

EMPOWERING STUDENTS THROUGH COLLABORATIVE LEARNING ON SOCIAL MEDIA PLATFORMS: ENHANCING KNOWLEDGE SHARING IN HIGHER EDUCATION

Kasumu, Rebecca Yinka & Ogali, Theodorah Ukaefi
 Department of Curriculum Studies and Educational Technology,
 Faculty of Education, University of Port Harcourt. Rivers State, Nigeria.
 Corresponding author: Yinkabeckyl@gmail.com

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ABSTRACT

Social media refers to a variety of technologies that facilitate the sharing of ideas and information among their users. The study adopted descriptive survey research designed to explore empowering students through collaborative learning on social media platforms: enhancing knowledge sharing in higher education. The study was carried out in Rivers State, Port Harcourt, Nigeria. The population of the study is 168 students from University of Port Harcourt and Ignatius Ajuru University of Education. A sample size of 84 was used for the study. A stratified sampling technique was used for the study. The instrument used for the study was a structured questionnaire titled empowering students through collaborative learning on social media platforms: enhancing knowledge sharing in higher education (ESCLSMPKHE) with 20 items. Face and content validity was used for the study, and reliability co-efficient of 0.82 was obtained. Mean and Z-test were the statistical tools used for the study. The study found that social media platforms eliminate geographical barriers, enabling students from different universities and regions to work together on joint research projects, academic discussions, and even virtual classrooms, which further enhances the learning experience. Based on the findings, the researchers recommended that universities should implement formal training programs to improve students' digital literacy, focusing on the effective and responsible use of social media for academic purposes.

Keywords: Social media, Collaborative learning, communication, engagement, academic focused platform, personalized learning.

I.INTRODUCTION

The way students communicate, study, and share information has been completely transformed by the introduction of technology into the classroom. Social media platforms have become extremely effective instruments for group learning in higher education in recent years. Originally created for private correspondence, social media has developed into a vibrant platform for academic interaction where students may exchange materials, have discussions, and work together on assignments outside of the classroom. The term "social media" describes a range of technological tools that enable users to share information and thoughts [1].

As digital natives, today's students are accustomed to using social media for both social and recreational reasons. In many higher education institutions, social media's potential to foster academic collaboration and improve knowledge sharing is still underutilized. Nevertheless, more and more academic institutions

are realizing how important it is to use social media as a collaborative learning tool. These platforms give students the chance to collaborate on projects, share learning materials, and have group conversations in a way that encourages peer support, active learning, and a deeper comprehension of academic material [2]. Students can connect with peers and teachers through academic-focused platforms like ResearchGate and social networking sites like Facebook, Twitter, LinkedIn, and WhatsApp, creating a knowledge-sharing environment. Deeper engagement with the course material, enhanced problem-solving abilities, and a more individualized learning experience are all encouraged by this interaction. Additionally, social media gives students instant access to and sharing of information, facilitating collaborative learning across time and space [3].

Nevertheless, there are drawbacks to using social media for teaching. Problems like the digital gap, which occurs when some pupils do not have equal access to technology and internet connectivity, as well as the possibility of distractions and false information on these platforms, continue to be obstacles to their efficient usage. Furthermore, students' capacity to properly utilize social media platforms for learning may be hampered by a lack of official instruction on how to use them in an academic setting [4].

The necessity to adopt cutting-edge teaching and learning resources has increased as universities throughout the world continue to adjust to the needs of the twenty-first century. Social media is becoming more and more acknowledged as a tool for encouraging student collaboration in learning because of its wide audience and interactive features. In addition to serving as venues for social interaction, these platforms have the ability to improve academic performance and establish vibrant learning communities where students can share knowledge and solve problems in real time [5].

Ajibade et al [6] suggest that social media platforms can be an effective bridge between traditional classroom settings and modern learning environments because of the changing nature of student learning habits and the increasing prevalence of digital devices. By using social media for academic collaboration, students can develop skills like critical thinking, communication, and teamwork all of which are critical competencies needed in the global workforce [7].

Additionally, students' extensive use of laptops, smartphones, and other digital devices offers a chance to interact with them in a meaningful way for academic purposes. Through social media, study groups may be formed, educational materials can be shared, and questions can be asked and answered in a peer-supported setting. Students are able to encourage one another in their academic endeavors because it cultivates a sense of community among them. According to Wahyu et al [8], this is especially crucial in Nigerian higher education, since the number of students enrolled frequently exceeds the resources and support networks that are accessible to them.

Additionally, it has been demonstrated that social networking sites like Facebook and WhatsApp promote informal learning since they make it simple for students to share course materials, videos, and notes. Additionally, these platforms give students a special way to communicate with teachers outside of scheduled lecture times, having conversations, getting answers to questions, and getting feedback. These platforms' ability to support asynchronous learning makes them perfect for students with a variety of schedules and obligations, providing a setting for ongoing education [9].

Nevertheless, despite the possible benefits, questions remain about how social media use affects students' wellbeing and academic achievement. The potential for distraction is a serious issue since students could struggle to strike a balance between their academic work and their leisure time spent on social media [10]. Additionally, students run the risk of depending on dubious sources for academic knowledge due to the spread of false information on social media platforms. Thus, it is essential to comprehend how to lessen these difficulties and use social media's advantages for teaching [11].

Understanding how Nigerian university students view and use social media for collaborative learning, how much they participate in knowledge-sharing activities, and the advantages and disadvantages they experience will be the main goals of this study. By examining students' experiences, the study hopes to shed more light on how social media might influence contemporary higher education and aid in the creation of best practices for incorporating these platforms into the teaching and learning process.

The results of this study will add to the current conversation about the digital transformation of education, with a particular emphasis on how social media can empower students through collaborative learning. Additionally, the study will contribute to the development of institutional policies regarding digital literacy initiatives and technology integration, guaranteeing that students possess the abilities and information required to collaborate academically on social media.

II.STATEMENT OF THE PROBLEM

Social media usage has changed many facets of daily life, including education, in recent years. Social media is mostly seen as a medium for interpersonal communication and social engagement, but there is growing interest in how it may promote knowledge sharing and collaborative learning in higher education. However, social media's incorporation into the educational process is still restricted and understudied at many Nigerian universities, even if its value as a tool for academic engagement is becoming more widely acknowledged.

There are advantages and disadvantages to students' extensive use of social media in the classroom. On the one hand, social media platforms provide students with a creative and convenient means of interacting with classmates and teachers, exchanging educational materials, working together on group projects, and gaining access to up-to-date academic resources. Students can improve their academic performance and learning experience by using these platforms to organize study groups, engage in casual conversations, and exchange ideas.

However, there are a number of obstacles that prevent social media from reaching its full potential when used for educational reasons. Students from underprivileged backgrounds have restricted access to the technology and internet connectivity needed to engage in online collaborative learning activities, resulting in a notable digital gap in Nigerian universities. Furthermore, students frequently turn their focus away from academic information on social media platforms, which are perceived as sources of distraction. Additionally, there is a dearth of institutional supervision or formal training about the use of social media in an academic context, which results in underutilization or poor usage of these platforms for collaborative learning.

Furthermore, worries regarding the authenticity of information posted on social media and the potential for misinformation remain serious issues. Students may find difficulty in discriminating between credible and unreliable sources, which could impair the quality of knowledge conveyed and collaborative learning results. Furthermore, little empirical study has been done on the effects of social media on student motivation and academic accomplishment in Nigeria, making it difficult to determine how these platforms can improve student involvement and create a feeling of community.

Aim and Objectives of the Study

The aim of the study is to empower students through collaborative learning on social media platforms: enhancing knowledge sharing in higher education. Specifically, the study intends to:

1. Assess the extent to which students use social media platforms for collaborative learning in Nigerian universities.
2. Examine the benefits of using social media for knowledge sharing and academic collaboration among students.
3. Investigate the challenges students face when using social media for academic collaboration and knowledge sharing.
4. Explore students' perceptions of the role of social media in enhancing their academic engagement and motivation.

Research Questions

Based on the objectives of the study, the following research questions were drawn:

1. To what extent do students use social media platforms for collaborative learning activities in Nigerian universities?
2. What are the perceived benefits of using social media for knowledge sharing and academic collaboration among students?
3. What are the challenges students face when using social media for academic collaboration and knowledge sharing?
4. How do students perceive the role of social media in enhancing their academic engagement and motivation in Nigerian universities?

III.METHODOLOGY

The study adopted a descriptive survey research designed to explore empowering students through collaborative learning on social media platforms: enhancing knowledge sharing in higher education. The study was carried out in Rivers State, Port Harcourt, Nigeria. The population of the study is 168 students from University of Port Harcourt and Ignatius Ajuru University of Education. A sample size of 84 was used for the study. A stratified sampling technique was used for the study. The instrument used for the study was a structured questionnaire titled empowering students through collaborative learning on social media platforms: enhancing knowledge sharing in higher education (ESCLSMPKHE) with 20 items. Face and content validity was used for the study, reliability co-efficient of 0.82 was obtained. Mean and Z-test were the statistical tools used for the study.

IV.RESULTS

Research Question 1: To what extent do students use social media platforms for collaborative learning activities in Nigerian universities?

Table 1: Extent to which students use social media platforms for collaborative

S/N	Items Extent to which students use social media platforms for collaborative	SA	A	SD	D	X Mean	SD	Total No of Respondents
1	Social media platforms are perceived as effective for communication, connecting with peers and lecturers, and enhancing collaborative learning	74	10	-	-	3.88	0.32	84
2	Social media platforms eliminate geographical barriers, enabling students from different universities and regions to work together on joint research projects, academic discussions, and even virtual classrooms, which further enhances the learning experience.	82	2	-	-	3.97	0.19	84
3	While some students have access to smartphones, laptops, and reliable internet, many others face difficulties due to poor internet connectivity, limited access to devices, and inadequate resources to engage in online collaborative activities.	80	4	-	-	3.95	0.23	84
4	A significant portion of Nigerian students may not possess the necessary digital literacy skills to effectively use social media platforms for educational purposes.	76	8	-	-	3.90	0.29	84
5	The use of social media for collaborative learning has the potential to positively impact academic performance. Collaborative approach helps enhance critical thinking, problem-solving, and communication skills, which are essential for academic success.	50	34	-	-	3.59	0.55	84
	Average Mean					3.85	0.31	

Table 1 shows that with the mean score of 3.85, the study revealed that social media platforms eliminate geographical barriers, enabling students from different universities and regions to work together on

joint research projects, academic discussions, and even virtual classrooms, which further enhances the learning experience.

Research Question 2: What are the perceived benefits of using social media for knowledge sharing and academic collaboration among students?

Table 2: Perceive benefits of using social media

S/N	Items Perceive benefits of using social media	SA	A	SD	D	X Mean	SD	Total No of Respondents
1	Social media platforms such as Facebook, WhatsApp, Twitter, and LinkedIn provide students with opportunities to access scholarly articles, research papers, educational videos, and other academic materials that can supplement their learning	79	5	-	-	3.94	0.28	84
2	Through social media, students can form study groups and engage in discussions on complex topics, helping each other clarify doubts, exchange knowledge, and explore different perspectives. This form of collaboration fosters a sense of community and promotes active learning, as students are no longer passive recipients of information but active participants in the learning process	60	24	-	-	3.71	0.45	84
3	Social media platforms allow students to communicate more easily with their peers, lecturers, and other academic professionals; this improved communication accelerates the exchange of ideas and enhances the collaboration process	69	15	-	-	3.82	0.38	84
4	Students can post questions, share resources, and respond to discussions at any time, making it easier for those with busy schedules or those in different time zones to participate.	59	25	-	-	3.70	0.46	84
5	Social media fosters peer learning, where students learn from each other's experiences, knowledge, and insights.	63	21	-	-	3.75	0.43	84
	Average Mean					3.78	0.40	

Table 2 shows that with the mean score of 3.78, the study revealed that social media platforms such as Facebook, WhatsApp, Twitter, and LinkedIn provide students with opportunities to access scholarly

articles, research papers, educational videos, and other academic materials that can supplement their learning

Research Question 3: What are the challenges students face when using social media for academic collaboration and knowledge sharing?

Table 3: Challenges students face when using social media

S/N	Items Challenges students face when using social media	SA	A	SD	D	X Mean	SD	Total No of Respondents
1	Social media platforms, while useful for academic collaboration, are also filled with entertainment content, social updates, and non-academic discussions. This makes it easy for students to veer away from academic tasks, wasting time on irrelevant content	55	29	-	-	3.65	0.47	84
2	Students in rural areas or those attending institutions with inadequate technological resources may struggle to access social media platforms consistently or experience slow data speeds, which hinder real-time communication and the sharing of educational content	51	33	-	-	3.60	0.50	84
3	A large number of students may not possess the necessary digital literacy or technological skills to effectively navigate social media platforms for academic purposes	81	3	-	-	3.96	0.30	84
4	In collaborative academic environments, this information overload can become a challenge as students may share unverified, incomplete, or low-quality materials, which can lead to confusion or the spread of misinformation	72	12	-	-	3.85	0.37	84
5	Academic collaboration through social media is informal and unstructured, with no clear roles, guidelines, or objectives for group members. This lack of direction can result in disorganized discussions, unclear tasks, and ineffective collaboration.	46	38	-	-	3.54	0.52	84
	Average Mean					3.72	0.43	

Table 3 shows that with the mean score of 3.72, the study revealed that a large number of students may not possess the necessary digital literacy or technological skills to effectively navigate social media platforms for academic purposes; in

collaborative academic environments, this information overload can become a challenge as students may share unverified, incomplete, or low-quality materials, which can lead to confusion or the spread of misinformation.

Research Question 4: How do students perceive the role of social media in enhancing their academic engagement and motivation in Nigerian universities?

Table 4: Students perceive role of social media

S/N	Items Students perceive role of social media	SA	A	SD	D	X Mean	SD	Total No of Respondents
1	Platforms such as Facebook groups, WhatsApp study circles, and Twitter discussions enable students to share academic content, including research papers, notes, and tutorials; this access to supplementary resources enhances students' understanding of course materials and allows them to stay updated on new developments in their field of study	59	9	-	-	3.13	0.39	84
2	Many students perceive social media as an effective way to collaborate with peers, which significantly enhances their academic engagement. Platforms like WhatsApp, Facebook, and Google Docs allow students to work together on assignments, projects, and research in real-time	66	18	-	-	3.78	0.45	84
3	Students perceive the ease and immediacy of social media communication as an effective way to seek clarification on academic issues, ask questions, or engage in discussions outside regular class hours	61	23	-	-	3.72	0.46	84
4	Social media platforms host challenges, quizzes, contests, and academic awards, all of which encourage students to participate and excel	44	40	-	-	3.52	0.50	84
5	Students often perceive social media as an important tool for building a sense of community within their academic environment; by joining academic groups, student organizations, or faculty-specific pages on platforms like Facebook or WhatsApp, students feel more connected to their university, their peers, and the academic community at large	70	14	-	-	3.83	0.44	84
	Average Mean					3.59	0.44	

Table 4 shows that with the mean score of 3.59, the study revealed that students often perceive social media as an important tool for building a sense of community within their academic environment; by joining academic groups, student organizations, or

faculty-specific pages on platforms like Facebook or WhatsApp, students feel more connected to their university, their peers, and the academic community at large.

Hypotheses

HO1: There is no significance difference between University of Port Harcourt and Ignatius Ajuru University of Education extent to which students use social media platforms for collaborative learning

Table 5: Table of analysis to examine the significant difference between University of Port Harcourt and Ignatius Ajuru University of Education extent to which students use social media platforms for collaborative learning

Group	Mean	Standard Deviation	n	Df	Standard Error	Z (Cal)	Z (Tab)	Decision
University of Port Harcourt	3.97	0.19	42	82	0.08	4.75	1.96	Rejected
Ignatius Ajuru University of Education	3.59	0.55	42					

There is a significant difference between the two universities regarding the extent to which students use social media platforms for collaborative learning. The higher mean for the University of Port Harcourt (3.97) compared to Ignatius Ajuru University of Education (3.59) suggests that students at the

University of Port Harcourt are more actively engaged in using social media for collaborative learning. This difference may be attributed to factors such as variations in digital literacy, institutional support for social media integration, or access to technology.

HO2: There is no significant difference between University of Port Harcourt and Ignatius Ajuru University of Education benefits of using social media for knowledge sharing and academic collaboration among students

Table 6: Table of analysis to examine the significant difference between University of Port Harcourt and Ignatius Ajuru University of Education benefits of using social media for knowledge sharing and academic collaboration among students

Group	Mean	Standard Deviation	N	Df	Standard Error	Z (Cal)	Z (Tab)	Decision
University of Port Harcourt	3.94	0.28	42	82	0.08	3.00	1.96	Rejected
Ignatius Ajuru University of Education	3.70	0.46	42					

The analysis of HO₂ revealed a significant difference between students of the University of Port Harcourt and Ignatius Ajuru University of Education regarding the benefits derived from using social media for knowledge sharing and academic collaboration. The University of Port Harcourt students reported a higher mean score (3.94) compared to their counterparts at Ignatius Ajuru University of Education (3.70). With a calculated Z-value of 3.00 exceeding the critical Z-value of 1.96 at a 0.05

significance level, the null hypothesis was rejected. This result implies that students from the University of Port Harcourt perceive greater benefits from social media usage in academic contexts than those from Ignatius Ajuru University of Education. Consequently, there is a need for strategic interventions at Ignatius Ajuru University of Education to enhance students' effective use of social media for academic collaboration and knowledge sharing.

HO3: There is no significant difference between University of Port Harcourt and Ignatius Ajuru University of Education challenges students face when using social media for academic collaboration and knowledge sharing

Table 7: Table of analysis to examine the significant difference between University of Port Harcourt and Ignatius Ajuru University of Education challenges students face when using social media for academic collaboration and knowledge sharing

Group	Mean	Standard Deviation	N	Df	Standard Error	Z (Cal)	Z (Tab)	Decision
University of Port Harcourt	3.54	0.52	42	82	0.09	4.66	1.96	Rejected
Ignatius Ajuru University of Education	3.96	0.30	42					

There is a significant difference between the two universities in the challenges faced by students when using social media for academic purposes. The mean for Ignatius Ajuru University of Education (3.96) is higher than that of the University of Port Harcourt (3.54), indicating that students at Ignatius Ajuru face more challenges. These challenges might include

limited access to stable internet, lack of technical skills, or inadequate institutional support. Interventions should focus on mitigating these challenges at Ignatius Ajuru University through infrastructure improvements, digital literacy programs, and institutional policies promoting social media usage.

HO4: There is no significant difference between University of Port Harcourt and Ignatius Ajuru University of Education students' perceptions of the role of social media in enhancing their academic engagement and motivation

Table 8: Table of analysis to examine the significant difference between University of Port Harcourt and Ignatius Ajuru University of Education students' perceptions of the role of social media in enhancing their academic engagement and motivation

Group	Mean	Standard Deviation	n	Df	Standard Error	Z (Cal)	Z (Tab)	Decision
University of Port Harcourt	3.83	0.44	42	82	0.09	7.77	1.96	Rejected
Ignatius Ajuru University of Education	3.13	0.39	42					

There is a significant difference between the two universities in students' perceptions of social media's role in enhancing academic engagement and motivation. The higher mean for the University of Port Harcourt (3.83) compared to Ignatius Ajuru University of Education (3.13) suggests that students

at the former institution perceive social media as more impactful for academic engagement and motivation. This disparity could stem from differing institutional cultures, teaching methods, or technological infrastructure.

V. DISCUSSION OF FINDINGS

Research Question 1: To what extent do students use social media platforms for collaborative learning activities in Nigerian universities?

The current study supports that of Ansari & Khan [12], who discovered that students frequently use Facebook and WhatsApp for academic purposes, including discussing coursework, sharing study materials, and planning group projects. Additionally, a study by Chukwunaza [13] demonstrated that social media platforms foster informal learning environments outside of traditional classrooms and improve student-to-student interactions. However, usage varies by institution. According to Boruzie et al [14], students at Nigerian universities report uneven access to social media technologies because of financial and infrastructure issues.

Research Question 2: What are the perceived benefits of using social media for knowledge sharing and academic collaboration among students?

A study by Liu et al [15] found that social media makes it easier for students to share materials including notes, videos, and articles. Because social media enables them to actively participate in academic debates and learn from a variety of views, students report feeling more engaged in the learning process [16]. Additionally, Chan & Pow's research [17] shows that social media promotes group problem-solving, which improves academic performance and fosters the growth of critical thinking abilities.

Research Question 3: What are the challenges students face when using social media for academic collaboration and knowledge sharing?

A study by Greenhow & Galvin [18] found that social media distractions frequently make it harder for students to stay focused on their academic work. Students' attention is diverted and social media's usefulness as a teaching tool is diminished when non-academic information, including entertainment and personal posts, is present. Social media can boost student motivation by offering a forum for active engagement and cultivating a feeling of community, according to a study by Gurjar [19].

Research Question 4: How do students perceive the role of social media in enhancing their academic engagement and motivation in Nigerian universities?

According to students, they felt more linked to their teachers and peers, which increased their sense of belonging and academic involvement [20]. Similarly, social media use can boost student motivation by giving them quick access to academic resources and encouraging peer collaboration, according to a study by Al Hannadi & Mohd Asri Bin [21].

VI. CONCLUSION

Students in universities, especially those in Nigeria, are increasingly using social media platforms for academic collaboration. According to the results, a sizable portion of students use Facebook and WhatsApp to collaborate on group projects, discuss homework, and exchange notes all of which are considered informal academic activity. Formal academic activities are not as commonly conducted on these platforms, and usage varies in degree.

Notwithstanding the obvious advantages, a number of obstacles prevent social media from being used effectively for educational objectives. The potential of these platforms to promote fruitful academic collaboration is limited by problems including insufficient internet connection, gaps in digital literacy, and distractions from non-academic content. These difficulties are especially noticeable in Nigerian colleges, where two major obstacles were found to be a lack of formal training on the use of social media for teaching and restricted access to dependable internet.

Students' interest and involvement in their studies are positively impacted by social media platforms. Students are more likely to remain motivated and involved in their academic work when they are able to work together with peers, share resources, and participate in scholarly conversations. Peer support is facilitated via social media, where students can help one another, provide study advice, and work together on assignments to enhance their overall academic performance and experience.

VII.RECOMMENDATIONS

Based on the conclusion, the following recommendations were made:

1. Universities should implement formal training programs to improve students' digital literacy, focusing on the effective and responsible use of social media for academic purposes.
2. To overcome the barrier of limited internet access, particularly in rural and under-resourced areas, universities should invest in improving internet infrastructure on campus.
3. To address the informal nature of social media collaboration, universities should establish structured academic collaboration spaces on platforms like Facebook, Google Groups, or institutional learning management systems (LMS).
4. Since distractions on social media platforms can hinder academic focus, universities should educate students on how to manage their time effectively and set academic goals while using social media.

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