. This finding suggests that mobile technologies can significantly enhance students' academic engagement when used effectively. Mobile devices enable students to access educational resources, collaborate with peers, and retrieve information quickly, thereby supporting learning processes. These findings reinforce the argument that mobile technologies have the potential to transform educational experiences by expanding access to information and facilitating flexible learning environments.

Overall, the findings of this study underscore the critical role of digital literacy in shaping how students engage with mobile technology devices for academic purposes. While access to mobile technologies is widespread among students, the ability to utilize these tools effectively depends largely on their digital literacy competencies. Strengthening digital literacy skills among students will therefore enhance their ability to maximize the academic benefits of mobile technologies and participate more effectively in digital learning environments.

6. CONCLUSION

This study examined the relationship between digital literacy and the use of mobile technology devices for academic activities among students of Emmanuel Alayande College of Education, Oyo State, Nigeria. The findings revealed that students generally possess moderate levels of digital literacy, demonstrating basic competencies in navigating digital tools, using search engines, identifying keywords, and accessing information through information and communication technologies (ICT). Although a majority of respondents reported awareness of digital literacy and indicated confidence in their ability to use digital tools, the results also revealed that some students still encounter difficulties when browsing for information online.

The findings further showed that mobile technology devices are widely used among students for academic purposes. Respondents reported using mobile devices for tasks such as

assignment preparation, searching for academic information, downloading scholarly materials, and reading academic resources. However, the study also indicated that students use mobile devices extensively for non-academic purposes such as social media interaction, communication, and entertainment. This suggests that while mobile technology devices are available and accessible, their academic utilization may compete with other forms of digital engagement.

The correlation analysis revealed a significant positive relationship between digital literacy and the academic use of mobile technology devices. This implies that students who possess higher levels of digital literacy are more likely to use mobile technology devices effectively for academic activities. The study also established a strong positive relationship between mobile technology device usage and students' academic activities, indicating that mobile technologies contribute meaningfully to academic engagement and learning processes when used appropriately.

Overall, the study concludes that digital literacy plays an important role in enabling students to maximize the academic benefits of mobile technology devices. Strengthening students' digital literacy competencies will therefore enhance their ability to effectively utilize digital technologies for learning and academic development.

7. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are proposed:

1. Integration of digital literacy training in the curriculum: Educational institutions should integrate structured digital literacy training into their curriculum to equip students with the necessary skills required to effectively navigate digital environments and utilize mobile technology devices for academic purposes.

2. Capacity building for students: Colleges of Education and other higher institutions should organize workshops, seminars, and training programmes aimed at improving students' digital competencies, particularly in areas such as information searching, evaluation of online sources, and effective use of digital learning tools.

3. Encouraging academic use of mobile technology devices: Lecturers and educators should encourage students to utilize mobile technology devices more actively for academic purposes by integrating digital tools into teaching, assignments, and classroom activities.

4. Provision of institutional digital support systems: Institutions should provide adequate digital infrastructure such as reliable internet connectivity, digital libraries, and online learning platforms to support students' academic engagement with mobile technologies.

5. Promotion of responsible technology use: Students should be sensitized to the importance of balancing academic and non-academic use of mobile technology devices to ensure that these tools contribute positively to their academic development rather than becoming sources of distraction.

8. IMPLICATIONS FOR RESEARCH AND PRACTICE

The findings of this study have important implications for both educational practice and future research. From a practical standpoint, the study highlights the importance of strengthening students' digital literacy skills in order to maximize the academic benefits of mobile technology devices. Although students demonstrated moderate digital literacy and reported frequent use of mobile technologies for academic purposes, the results suggest that access to digital tools alone does not automatically translate into effective academic utilization. Educational institutions should therefore prioritize digital literacy development as a core component of teaching and learning strategies. Integrating digital literacy training into curricula and encouraging the use of mobile technologies for academic engagement can enhance students' learning experiences and academic productivity.

For educators and institutional administrators, the findings underscore the need to create supportive digital learning environments that encourage purposeful use of mobile technologies. Lecturers can incorporate mobile-assisted learning strategies, digital research assignments, and online academic resources into their instructional practices to promote active academic use of technology. Furthermore, providing reliable internet access, digital libraries, and

technology-enabled learning platforms will help students leverage mobile devices more effectively for academic activities.

The study also provides a foundation for further research in the area of digital literacy and technology-enabled learning. Future studies may explore additional factors that influence students' academic use of mobile technologies, such as digital learning environments, institutional policies, or socio-economic factors. Researchers may also employ longitudinal or experimental designs to examine how improvements in digital literacy training influence students' academic performance over time. Expanding such research across different institutions and educational contexts would provide deeper insights into how digital literacy and mobile technology use shape learning outcomes in higher education.

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