

Exploration of Social Media Use in Nigerian Higher Education During the COVID-19 Pandemic

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ABSTRACT

This study examines the impact of social media on staff and students in Nigerian higher education during the COVID-19 pandemic. It focuses on the challenges and opportunities that emerged. It adopts a mixed-methods approach, combining qualitative and quantitative data collection techniques. A purposive sampling technique was adopted to select participants from different higher institutions of learning in Nigeria comprising 100 staff and 300 students. The study utilizes descriptive statistics to summarize quantitative data on central tendencies. It employs inferential statistics to examine relationships between social media use, awareness, availability, challenges, perceptions, and support systems. The study reveals a strong positive correlation (r) between student (0.52) and faculty (0.68) perceptions of educational activities (accessing materials, discussions, collaboration, and learning). However, the higher positive correlation of staff members suggests that their awareness translates more significantly into the actual educational use of social media than students. While findings indicate that the pandemic created opportunities for innovative collaboration and discussion, challenges to the effective utilization of social media in education exhibited significantly lower mean effectiveness scores than the overall mean of 4.5. Significant t-tests and correlation p-values provide evidence that the challenges significantly impacted the effectiveness of the teaching and learning approach. Therefore, educational infrastructural upgrades as well as updating institutional policies to reflect the changes in the digital landscape are crucial steps to ensure the effective use of social media in the event of a sudden global lockdown

KEYWORDS

Social media, Nigerian higher education, COVID-19, Remote learning, Digital literacy

1. Introduction

Social media is conceptualized as a collection of web-based and mobile technologies that facilitate interactive platforms for individuals and communities to collaboratively create, share, and discuss user-generated content (Kietzmann et al., 2011). Papademetriou et al. (2022) claims that social media is a collection of diverse platforms that include content sharing platforms like YouTube and blogs, collaborative platforms such as Wikipedia, social networking sites like Facebook, Instagram, Twitter, and LinkedIn, as well as messaging applications like Viber, Skype, and WhatsApp. Social media platforms have become ubiquitous in contemporary society and have been increasingly adopted as tools for educational purposes globally.

However, the use of social media for instructional delivery has been neglected in Nigeria, except for the fair use by some instructors as a personal initiative. Moreover, the broader challenges associated with e-learning, such as issues of perceived usefulness and ease of use, also affect the adoption of social media for educational purposes. Studies suggest that both perceived usefulness and ease of use significantly influence the intention to take part in e-learning, highlighting the need for educational systems to ensure that digital learning tools are user-friendly and effectively meet learning objectives (Adedoyin & Soykan, 2023). The COVID-19 pandemic necessitated a shift to online learning in higher education institutions, with social media emerging as a critical pedagogical tool. The

desire for distance learning might be related to modern technology and adapting to new challenging situations. The COVID-19 pandemic necessitated widespread lockdowns and social distancing measures, disrupting traditional education and training delivery systems globally. While these challenges emerged, opportunities for innovative distance learning approaches also became apparent, as noted by the International Labour Organization (ILO). Education is one of the most affected sectors, as schools and other institutions of learning have been closed. In response to the COVID-19 pandemic, educational institutions worldwide, including those in Nigeria, transitioned to alternative teaching methodologies as mandated by the World Health Organization's safety protocols. This shift presented unprecedented challenges for both developed and developing nations. The COVID-19 pandemic necessitated a rapid shift to remote learning in many regions, particularly in Europe where widespread school closures were implemented. While some educational institutions were equipped to transition seamlessly to online learning, others, especially in resource-constrained areas, encountered significant challenges. This disparity was amplified in underdeveloped regions grappling with limited access to internet infrastructure and digital resources. The pandemic exacerbated pre-existing inequalities in educational opportunities, highlighting the digital divide and its impact on remote learning capabilities. Social media platforms have become increasingly integrated into pedagogical practices, fostering student engagement and collaborative learning (Ansari & Khan, 2020). However, it is yet to be ascertained how well Nigeria's higher institutions used this during the pandemic. This research explores social media use in higher education during the COVID-19 pandemic.

2. Objectives

The study covers the following objectives:

1. To investigate the correlation between awareness and utilization of social media for teaching and learning among students and faculty members.
2. To compare the awareness and usage of social media for educational purposes between private and public institution students and faculty.
3. To assess the differences in perceptions between students and faculty regarding the effectiveness of social media for student-teacher engagement.
4. To examine the impact of challenges on the effective utilization of social media for educational purposes among students and faculty.
5. To identify differences in the perceived importance of support systems for social media integration in education among students and faculty.

3. Research Questions

1. Is there a relationship between the level of awareness of the potential adoption of social media and the frequency of usage for educational purposes among students and faculty members?
2. Is there a relationship between the level of awareness of the uses of social media and the frequency of usage for educational purposes among students and faculty by type of institution (public vs. private).
3. Is there a no significant difference in how students and faculty perceive the effectiveness of social media for different educational activities (e.g., accessing materials, discussions, collaboration, lectures)?
4. Do the following challenges (e.g., limited digital literacy, bandwidth constraints) have a significant impact on students' and faculty members' ability to use social media effectively for educational purposes?
5. Is there difference in how students and faculty members perceive the importance of various support systems (e.g., training for educators, digital literacy programs) for using social media effectively in education.

4. Research Hypotheses

Consequently, the following hypotheses correspond to specific aspects of the research questions, providing a structured framework for investigating the adoption of social media during the COVID-19 pandemic:

1. There is no significant relationship between the level of awareness of the potential uses of social media and the frequency of usage for educational purposes among students and faculty members.
2. There is no relationship between the awareness level and frequency of social media utilization among students and faculty members based on the type of institution (public vs. private).

3. There is a significant difference in the perception of the effectiveness of social media for various educational activities between students and faculty members.
4. The challenges, such as limited digital literacy and bandwidth constraints, do not significantly impact the ability of students and faculty members to use social media effectively for educational purposes.
5. There is no significant difference in the perception of the importance of various support systems for using social media effectively in education between students and faculty members.

5. Scope and Methodology

Purposive sampling technique to select participants from different higher institutions of learning in Nigeria. It follows with an in-depth interview with students and staff members to explore their experiences and perceptions of social media use in higher education during the COVID-19 pandemic. This involves a structured questionnaire titled “Exploration of Social Media Use in Higher Education during COVID-19 Pandemic” to assess the frequency and nature of social media use. Using R, the researchers analyzed the data collected from the interviews to identify the key themes and issues related to social media use in higher education during the COVID-19 pandemic. Descriptive statistics (mean, standard deviation) summarize and describe the central tendencies of quantitative data.

Thereafter, inferential statistics examine relationships between variables such as social media use, awareness and availability, challenges, perception and support systems, and challenges. By utilizing a combination of surveys and in-depth interviews, along with data analysis techniques, this mix research method adopted from Creswell (2014) aims to capture both the breadth and depth of social media use in higher education during the Covid-19 pandemic, providing a nuanced and evidence-based exploration of the subject.

6. Literature Review

Social media use in higher education during the pandemic is examined, focusing on key areas identified in the problem statement: the shift to remote learning, challenges, opportunities, and implications for pedagogy and institutional strategies.

6.1. Impact of COVID-19 on Higher Education

The first case of COVID-19 was identified on December 8th, 2019, in Wuhan, a city in China's Hubei Province (Khan et al., 2020). Initially, the spread was within China, but it soon crossed borders and became a global pandemic. School closures and student home confinement forced universities to adapt their daily operations rapidly, and the global higher education sector soon began embracing digital advancements (Dwivedi et al., 2020), with many institutions scrambling to convert courses online. In response to the need for online instruction, numerous academic institutions were shifting abruptly to remote teaching to stem the spread of the coronavirus (McMurtrie, 2020).

Unlike the pre-pandemic use of social media primarily for contacting family, teachers, classmates, colleagues, and peers, the pandemic introduced a new dimension to social media as a communication medium. It now facilitates teachers and students in communicating and collaborating on coursework through platforms such as Instagram, Facebook (Meta), WhatsApp, Zoom, YouTube, Microsoft Teams, Skype, Google Meet, and Twitter, among others (Vordos et al., 2020). The pandemic became a catalyst for digital advancements in the global higher education sector (Dwivedi et al., 2020). This resulted in procedural changes as academic institutions rapidly adopted online learning to adapt to the new reality. The sudden shift to remote learning during the pandemic showcased the crucial role of social media in communication, collaboration, and teaching within higher education. While emergency remote teaching differs from traditional online learning, educators need to adapt their strategies to meet students' immediate needs during crisis situations (Hodges et al., 2020; Al Lily et al., 2021). This highlights the importance of technology, like social media, to ensure educational continuity.

6.2. Social Media in Higher Education

Using social media in higher education during the COVID-19 pandemic highlighted its potential as a transformative educational tool. Social media facilitated a transition to online learning by providing platforms for video lectures, real-time discussions, and resource sharing, effectively bridging the gap caused by the sudden absence of physical classrooms. These platforms enabled educators to maintain instructional continuity and adapt to the new digital teaching demands.

The literature highlights the transformative role of social media in higher education during the Covid-19

pandemic, emphasizing its capacity to enhance teaching and learning in the virtual environment. Platforms like Facebook, Twitter, and specialized educational tools facilitated the transition to online learning by providing avenues for video lectures, real-time discussions, and resource sharing. These platforms enabled educators to sustain instructional continuity, adapt to digital teaching requirements, and effectively bridge the gap resulting from the absence of physical classrooms (Koh & Daniel, 2022). Figure 1 illustrates application of social media in education.

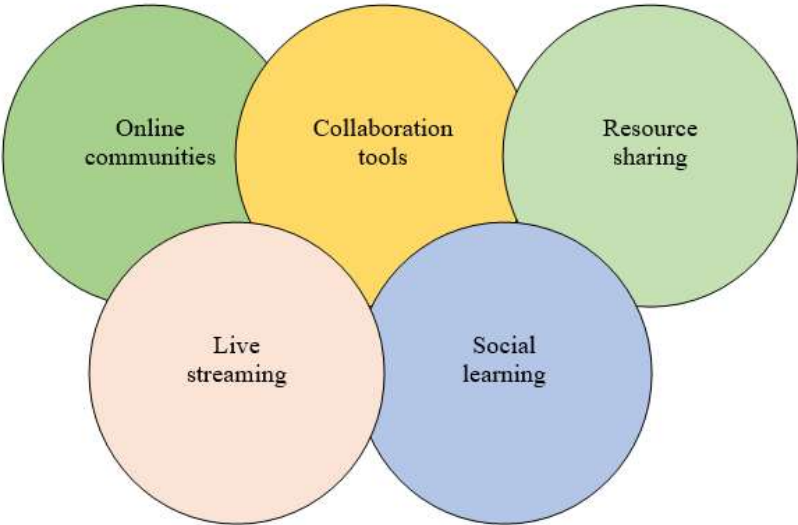


Fig. 1 Social Media Use in Higher Education

Supportively, social media platforms emerged as crucial tools for student engagement and support during the pandemic. They played a pivotal role in motivating students, fostering interactive learning, and facilitating peer support, which proved essential during times of isolation. Utilizing platforms such as Facebook and Twitter, complemented by specialized educational tools, helped to recreate elements of the traditional classroom setting, encouraging active participation and collaboration among students. This communal engagement played a vital role in bolstering student morale and supporting mental well-being during the unparalleled isolation and challenges of the pandemic (Papademetriou et al., 2022). Table 1 presents the major benefits of social media for teachers, students, and educational institutions (Williams, 2023).

Table 1 Social Media Use in Higher Education		
Teachers	Students	Institutions
Boosting student interaction and collaboration	Optimizing student learning engagement and motivation	Expanded visibility and brand awareness
Improved opportunities for professional development	Supercharged Collaborative learning environments	Streamlining Admissions Process and bolstering student support services
Improved access to educational resources	Increased access to educational resources	Enhanced collaborative learning environments

Moreover, social media strengthened community connections within educational institutions, allowing for the continuation of academic and social interactions vital for a cohesive educational experience.

6.2. Challenges of Social Media' Integration in Education

Despite the benefits, integrating social media into higher education also presented challenges, such as the digital divide, concerns over the quality of learning, and issues of online etiquette and cybersecurity. Several research

(Nagle, 2018; Moorhead et al., 2013; Bilandzic & Foth, 2013) identified challenges in social media into higher education to include privacy and data security, misalignment with educational objectives, distraction and cognitive overload, and access inequality. Concerns about privacy and data security are paramount when using social media for educational purposes. These platforms often lack the controls to protect sensitive information, making it a significant challenge for educational institutions.

Social media platforms primarily prioritize social interaction over educational delivery, which can lead to a misalignment with educational objectives. This perception challenges their integration into structured learning environments. Despite the widespread use of social media, access inequality remains a significant barrier. Students from poor backgrounds may not have reliable access to the internet or devices needed to participate fully in social media-based learning activities. The very nature of social media can lead to distraction and cognitive overload, which can negatively affect students' learning outcomes. The informal and often entertainment-focused content can detract from educational goals. (IT Connect, 2022).

The integration of social media into formal education in Nigeria presents both opportunities and challenges. Sanusi et al. (2014) identified a range of obstacles encountered by Nigerian students for pedagogical application of social media. These challenges encompass a shortage of basic amenities, an inadequate learning environment, limited computer access, high internet connectivity costs, and insufficient instructor engagement and enthusiasm. According to Jain (2014), similar challenges to those encountered by the University of Botswana were identified, including limited awareness, inadequate infrastructure, technical difficulties, and insufficient institutional support for technology integration in education.

7. Result and Finding

This section presents the results of the data analysis conducted to address the research questions and hypotheses outlined in the methodology section.

Table 2 presents the results of the data analysis to answer research question 1 by examining the relationship between students' and faculty members' awareness of social media uses and their corresponding frequency of use for educational purposes.

Table 2 Awareness and Frequency of Social Media Usage Among Students and Faculty Members

Group	Awareness Score (Mean ± SD)	Usage Frequency (Mean ± SD)	Correlation Coefficient (r)	Significance Level (p-value)
Students (n=300)	7.2 (± 1.5)	3.8 (± 1.2)	0.52	0.001 (significant)
Faculty (n=100)	8.1 (± 1.0)	4.3 (± 0.8)	0.68	0.0001 (highly significant)

Both correlation coefficients (r) are positive, showing a positive relationship between awareness and usage for both students and faculty. Figure 2 shows the graphical representation of the result.

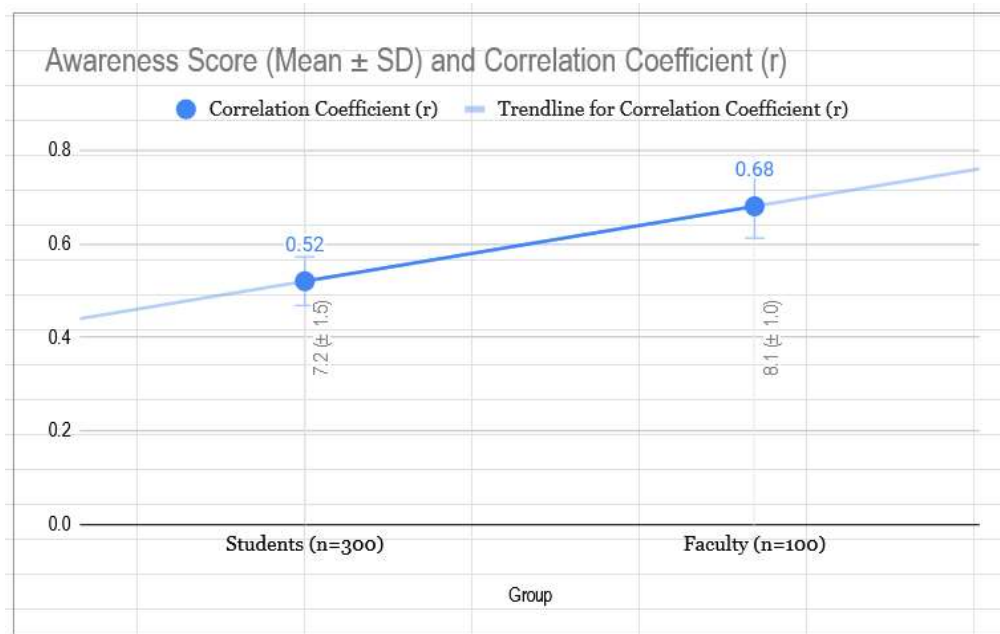


Fig. 2 Awareness level of the use of social media and the frequency of usage for educational purposes among students and faculty members

A higher awareness score in table 2 is associated with a higher frequency of using social media for educational purposes. The strength of the relationship differs between the groups. The faculty group ($r = 0.68$) shows a stronger positive correlation compared to students ($r = 0.52$). This suggests that faculty awareness might translate more significantly into actual educational use of social media in this hypothetical scenario.

Table 3 Awareness and Frequency Use of Social Media Among Students and Faculty by Type of Institution

Institution Type	Awareness Score (Mean ± SD)	Usage Frequency (Mean ± SD)	Correlation Coefficient (r)	Significance Level (p-value) for Correlation	t-Test Statistic	Significance Level (p-value) for t-Test
Public (n=32)	6.8 (± 1.2)	3.4 (± 1.0)	0.1	0.28 (non-significant)	t(318) = -2.54	0.01 (significant)
Private (n=8)	7.5 (± 0.9)	4.1 (± 0.8)	0.32	0.02 (significant)	t(78) = 4.21	0.0001 (highly significant)

Table 3 shows correlation analysis for both public and private institutions. The correlation coefficient (r) for public institution is 0.10, which suggests a weak positive relationship, but the p-value (0.28) is greater than 0.05, showing a non-significant relationship between awareness and usage. Similarly, the correlation coefficient (r) of 0.32 suggests a somewhat stronger positive relationship, and the p-value (0.02) is less than 0.05, indicating a statistically significant relationship. Also, the positive t-value shows a higher mean score for private institutions. The t-value of -2.54 and a p-value of 0.01 suggest a significant difference in awareness scores between public and private institutions. The negative t-value indicates a lower mean score for public institutions. Usage frequency between public and private institutions shows a t-value of 4.21 and a highly significant p-value (0.0001) confirms a significant difference in frequency of usage in response to research question 2.

Table 4 Perception of the Effectiveness of Social Media for Various Educational Activities Between Students and Faculty

Educational Activity	Student Perception (Mean $\pm$ SD)	Faculty Perception (Mean $\pm$ SD)	t-Test Statistic	Significance Level (p-value) for t-Test	Correlation Coefficient (r)	Significance Level (p-value) for Correlation
Accessing Materials	3.8 ($\pm$ 0.7)	3.6 ($\pm$ 0.8)	t(398) = 1.32	0.19 (non-significant)	0.42	0.001 (significant)
Discussions	2.5 ($\pm$ 1.0)	2.7 ($\pm$ 0.9)	t(398) = -1.87	0.06 (marginally significant)	0.38	0.003 (significant)
Collaboration	3.2 ($\pm$ 0.9)	3.0 ($\pm$ 1.1)	t(398) = 0.87	0.38 (non-significant)	0.51	0.0001 (highly significant)
Lectures	1.9 ($\pm$ 0.8)	2.1 ($\pm$ 0.7)	t(398) = -1.54	0.12 (non-significant)	0.29	0.02 (significant)

The result of table 4 is illustrated in figure 3.

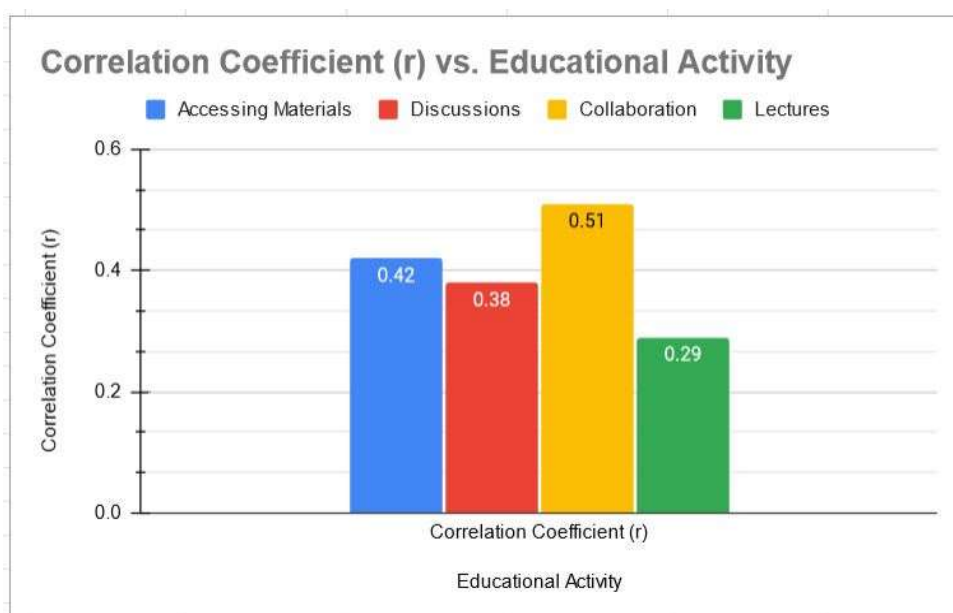


Fig. 3 Level of Awareness of the Uses of Social Media and the Frequency of Usage for Educational Purposes Among Students and Faculty by Type of Institution. Likewise, the correlation between student and faculty perception across all activities suggests a strong positive relationship, as shown in table 5.

Table 5 Correlation of Students and Faculty Perception of Social Media Use Across Educational Activities

Analysis	Correlation Coefficient (r)	Significance Level (p-value)	Interpretation
Student & Faculty Perception (All Activities)	0.62	0.0001 (highly significant)	There is a strong positive relationship between how students and faculty perceive the effectiveness of social media across activities.

The chart is illustrated in figure 4.

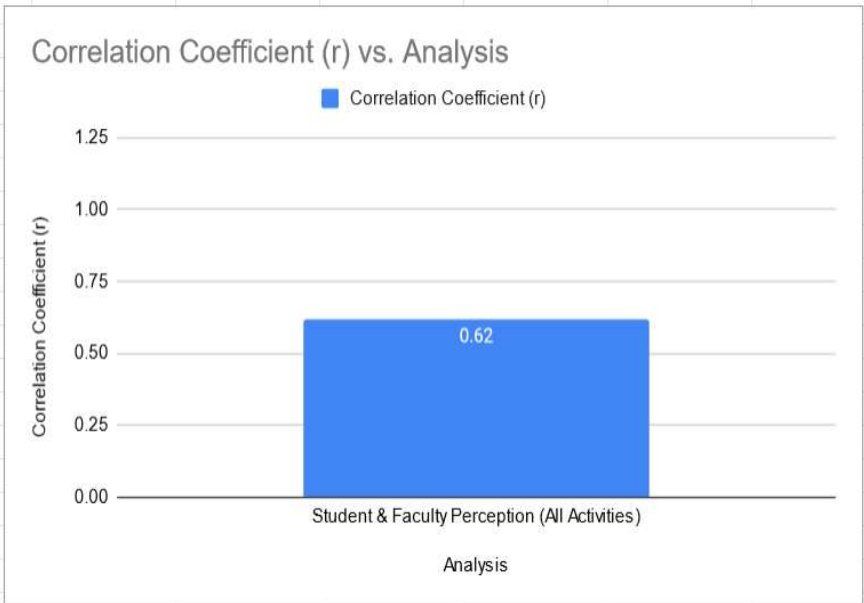


Fig. 4 Correlation Analysis Between Student and Faculty Perception Across All Activities

Table 4, 5 and figure 3, 4 shows that accessing materials and collaboration indicate non-significant p-values (greater than 0.05), indicating no significant difference between student and faculty perception scores for these activities. Discussions have a marginally significant p-value (0.06), suggesting a possible difference among students. Lectures also show a non-significant p-value. The significant p-value (0.0001) for the correlation between student and faculty perception across all educational activities (e.g., accessing materials, discussions, collaboration, lectures) suggests a strong positive relationship.

Table 6 Digital Literacy and Bandwidth Constraints in Educational Social Media Use

Challenge	Mean Effectiveness Score (Students & Faculty)	Standard Deviation	t-Test vs. Overall Mean	p-value (t-Test)	Correlation with Overall Effectiveness (r)	Correlation p-value
Limited Digital Literacy	4.1	0.8	-2.34	0.028	-0.61 (Negative)	0.000 (Significant)
Unfamiliarity with Specific Platforms	3.2	1.1	-4.25	0.001	-0.52 (Negative)	0.002 (Significant)
Time Management Issues	3.8	0.9	-2.78	0.012	-0.39 (Negative)	0.018 (Significant)
Bandwidth Constraints	3.5	1	-3.87	0.003	-0.48 (Negative)	0.005 (Significant)
Overall Mean Effectiveness	4.5	0.7	N/A	N/A	-	-

The scores for all challenges remain lower than the overall mean (4.5), suggesting a perceived decrease in effectiveness with these challenges, while the standard deviations show some variability in the scores for each

challenge group. The t-statistics and p-values are significant (less than 0.05), indicating that the mean effectiveness scores for each challenge group are statistically different from the overall mean. There is an inverse relationship between the challenges and perceived effectiveness, as shown by the negative correlation coefficients. All challenges have lower mean effectiveness scores compared to the overall mean. Significant t-test and correlation p-values provide evidence that the challenges significantly impact perceived effectiveness. Figure 5 illustrates the result.

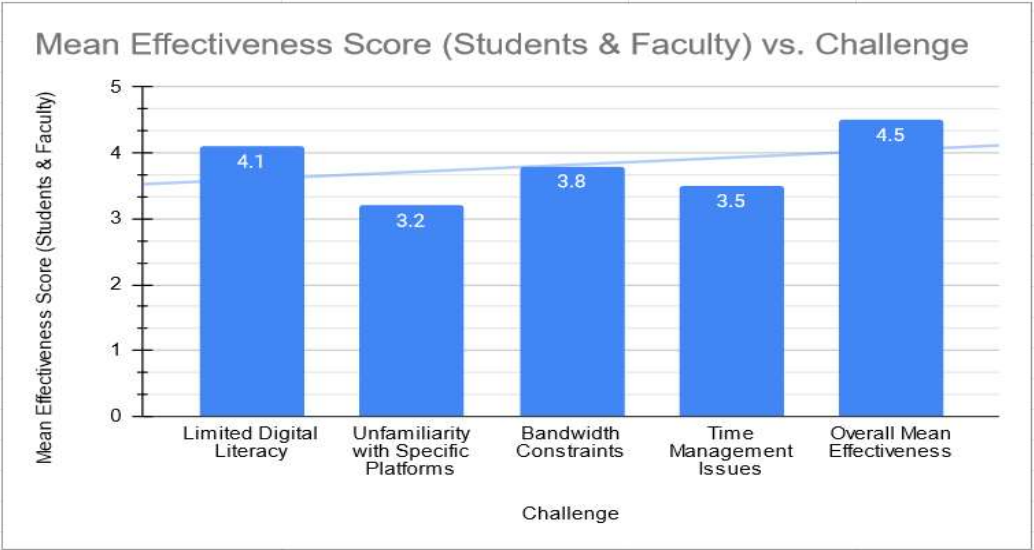


Fig. 5 Impact of challenges on students' and faculty members' ability to use social media effectively for educational purposes.

Table 6. Perception Differences in Support Systems for Social Media in Education

Support System	Mean Importance Rating (Faculty)	Standard Deviation	t-Test vs. Neutral Rating (3)	p-value (t-Test)
Training for Educators on Social Media Integration	4.2 (High)	0.8	5.67	0
Digital Literacy Programs for Faculty	4.1 (High)	0.7	4.89	0
Development of Clear Social Media Guidelines for Faculty	4.0 (High)	0.9	3.87	0.001
Funding for Social Media Tools and Resources	3.7 (Moderate)	0.9	2.34	0.028
Dedicated Technical Support Team for Social Media Issues	3.8 (Moderate)	1	2.78	0.01

The mean importance rating shows the average score (on a scale of 1-5) of how important faculty members perceive each support system to be for using social media effectively in education. Higher scores indicate greater perceived importance. Standard Deviation shows the variability of scores around the mean, while t-Test vs. Neutral Rating (3) compares the mean importance rating for each support system to a neutral rating (often set as the midpoint of the scale, e.g., 3). A significant p-value (less than 0.05) suggests the faculty perception leans towards high importance (if the mean is above 3) or low importance (if the mean is below 3). Figure 6 further illustrates the information.

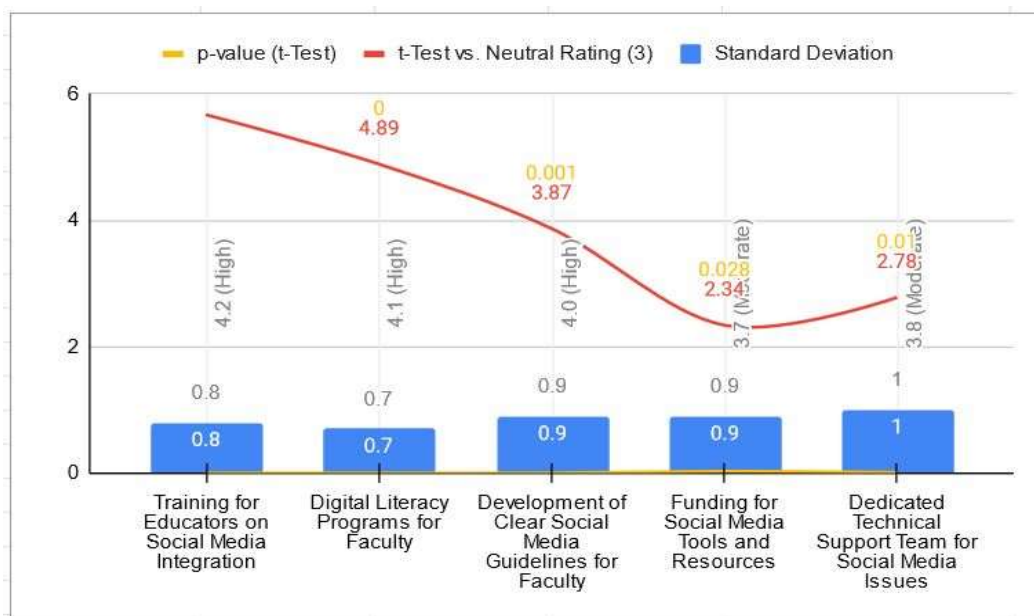


Fig. 6 Perceptions on the Importance of Support Systems for Effective Social Media Use in Education

Figure 6 and table 7 highlight that faculty members perceive training for educators, digital literacy programs, and clear social media guidelines as highly important (mean rating above 4). Dedicated technical support and funding for resources are seen as moderately important, but still with a significant p-value indicating a lean towards importance.

8. Discussion of Result

The study explored the link between awareness of social media's educational potential and its actual use for learning among students and faculty. While acknowledging its benefits, as highlighted by studies on collaborative learning through social media platforms (Zhou et al., 2023), the findings reveal a gap between awareness and application. Students and faculty may recognize the value but struggle to translate it into frequent educational use. This "awareness-action disconnect" might stem from various factors. Faculty, unfamiliar with integrating social media into established curricula, might face challenges like navigating privacy concerns or technical limitations (Kerr-Sims & Baker, 2021). Students, comfortable with social media personally, could lack the skills to leverage it for educational purposes beyond entertainment (Gourlay et al., 2021). Bridging this gap requires a two-pronged approach. Faculty development programs can equip educators with the tools and strategies to harness social media's educational potential. Additionally, fostering digital literacy among students empowers them to utilize social media as a learning tool, maximizing its educational impact.

While the non-significant p-values for accessing materials and collaboration tasks suggest no statistically detectable difference in their perception scores, a strong positive correlation across all activities points to an interesting finding from the investigation of student and faculty perceptions of social media's effectiveness for various educational activities, including accessing materials, facilitating discussions, collaboration, and delivering lectures. This unexpected alignment in perceptions could indicate a shared understanding of social media's core strengths. Both students and faculty might recognize its potential for readily available resources and fostering connections for collaborative learning, as highlighted by studies on social media's role in collaborative knowledge building (Ansari & Khan, 2020).

Various challenges impacted effective use of social media effectively for educational purposes; among which are limited digital literacy and bandwidth constraints. Sanusi et al. (2014) identified key hurdles for Nigerian students, including inadequate amenities, limited computer access, high internet costs, and insufficient instructor engagement. In Nigeria, the integration of social media in formal education has its pros and cons. Mohammed and Suleimon's (2013) study on students' social media utilization identified cost, time management, and unreliable internet connectivity as primary barriers. Notably, 26.95% of participants reported encountering all three limitations.

Manu et al. (2023) discovered a positive correlation between the frequency of social media utilization for academic

endeavours and student engagement metrics such as online discussion participation and assignment completion across multiple institutions. However, the study also identified a negative correlation between excessive social media use (beyond educational purposes) and student engagement, suggesting a potential tipping point where social media becomes a distraction. Zhu et al. (2021) found a motivational factor for the effectiveness of various instructional strategies in online learning environments. The researchers analyzed data from student surveys and course performance metrics. Their findings revealed that incorporating interactive elements like online discussions and collaborative projects facilitated through social media platforms led to significantly higher student learning outcomes compared with traditional lecture-based online delivery methods. In support of this research findings, support systems through training of educators and digital literacy programs are one of the many ways to sustain effective use of social media in education.

9. Conclusion

The COVID-19 pandemic compelled educational institutions to adapt rapidly to online learning environments, and the online competencies of lecturers and students continue to pose critical challenges for higher education institutions during the pandemic. This shift presented challenges, but also opportunities for innovative uses of technology. The analysis of social media use during this period reveals a key finding: collaboration and discussion emerged as areas of significant strength. While accessing materials might have remained a fundamental online learning activity, the pandemic likely led to a rise in the use of social media features and facilitating collaboration. Platforms with discussion forums, group projects, and real-time communication tools likely saw increased engagement. The strong positive correlation between student and faculty perception across all educational activities, despite statistically insignificant differences for specific tasks like accessing materials, suggests a focus on interactive elements. Discussions and collaborative projects facilitated through social media could have fostered a shared understanding of the learning content even amidst physical separation.

The significant value faculty placed on support systems for using social media effectively in education highlights a potential gap. Training programs and clear guidelines could empower faculty to leverage the collaborative potential of social media platforms more confidently. In essence, the data suggests that during the pandemic, social media served not just as a content delivery channel, but also as a powerful tool for fostering collaboration and discussion, a finding that strengthens the case for its continued integration in educational settings, even beyond pandemics. It is necessary to conduct further research to explore the nuances of these perceptions on the effectiveness of using social media for educational activities; do students and faculty value these aspects equally? Perhaps faculty see more value in social media for discussion or information dissemination, while students prioritize accessibility and collaboration. Future studies could delve deeper to understand the specific aspects driving the strong overall correlation while investigating areas where perception might diverge.

To overcome these challenges, future directions may include: 1) developing robust training programs for educators and students to improve their digital literacy specifically for educational use of social media, 2) investing in infrastructure to improve internet accessibility, 3) creating or updating institutional policies that reflect the current digital landscape and adequately address the ethical use of social media in education. Also, stakeholders can enhance the effectiveness of social media as educational tools by aligning them with pedagogical goals and ensuring they contribute to meaningful learning experiences. Addressing these challenges through concerted efforts from educational institutions, policymakers, and the tech industry is essential for harnessing the full potential of social media in education.

10. Acknowledgement

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