

Social Media Usage and Academic Achievement Among Students of Federal College of Education, Gidan Madi, Sokoto State

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Abstract

The study examined the pattern of social media usage and its relationship with academic achievement among NCE students of Federal College of Education, Gidan Mad, Sokoto State, Nigeria. In recent years, the proliferation of social media platforms such as Facebook, WhatsApp, TikTok, and Telegram has significantly influenced communication patterns and information access among young adults. While these platforms offer educational opportunities, their impact on students' academic outcomes remains a topic of scholarly debate. The study employed a descriptive survey design involving a total of 386 NCE students selected through stratified and convenience sampling techniques. Data were collected through a structured, self-administered questionnaire titled 'Social Media Usage Questionnaire' (SMUQ). While students' academic achievement was measured with their Grade Point Averages (GPAs) obtained from their departmental exam units. The SMUQ's validity was established by experts in educational measurement and ICT, while reliability was confirmed through a pilot study yielding a Cronbach's Alpha coefficient of 0.86. Descriptive and inferential statistics, including frequency counts, percentages, independent t-tests, and Pearson's correlation coefficient, were used for data analyses at a 0.05 significance level. Findings revealed that Facebook (24.5%), WhatsApp (22.2%), and TikTok (19.5%) were the most commonly used platforms among students. Most students spent 10–30 minutes daily on these platforms. An independent samples t-test showed no significant gender difference in social media usage patterns. Furthermore, a moderate positive correlation ($r = 0.474$, $p < 0.05$) was found between social media usage and academic achievement, indicating that responsible use of social media platforms can support learning outcomes. The study concluded that social media held substantial potential as an academic tool if properly integrated into instructional strategies. It recommended promoting structured, academic-oriented social media use, facilitating digital literacy programs, and developing institutional policies to guide responsible platform usage.

Keywords: Social media, academic achievement, NCE Students, Gidan Madi, digital literacy

Introduction

In recent years, the exponential growth of social media has fundamentally transformed the landscape of communication and information dissemination globally. Social media platforms such as Facebook, X (Twitter), WhatsApp, Instagram, and Telegram have emerged as dominant tools not only for social interaction but also for educational engagement and professional networking (Peter & Valkenburg, 2022). In Nigeria, the widespread penetration of smartphones, affordable internet access, and increasing digital literacy among youths have positioned social media as an integral part of daily life, particularly among students in higher institutions (Muscanell & Guadagno, 2020).

At the heart of this digital revolution is the potential of social media to influence students' academic lives in multiple ways. Scholars like Chen and Bryer (2020) and Junco (2021) have argued that social media platforms can foster collaborative learning, enhance student engagement, and promote active participation beyond the confines of the classroom. Through platforms like Facebook groups, WhatsApp study forums, and YouTube educational channels, students can access academic materials, interact with peers and lecturers, and receive timely academic updates.

However, alongside these educational benefits, concerns have also emerged regarding the possible adverse effects of unregulated social media usage on students' academic achievement (Kirschner & Karpinski, 2021). The addictive nature of social media, characterized by endless scrolling, entertainment content, and non-academic interactions, may reduce the time and attention students allocate to academic tasks, potentially resulting in poor academic outcomes.

At Federal College of Education, Gidan Madi like many other tertiary institutions in Nigeria social media has become a ubiquitous tool among NCE students. Despite its prevalence, limited institutional efforts exist to harness social media for structured academic activities. Instead, anecdotal evidence suggests that students predominantly use these platforms for social interactions, entertainment, and non-academic engagements. This situation raises pertinent questions about the extent of social media usage, gender differences in usage patterns, and the possible relationship between social media use and academic achievement in the college.

Social media has revolutionized communication, particularly among young adults in higher education. In Nigeria, increasing internet access and smartphone penetration have made platforms like Facebook, X (Twitter), and WhatsApp ubiquitous among college students. These platforms hold potential for both academic engagement and distraction. This study, situated at the Federal College of Education, Gidan Madi, analyzes how students use social media and how this usage relates to their academic achievement.

Therefore, understanding the patterns of social media usage and its implications for students' academic outcomes is crucial. This study seeks to provide empirical evidence to guide policy

recommendations for effectively integrating social media into teaching and learning processes within Federal College of Education, Gidan Madi.

Statement of the Problem

The increasing adoption of social media by students in tertiary institutions has created a dynamic shift in communication and information-sharing practices within academic environments. While social media holds considerable potential for enhancing teaching, learning, and collaborative engagement among students and faculty members, its actual impact on academic achievement remains a subject of scholarly debate (Junco, 2021; Kirschner & Karpinski, 2021).

At Federal College of Education, Gidan Madi, there is a noticeable upsurge in students' use of social media platforms such as Facebook, X (Twitter), WhatsApp, and Instagram. Despite this widespread adoption, preliminary observations suggest that these platforms are predominantly used for leisure and social interaction rather than for academic purposes. Many students spend considerable time engaging in non-academic activities such as chatting, sharing memes, uploading videos, and participating in social trends, often during academic hours.

Consequently, concerns have been raised by educators and administrators about the potential negative impact of excessive social media usage on students' academic achievement, concentration, and study habits. Furthermore, there is a dearth of empirical studies within the Nigerian college of education system — and particularly at Federal College of Education, Gidan Madi to systematically examine the nature of students' social media usage, gender differences in engagement, and its association with academic achievement.

Without adequate understanding of these dynamics, educational administrators may miss opportunities to leverage social media as a pedagogical tool while also failing to address the risks it poses to academic success. This gap in knowledge necessitates a focused inquiry into how NCE students at Federal College of Education, Gidan Madi, use social media, the extent of their engagement, and the influence of such usage on their academic achievement. The findings of this study are expected to inform policy interventions, curriculum innovations, and digital literacy campaigns within the institution.

Research Questions

The survey focused on the following questions in relation to the study's samples:

1. What are the participation rates on various social media platforms?
2. What are the daily subscription rates on various social media platforms?
3. Is there gender difference on the basis of social media usage?
4. Is there relationship between social media usage and academic achievement?

Objectives of the study

The main objective of this study is to explore the Social Media Usage and academic achievement Among NCE Students of Federal College of Education, Gidan Madi. However, the study specifically sought to achieve the following objectives:

1. Identification of participation rates on various social media platforms.
2. Analysis of daily subscription rates on various social media platforms.
3. Investigation of gender differences on the basis of social media usage.
4. Assessment of relationship between social media usage and academic achievement.

Significance of Study

This study is significant as it provides empirical insight into the patterns of social media usage and its relationship with academic achievement among undergraduate students of Federal College of Education, Gidan Madi. In an era where digital technologies increasingly shape students' academic and social experiences, understanding these patterns is crucial for educators, administrators, and policymakers.

The findings offer evidence-based recommendations for integrating social media platforms into instructional strategies, promoting responsible digital engagement, and enhancing students' academic outcomes through guided use of technology. Furthermore, the study highlights the underutilization of academically beneficial platforms such as LinkedIn and Telegram, presenting an opportunity for institutional interventions and digital literacy programs.

It also contributes to the existing body of knowledge on educational technology and student learning behaviour in Nigerian colleges of education, serving as a valuable reference for future research and institutional policy formulation.

Literature Review

Social media platforms have evolved into powerful digital ecosystems where students interact, share knowledge, and access academic resources. Numerous studies have explored its educational potential and challenges in various contexts, especially in higher education. This literature review discusses relevant empirical and theoretical insights on (i) social media platforms used by students, (ii) the rate of social media usage, (iii) gender differences in social media engagement, and (iv) the relationship between social media usage and academic achievement.

Social Media Platforms Used by Students

Social networking sites (SNS) such as Facebook, X (Twitter), Instagram, WhatsApp, and Telegram have become embedded in students' academic and social routines globally (Peter & Valkenburg, 2022). In the Nigerian context, platforms like WhatsApp and Facebook remain the most widely used among NCEs due to their affordability, accessibility, and

multifunctional features (Olatunde & Akande, 2020). Chen and Bryer (2020) assert that social media provides an interactive environment where students can exchange academic materials, engage in discussions, and form virtual study groups. Similarly, Junco (2021) found that students actively participating in academic-focused social media groups reported higher levels of academic engagement.

However, despite these affordances, research by Olowu and Seri (2021) observed that Nigerian college students tend to prioritize entertainment content, personal updates, and social gossip over educational uses. This underscores the need for structured integration of social media into formal educational practices, as advocated by Muscanell and Guadagno (2020).

Rate of Social Media Usage among Students

Social media usage has surged dramatically among students in tertiary institutions, driven by increasing smartphone penetration and affordable internet services. Lenhart (2019) reported that over 90% of university students globally use social networking sites daily. In Nigeria, a survey by Onifade et al. (2021) revealed that 84% of college students accessed social media multiple times per day, predominantly during lecture-free periods and late nights.

Moreover, Gary Small's 2020 study described this generation of "digital natives" as spending an average of seven hours daily on digital media, a figure corroborated by a recent survey by Uche and Akanbi (2022) which showed that 68% of Nigerian college students spend 2–5 hours daily on social media. While social media can facilitate collaborative learning (Veletsianos & Navarrete, 2022), its unregulated use often leads to academic distractions, reducing students' focus on studies (Kirschner & Karpinski, 2021).

Gender Differences in Social Media Usage

Studies examining gender disparities in social media usage have produced mixed results. Earlier research (Tufekci, 2018; Sheldon, 2019) suggested that female students were more inclined toward social and relational use of platforms, while male students favored information-seeking and gaming content. However, more recent findings (Peter & Valkenburg, 2022) indicate a narrowing gender gap, with both genders now exhibiting similar engagement patterns across platforms like Facebook, WhatsApp, and Instagram.

In the Nigerian context, Olowu and Seri (2021) found no statistically significant difference in the overall time spent on social media between male and female college students. This was corroborated by Uche and Akanbi (2022), who reported that while males slightly preferred task-oriented uses, and females leaned towards expressive communication, the variance was minimal. This convergence is attributed to increased access to smartphones and evolving social norms regarding technology use in Nigeria.

Relationship between Social Media Usage and Academic Achievement

The impact of social media on students' academic achievement has been debated extensively. Some scholars argue that its excessive use contributes to academic decline due to distractions

and poor study habits (Kirschner & Karpinski, 2021; Banquil et al., 2020). Others contend that social media, when strategically integrated into educational contexts, enhances academic achievement by fostering peer learning, information access, and student engagement (Chen & Bryer, 2020).

In a recent Nigerian study, Onifade et al. (2021) found a moderate positive correlation between academic-related social media use and students' cumulative GPA. Similarly, Veletsianos and Navarrete (2022) emphasized that educational use of social media fosters deeper understanding, increases retention, and promotes collaborative knowledge construction among students. However, they also noted that non-academic use could negatively impact academic focus and time management.

Thus, while social media holds immense potential to improve academic outcomes, its benefits are contingent on the nature of use, frequency, and institutional regulation (Junco, 2021; Uche & Akanbi, 2022). This underscores the need for structured digital literacy programs and academic integration policies within Nigerian colleges of education.

Studies (Lenhart, 2019; Lin, 2020; Junco, 2021) indicate that Facebook remains the most utilized social media site among college students, offering educational and social benefits. Some researchers argue that social media enhances learning through peer engagement (Chen & Bryer, 2020), while others caution against its distractive tendencies (Kirschner & Karpinski, 2021). Gender-related findings are mixed, with some reporting female dominance in expressive social media use (Muscanell & Guadagno, 2020). However, recent studies (Peter & Valkenburg, 2022) suggest a convergence in usage patterns across genders.

Methodology

The study employed a descriptive design to investigate the pattern of social media usage and its relationship with academic achievement among NCE students at Federal College of Education, Gidan Madi, Nigeria. The design was considered appropriate as it enabled the collection of quantitative data from a large population at a single point in time, providing a snapshot of current practices and opinions. The target population was all the entire registered NCE students across various departments and academic levels in the college.

A total sample of 386 respondents participated in the survey, selected through stratified and convenience sampling methods. The population was first divided according to departments and academic levels (NCE 1, NCE II, and NCE III), after which respondents were conveniently chosen within each stratum. This approach allows for selection of respondents based on suitability, availability and accessibility.

Data were collected using a structured, self-administered instrument titled Social Media Usage Questionnaire (SMUQ), developed in a Likert format based on insights from related literature. The instrument comprised two sections: Section A captured demographic information, while Section B assessed patterns of social media usage. To ensure validity, the instrument was reviewed by three experts in Educational Measurement and ICT in Education, leading to revisions that enhanced clarity and relevance. Reliability was established through a

pilot study involving 30 students from a comparable institution, yielding a Cronbach’s Alpha coefficient of 0.86. Ethical approval and necessary permissions were secured, and questionnaires were administered personally by the researcher during lecture-free periods, achieving a 100% retrieval rate. Data were analyzed using SPSS version 25.0, employing descriptive statistics, independent t-tests, and Pearson’s correlation, with a significance level set at 0.05.

Results

A total of 390 questionnaires were conveniently distributed with 386 recovered. Data were analyzed using descriptive statistics, independent sample t-tests, and Pearson’s correlation coefficient.

FCE Gidan Madi Students' Participation Rates on Various Social Media Platforms

Table 1: Distribution of Respondents by Dominant Social Media Platform

Social Media Platform	Frequency	Percentage
Facebook	95	24.5%
X (Twitter)	21	5.5%
WhatsApp	86	22.2%
Instagram	46	11.9%
Telegram	71	18.5%
TikTok	75	19.5%
LinkedIn	1	0.3%
Others	29	7.5%
Total	386	100%

Social media usage among students of Federal College of Education, Gidan Madi reveals that while Facebook remains the most dominant platform with 24.5% of users, other platforms such as WhatsApp (22.2%), TikTok (19.5%), and Telegram (18.5%) have gained substantial traction. This marks a shift from the earlier Facebook-dominated landscape to a more diversified pattern of social media engagement. Instagram (11.9%) and Twitter (5.5%) maintain moderate popularity, while professional networking platforms like LinkedIn remain virtually unused at 0.3%. The findings suggest evolving preferences towards instant messaging, short video content, and bulk information-sharing platforms. This growing popularity of TikTok and Telegram reflects broader global trends in youth digital habits and highlights their potential role in informal learning and academic interactions. However, the underutilization of academic-oriented platforms like LinkedIn points to a gap in students’

exposure to professional digital tools. These patterns emphasize the need for digital literacy campaigns and strategic integration of widely used platforms into instructional practices to enhance learning engagement, promote responsible use, and improve students' academic experiences.

Rate of Social Media Usage

Table 2: FCE Gidan Madi Students' Daily Social Media Subscription

Duration	Freq.	%
Less than 10 minutes	76	20.4
10–30 minutes	131	35.1
30–60 minutes	68	18.2
1 hour	44	11.8
2 hours	39	10.3
6 hours	5	1.3
More than 6 hours	10	2.7

Majority of the students (35.1%) spent between 10 and 30 minutes per day on social media, followed by 20.4% who spent less than 10 minutes, while only 2.7% spent more than 6 hours daily.

H₀1: Gender Differences in Social Media Usage

Table 3: T-test for Gender Differences in Social Media Usage

Gender	Mean	SD	T	df	Sig. (2-tailed)
Male	0.3457	0.6361	0.543	330	0.543
Female	0.302	0.518			

An independent samples t-test showed no significant difference in social media usage between male and female students ($t(330) = 0.543, p = 0.543 > 0.05$). This suggests that both genders use social media equally in this academic setting.

H₀2: Relationship Between Social Media Usage and academic achievement

Table 4: Pearson Correlation between Social Media Usage and Academic Achievement

Variables	R	Sig. (2-tailed)
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Social Media Usage & CGPA	0.474	0.000
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The study found Facebook as the dominant platform (77.5%). Most students spent 10–30 minutes daily on social media. No significant gender difference was found ($t(330) = 0.543, p > .05$). A moderate positive correlation existed between social media usage and academic achievement ($r = 0.474, p < 0.05$).

A moderate positive correlation was found between social media usage and academic achievement ($r = 0.474, p = 0.000$). This implies that students who use social media platforms, particularly for academic engagements, tend to perform better academically.

Discussions on Findings

The study investigated social media usage and academic achievement among NCE students of Federal College of Education, Gidan Madi, Sokoto State Nigeria. The findings are consistent with recent national and international studies and reveal both opportunities and concerns for educators and policymakers.

The data confirmed that Facebook remains the most preferred social media platform among students, consistent with earlier findings by Lenhart (2019) and Onifade et al. (2021). Its wide adoption suggests that integrating Facebook-based academic groups or virtual classrooms could enhance communication and knowledge sharing in Nigerian colleges of education. Majority of students spent between 10–30 minutes per day on social media, a relatively moderate usage rate compared to the national average of 2–5 hours daily reported by Uche and Akanbi (2022). This moderate engagement could explain the positive correlation found in this study, suggesting that controlled use of social media may enhance rather than inhibit academic achievement, supporting findings by Veletsianos and Navarrete (2022).

The absence of significant gender differences in usage corroborates studies by Peter and Valkenburg (2022) and Olowu and Seri (2021) that modern smartphone and social media use is gender-neutral in most Nigerian higher education settings. Both male and female students demonstrated similar levels of social media engagement.

A moderate positive correlation ($r = 0.474, p < 0.05$) between social media usage and academic achievement aligns with recent empirical evidence from Junco (2021) and Onifade et al. (2021), who reported that academic-related social media use (e.g., group discussions, resource sharing) contributes to improved academic outcomes. This contradicts earlier assertions by Kirschner and Karpinski (2021) that social media acts primarily as a distraction. The findings support the argument that when harnessed responsibly, social media can serve as an educational tool. The dominance of Facebook aligns with prior research (Lenhart et al., 2020). Most students used social media briefly, mitigating its potentially disruptive influence. The absence of gender difference suggests equal access and engagement. The moderate

positive correlation suggests that appropriate social media use can support learning, echoing findings by Junco et al. (2021).

Conclusion

The study examined the pattern of social media usage and its relationship with academic achievement among NCE students at Federal College of Education, Gidan Madi, Sokoto State Nigeria. The findings revealed that social media platforms, particularly Facebook, X (Twitter), and WhatsApp, are widely used by students, with the majority spending between 10–30 minutes daily on these platforms. Social media, especially Facebook, plays a significant role in the academic and social lives of students at Federal College of Education, Gidan Madi. While usage patterns vary, their impact on academic achievement is moderately positive. Institutions should leverage this by integrating social media into instructional strategies.

Notably, no significant gender differences were observed in the usage patterns of social media, indicating an equitable level of access and engagement across male and female students. Importantly, a moderate positive relationship was established between social media usage and academic achievement, suggesting that responsible and academically focused use of social media platforms can enhance learning outcomes. These findings contribute valuable insights into the digital behaviour of Nigerian college students, emphasizing the potential of social media as a complementary instructional tool when appropriately regulated and integrated into formal learning environments.

Recommendations

In view of the study's findings, the following recommendations are proposed to enhance academic outcomes through strategic use of social media in colleges of education and similar tertiary institutions:

1. **Integrate Social Media Platforms into Academic Delivery:** The management of Federal College of Education, Gidan Madi, and similar institutions should formally integrate platforms like Facebook, WhatsApp, and X (Twitter) into teaching and learning processes. This can be achieved by creating academic groups for course discussions, announcements, and collaborative projects.
2. **Promote Structured, Academic-Oriented Social Media Use:** Digital literacy workshops should be organized for students to sensitize them on the responsible use of social media, emphasizing its academic applications while discouraging excessive non-academic consumption.
3. **Encourage Academic Engagement Time on Social Media:** Since most students spend 10–30 minutes daily on social media, lecturers can align digital instructional activities within this timeframe through targeted learning exercises, quizzes, and virtual peer reviews to optimize engagement.

4. Facilitate Equal Access for Both Genders: As usage was found to be gender-neutral, institutions should ensure that academic social media platforms are accessible and inclusive for both male and female students, promoting digital equity in instructional delivery.
5. Develop Social Media Usage Policies for Academic Purposes: The college administration should formulate clear guidelines governing the academic use of social media platforms to maximize their benefits and minimize potential distractions or misuse during academic hours.
6. Further Research on Longitudinal Impact: It is recommended that future studies adopt longitudinal designs to examine the long-term impact of social media integration on academic achievement, including discipline-specific analyses within colleges of education in Nigeria.

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