

Relationship Between Social Media Use and Study Habits of Computer Science Students in Tertiary Institutions in Zamfara State, Nigeria

Nafiu Isah Aliyu

^{1&2}Department of Science Education, Faculty of Education, School of Postgraduate, Sokoto State University, Sokoto State, Nigeria. Email: nafiuaiyuisah@fcetgusau.edu.ng

Abstract

This study examined the relationship between social media use and study habits among Computer Science students in tertiary institutions in Zamfara State, Nigeria. A cross-sectional descriptive correlational survey design was used. The population comprised 2,538 Computer Science students in six tertiary institutions. Three institutions were purposively selected because of time and security constraints; their combined enrolment was 1,293, and 307 students participated. Data were collected with a 10-item structured questionnaire consisting of five social media-use items and five study-habit items. Mean and standard deviation answered the descriptive research questions, while Pearson's product-moment correlation answered the relationship question and tested the null hypothesis at the .05 significance level. Students reported frequent social media use ($M = 3.04$, $SD = 0.82$). All five activities were rated as frequent, although academic use had the lowest item mean ($M = 2.99$, $SD = 0.79$). Study habits were generally weak ($M = 2.00$, $SD = 0.81$), with all item means below the 2.50 decision point. Social media use was moderately and negatively related to study habits, $r(305) = -.465$, $p = .001$. The null hypothesis was therefore rejected. The findings indicate an association, not a causal effect: students who reported greater social media use also tended to report less consistent study routines. The study recommends practical support for digital self-regulation, structured study schedules, and purposeful academic use of social media.

Keywords: Social media use, Study habits, Computer Science students, Tertiary education, Zamfara State

Cite this as (APA): Aliyu, N. I. (2026). Relationship Between Social Media Use and Study Habits of Computer Science Students in Tertiary Institutions in Zamfara State, Nigeria. *Rima International Journal of Education*, 5(6), 87—103. DOI: <https://doi.org/10.65760/rijessu.v5.6.6>

Introduction

Social media is now embedded in university life. Students use WhatsApp, YouTube, Facebook, Instagram, TikTok, X, and related platforms to maintain relationships, obtain news, share course materials, seek explanations, and coordinate group work. For students in Computer Science, online networks can be especially useful because programming examples, technical communities, tutorials, and peer support are readily available beyond the classroom. Social media is therefore neither wholly academic nor wholly recreational; the educational value of a platform depends on what students do with it, how often they use it, and whether its use is compatible with sustained study.

Recent evidence reflects this mixed role. Ansari and Khan (2020) found that social media can support collaborative learning and student interaction when it is used to exchange knowledge. Shafiq and Parveen (2023) similarly reported that knowledge-sharing through social media was associated with stronger engagement and academic performance. Alshalawi (2022), in a study of 453 undergraduates at five Saudi public universities, found a positive relationship between social media-use intensity and academic performance after controlling for gender and prior achievement. These findings show that social media can extend access to learning resources and make peer communication more immediate.

The same accessibility can, however, fragment study time. Notifications, short-form videos, repeated checking, and rapid switching between academic and non-academic content compete for attention. Whelan et al. (2020) linked social media overload with weaker academic performance through reduced self-regulation, while Kolhar et al. (2021) reported that university students' social media routines were connected with learning, social interaction, and sleep outcomes. Objective usage data also suggest that intensity matters: Tafesse (2022) found an inverted U-shaped relationship in which modest use was positively associated with academic performance but heavier use was negatively associated with it. Thus, frequency alone does not establish whether social media is helpful or harmful; purpose, timing, and intensity are central.

Study habits refer to the recurring behaviours through which students organise and sustain learning, including regular reading, following a timetable, revising material, completing assignments, and controlling distractions. Such habits are

important in Computer Science because competence develops through repeated practice, debugging, problem-solving, and engagement with cumulative technical concepts. Credé and Kuncel (2008) identified study habits, skills, and attitudes as a substantial component of collegiate achievement. When online activity repeatedly interrupts these routines, students may have less uninterrupted time for the deliberate practice their discipline requires.

Evidence from Nigeria remains limited and is not uniform. Akinleye and Akinde (2024) found a small positive relationship between social media use and the study habits of Library and Information Science undergraduates in two universities in Southwest Nigeria. That result suggests that academically directed use may coexist with effective study. It does not, however, resolve what occurs among Computer Science students in Zamfara State, where institutional conditions, security constraints, connectivity, and students' reasons for going online may differ. The present study therefore examined the level of social media use, the pattern of study habits, and the relationship between the two variables among Computer Science students in selected tertiary institutions in Zamfara State.

Review of Related Literature

Social Media Use and Study Habits

Social media use encompasses the frequency, intensity, and purpose of interaction with networked platforms. A student may use the same platform to download lecture materials, ask a classmate about an assignment, watch entertainment, or maintain social relationships. Treating these activities as a single exposure can obscure important differences. Ansari and Khan (2020) emphasised the collaborative possibilities of social media, whereas Tafesse (2022) demonstrated that the association with academic outcomes can change as time spent increases. The present study operationalised social media use through five frequency items: checking accounts, posting updates, communicating with friends or family, using platforms for academic purposes, and following news or current events.

Study habits are observable routines rather than a single academic outcome. Regular reading, scheduled study, same-day revision, timely completion of assignments, and resistance to distraction can help students distribute effort

across a semester instead of relying on last-minute preparation. Credé and Kuncel (2008) showed that study-related behaviours contribute meaningfully to collegiate performance. In the present study, these five behaviours were used as indicators of study habits. This distinction is important: a correlation between social media use and study habits concerns students' routines and cannot be treated as direct evidence that social media changed grades or academic performance.

Theoretical Framework

The study was guided by Uses and Gratifications Theory and Social Learning Theory. Uses and Gratifications Theory views media users as active selectors who choose particular media to satisfy needs such as information, entertainment, social interaction, identity expression, or learning (Katz et al., 1973; Ruggiero, 2000). Applied to this study, the theory suggests that frequent use may have different academic implications depending on the gratification sought. Academic information and peer collaboration may complement study, while repeated entertainment or social checking during planned study periods may displace or interrupt it.

Social Learning Theory explains that behaviour develops through observation, imitation, reinforcement, and interaction with the social environment (Bandura, 1977). Bandura's (2001) later social cognitive account also stresses reciprocal relationships among personal factors, behaviour, and environment. Social media exposes students to peers' routines and shared norms. Online groups may model productive practices, such as exchanging code or reminding members about deadlines, but they may also normalise continuous availability, procrastination, and attention switching. Together, the theories explain why the platform itself is not determinative: students' motives, peer models, and capacity for self-regulation shape how social media fits into study routines.

Recent Empirical Evidence and Research Gap

Recent empirical studies report positive, negative, and nonlinear associations. Malik et al. (2020) found that social media use was positively associated with academic performance and creativity among 334 undergraduates, with intrinsic motivation acting as a mediator. Alshalawi (2022) also reported a positive association after accounting for selected background variables. Shafiq and Parveen (2023) found that social media's knowledge-sharing capabilities

could strengthen engagement and performance. These studies indicate that purposeful and academically connected use can support learning.

Other studies emphasise overload and displacement. Whelan et al. (2020) reported that social media overload can deplete the self-regulation required for academic goal pursuit. Kolhar et al. (2021) found that social media use was woven into students' learning and social routines and also related to reduced sleep duration. Using smartphone tracking rather than recall alone, Tafesse (2022) showed that moderate use and heavy use did not have the same association with performance. More recently, Gong et al. (2025) found a negative association between social media use and academic performance in a large sample of Chinese undergraduates, with social anxiety and fear of missing out helping to explain the relationship.

The Nigerian evidence is similarly contextual. Akinleye and Akinde (2024) reported a small positive correlation between social media use and study habits among Library and Information Science undergraduates. Their result contrasts with studies that focus on overload or high-frequency non-academic use and reinforces the need to examine specific student groups and settings. Few recent studies have focused directly on the study habits of Computer Science students in tertiary institutions in Zamfara State. The present study addresses that contextual gap while recognising that a cross-sectional correlation cannot establish temporal order or causation.

Statement of the Problem

Computer Science students are expected to develop regular study routines that support programming practice, independent problem-solving, revision of technical concepts, and timely completion of assignments. Social media can assist these activities by connecting students with peers and digital resources. At the same time, continuous checking, entertainment, and social interaction may compete with the uninterrupted attention required for demanding academic work.

The practical concern in tertiary institutions in Zamfara State is not simply that students use social media, but whether frequent use is associated with weaker study routines. Without evidence from the local setting, lecturers and administrators cannot tell whether students' social media activity tends to complement or conflict with regular reading, scheduled study, revision,

assignment completion, and control of distractions. Findings from other disciplines and countries are mixed and cannot automatically be generalised to Computer Science students in the selected institutions.

This study therefore assessed students' reported level of social media use, described their study habits, and determined whether the two variables were related. The focus was association rather than causation. Establishing the direction and strength of the relationship can inform practical support for responsible digital use while identifying questions that require longitudinal or experimental research.

Research Objectives

The study sought to:

1. Determine the level of social media use among Computer Science students in tertiary institutions in Zamfara State, Nigeria;
2. Examine the study habits of Computer Science students in tertiary institutions in Zamfara State, Nigeria; and
3. Determine the relationship between social media use and study habits among Computer Science students in tertiary institutions in Zamfara State, Nigeria.

Research Questions

1. What is the level of social media use among Computer Science students in tertiary institutions in Zamfara State, Nigeria?
2. What are the study habits of Computer Science students in tertiary institutions in Zamfara State, Nigeria?
3. What relationship exists between social media use and study habits among Computer Science students in tertiary institutions in Zamfara State, Nigeria?

Null Hypothesis

H₀₁: There is no statistically significant relationship between social media use and study habits among Computer Science students in tertiary institutions in Zamfara State, Nigeria.

Methodology

Research Design and Setting

The study used a cross-sectional descriptive correlational survey design. This design was appropriate because information on social media use and study habits was collected from students and the statistical relationship between the variables was estimated without manipulating either variable (Creswell, 2014). The design supports description and association but does not establish that one variable causes the other. The study was conducted in selected tertiary institutions in Zamfara State, Nigeria.

Population and Sampling

The population comprised 2,538 Computer Science students enrolled in six tertiary institutions in Zamfara State. Three institutions were included: Federal University Gusau, Zamfara State College of Education, Maru, and Federal Polytechnic Kaura Namoda. These institutions were purposively selected because of time and security constraints. Their combined Computer Science enrolment was 1,293 students, from whom an analytic sample of 307 was obtained.

Instrument and Scoring

Data were collected with the Computer Science Students' Social Media Use and Study Habits Questionnaire. The instrument contained two five-item subscales. The social media-use subscale used four frequency options coded from 1 (Never) to 4 (Always). The study-habits subscale used four agreement options coded from 1 (Strongly disagree) to 4 (Strongly agree). Higher scores represented more frequent social media use and stronger study habits, respectively. For item and grand-mean decisions, means of 2.50 or above were interpreted as Often/Agree, whereas means below 2.50 were interpreted as Never or Sometimes/Disagree, as applicable.

Validity and Reliability

The questionnaire was reviewed by experts, and a pilot study produced a reported overall reliability coefficient of .81. The coefficient indicates acceptable reliability only after the statistic used, pilot sample, administration procedure, and the reliability of each subscale have been specified.

Data Collection and Analysis

Responses from 307 students were included in the analysis. Mean and standard deviation were used to answer Research Questions 1 and 2. Pearson's product-moment correlation was used to answer Research Question 3 and test H_{01} at the .05 significance level. The sign of r indicated direction and its absolute magnitude indicated the strength of the linear association.

Results

Research Question 1

What is the level of social media use among Computer Science students in tertiary institutions in Zamfara State, Nigeria?

Table 1

Descriptive Statistics for Social Media Use

S/N	Item	N	M	SD	Decision
1	Check social media accounts on a typical day	307	3.06	0.82	Often
2	Post updates (e.g., status, photos, and videos)	307	3.03	0.82	Often
3	Use social media to communicate with friends or family	307	3.01	0.83	Often
4	Use social media for academic or study-related purposes	307	2.99	0.79	Often
5	Follow news or current events through social media	307	3.09	0.83	Often
	Grand mean	307	3.04	0.82	Often

Table 1 shows that all five social media activities were reported as frequent. Following news or current events had the highest mean ($M = 3.09$, $SD = 0.83$), followed by checking accounts on a typical day ($M = 3.06$, $SD = 0.82$). Academic or study-related use had the lowest mean ($M = 2.99$, $SD = 0.79$), although it remained above the 2.50 decision point. The grand mean of 3.04 ($SD = 0.82$) indicates frequent overall social media use. Because the item means were close, the results support a broad pattern of frequent use rather than a sharp separation between academic and non-academic activities.

Research Question 2

What are the study habits of Computer Science students in tertiary institutions in Zamfara State, Nigeria?

Table 2*Descriptive Statistics for Study Habits*

S/N	Item	N	M	SD	Decision
1	I read my books every day	307	1.92	0.83	Disagree
2	I follow my scheduled study timetable	307	1.97	0.82	Disagree
3	I revise what I learn in class on the same day	307	2.06	0.81	Disagree
4	I complete my assignments on time	307	2.03	0.79	Disagree
5	I avoid distractions such as social media when studying	307	2.01	0.82	Disagree
	Grand mean	307	2.00	0.81	Disagree

As shown in Table 2, all study-habit means were below 2.50. Same-day revision recorded the highest item mean ($M = 2.06$, $SD = 0.81$), while daily reading recorded the lowest ($M = 1.92$, $SD = 0.83$). Following a study timetable, completing assignments on time, and avoiding distractions were also rated below the decision point. The grand mean of 2.00 ($SD = 0.81$) indicates generally weak reported study habits across the five behaviours measured.

Research Question 3 and Test of H_{01}

What relationship exists between social media use and study habits among Computer Science students in tertiary institutions in Zamfara State, Nigeria?

Table 3*Pearson Correlation Between Social Media Use and Study Habits*

Variable	N	M	SD	1	2
1. Social media use	307	3.04	0.82	—	-.465
2. Study habits	307	2.00	0.81	-.465	—

Note. $N = 307$; $df = 305$; $p = 0.001$.

Table 3 shows a moderate negative relationship between social media use and study habits, $r(305) = -.465$, $p = .001$. Students reporting greater social media use tended to report weaker study habits. Because p was below .05, H_{01} was rejected. The coefficient describes co-variation between the measures; it does not demonstrate that social media use caused the weaker study habits.

Summary of Major Findings

1. Computer Science students reported frequent social media use ($M = 3.04$, $SD = 0.82$). All five measured activities were frequent, and academic use had the lowest item mean.
2. Students reported generally weak study habits ($M = 2.00$, $SD = 0.81$), with every item below the 2.50 decision point.
3. Social media use had a statistically significant, moderate negative relationship with study habits, $r(305) = -0.465$, $p = 0.001$.

Discussion

Level and Pattern of Social Media Use

The first finding was that Computer Science students reported frequent social media use. The grand mean of 3.04 was above the 2.50 decision point, and each of the five activities was rated Often. This pattern is unsurprising for students whose academic and social lives are closely connected to digital devices. Social media offers rapid access to peers, technical explanations, current events, entertainment, and communities that can answer programming questions. Kolhar et al. (2021) likewise found that social media was deeply integrated into university students' learning and social interaction. The present finding adds evidence from tertiary institutions in Zamfara State, where frequent use appears to extend across communication, information, posting, account checking, and academic activity.

The item-level results require a careful reading. Following news or current events recorded the highest mean, while academic or study-related use recorded the lowest. However, the difference between the highest and lowest means was only 0.10, and academic use still fell within the Often category. It would therefore be inaccurate to conclude that respondents used social media almost exclusively for non-academic purposes. A more defensible interpretation is that students used social media frequently for several overlapping purposes, with academic use slightly less prominent than news and routine account checking. This nuance matters because the questionnaire measured frequency, not duration, the exact content viewed, or whether academic and social activities occurred within the same session.

Uses and Gratifications Theory helps explain this broad pattern. Students select media to meet information, interaction, entertainment, and learning

needs (Katz et al., 1973; Ruggiero, 2000). A Computer Science student may open WhatsApp to obtain a lecture note, move to a social conversation, and then follow a news link without leaving the platform. The gratifications are layered rather than mutually exclusive. The finding therefore supports a shift from asking whether students use social media to asking what needs the use serves, at what times, and with what consequences for planned study.

The high mean is consistent with recent work showing that social media has become a routine part of higher education. Ansari and Khan (2020) documented its role in collaborative learning, and Shafiq and Parveen (2023) linked knowledge-sharing uses with engagement and performance. These studies help explain why frequent use should not automatically be treated as problematic. If course groups, peer feedback, and technical resources account for part of the activity, some use may support study. At the same time, frequency measures alone cannot distinguish productive engagement from repetitive checking, which is why the relationship with study habits must be considered separately.

Students' Study Habits

The second finding was that reported study habits were generally weak. The grand mean was 2.00, and respondents disagreed with all five positive study-habit statements. Same-day revision had the highest mean, but it still remained below the decision point. Daily reading had the lowest mean. These results suggest that the difficulty was not confined to one behaviour; it extended across regular reading, timetable use, revision, assignment completion, and protection of study periods from distraction.

This finding is educationally important because the measured routines are basic forms of self-regulated learning. Computer Science concepts build on one another, and programming proficiency normally requires repeated practice rather than occasional exposure. Weak daily reading and inconsistent timetable use may leave students dependent on compressed study close to assessments. Difficulty avoiding distractions may further reduce the quality of the time that is nominally allocated to study. Credé and Kuncel (2008) showed that study habits and skills are a major component of collegiate performance, so the low scores warrant attention even though academic grades were not measured in the present study.

The result differs in direction from Akinleye and Akinde's (2024) study of Library and Information Science undergraduates in two Nigerian universities, where social media use had a small positive correlation with study habits. Differences in discipline, location, measurement, and students' purposes for using platforms may account for the contrast. Computer Science students may use devices continuously for both coursework and leisure, making the boundary between study and distraction particularly difficult to maintain. The present data cannot identify which explanation is correct, but they show that findings from one Nigerian student group should not be generalised to another without attention to context.

Relationship Between Social Media Use and Study Habits

The third finding was a statistically significant moderate negative correlation between social media use and study habits. Students with higher social media-use scores tended to have lower study-habit scores. The magnitude, $r = -0.465$, indicates a meaningful association in this sample, but it is not so large that study habits can be reduced to social media use alone. Study routines are also likely to reflect workload, motivation, access to quiet study space, employment or family responsibilities, teaching practices, connectivity, and individual self-regulation. The result should therefore be interpreted as one part of a wider academic context.

One plausible explanation is time displacement. Time spent checking updates, following news, posting, or maintaining conversations cannot simultaneously be used for uninterrupted reading or practice. A second explanation is attentional fragmentation: even brief notifications can divide a study session into short intervals and make it harder to sustain concentration. Whelan et al. (2020) found that social media overload can drain self-regulatory resources needed for academic goal pursuit. Kolhar et al. (2021) also connected social media routines with learning and sleep, suggesting that the association may extend beyond the immediate minutes spent online. These mechanisms are consistent with the present result, but they were not directly measured and should remain interpretations rather than established causal pathways.

The finding also accords with Tafesse's (2022) objective tracking study, which showed that the relationship between social networking-site use and academic performance changed with intensity: limited use was positively associated with performance, whereas heavier use was negatively associated with it. Although academic performance and study habits are different outcomes, the

nonlinear result is relevant because it cautions against a simple all-use-is-harmful conclusion. The Zamfara data show a negative linear association within the measures used; they do not identify a threshold at which use becomes disruptive, nor do they separate moderate academic use from prolonged non-academic use.

Gong et al. (2025) similarly reported a negative association between social media use and academic performance among Chinese undergraduates and identified social anxiety and fear of missing out as potential explanatory processes. Those variables were not measured in the present study, so they cannot be assumed to operate in the same way in Zamfara State. Nevertheless, frequent concern about updates or social responsiveness could plausibly make it difficult for students to silence devices and maintain a study schedule. Future research should test these mechanisms directly rather than infer them from a bivariate correlation.

The negative association contrasts with positive findings from Alshalawi (2022), Malik et al. (2020), and Shafiq and Parveen (2023). Those studies indicate that social media can support achievement, engagement, creativity, or motivation when use is connected to academic exchange and knowledge sharing. The difference reinforces the central theoretical point: purpose and context matter. A platform used to share code, discuss an assignment, or obtain feedback may reinforce study, whereas the same platform used for continuous entertainment during scheduled reading may compete with it. The present instrument included only one broad academic-use item and therefore could not separate these pathways.

Social Learning Theory provides a complementary interpretation. Students observe and reproduce norms within their peer networks (Bandura, 1977, 2001). A class group that rewards prompt academic responses and collaborative problem-solving may strengthen productive routines. A peer environment that expects constant social availability may instead normalise repeated checking and procrastination. These patterns may operate reciprocally: weak study organisation may leave more unstructured time for social media, while frequent interruption may make study organisation harder. The cross-sectional design cannot determine which process came first.

Implications and Limitations

The practical implication is not that tertiary institutions should prohibit social media. Such a response would ignore its role in communication and learning. A more useful approach is to strengthen digital self-regulation: students can schedule focused study periods, disable non-essential notifications, separate academic groups from entertainment feeds, and use device-based activity reports to monitor time. Lecturers can also channel existing online activity toward purposeful tasks by using course groups for concise announcements, peer explanation, resource sharing, and programming support. These measures address how social media is used rather than treating access itself as the problem.

Several limitations qualify the findings. First, the study was cross-sectional, so the negative correlation does not establish direction or causation. Students with weak study routines may use social media more, frequent use may interfere with routines, or both may reflect other variables. Second, institutions were selected purposively under time and security constraints, which limits generalisation to all tertiary institutions in Zamfara State or Nigeria. Third, both variables were measured by self-report with only five items each. Recall error and socially desirable responding may affect the estimates, and the broad social media measure did not capture time spent, specific platforms, multitasking, problematic use, or academic versus recreational duration.

The reliability information is also incomplete until the statistic and separate subscale coefficients are confirmed. In addition, the study did not adjust for potential confounders such as age, level of study, prior achievement, motivation, internet access, residence, or workload. Future studies should use probability sampling where feasible, report validation and reliability by subscale, combine questionnaires with device-use logs or time diaries, and follow students over time. Qualitative interviews could also clarify why students go online during study and how local conditions shape their routines. These improvements would permit a more precise account of when social media supports learning and when it competes with it.

Conclusion

Computer Science students in the three selected tertiary institutions reported frequent social media use and generally weak study habits. Social media use was moderately and negatively associated with study habits, meaning that students with higher use scores tended to report less regular reading, timetable use, same-day revision, timely assignment completion, and control of

distractions. Because the evidence is cross-sectional and self-reported, the result does not show that social media caused the weak routines. It does, however, identify digital self-regulation and study organisation as relevant areas for student support. The most defensible response is to promote purposeful academic use while helping students protect focused study time.

Recommendations

1. Students should use practical self-regulation strategies, including scheduled study periods, notification controls, and routine review of screen-time reports, to protect uninterrupted academic work.
2. Lecturers and student-support units should provide short workshops on time management, study planning, digital distraction, and the responsible academic use of social media.
3. Departments should use course-based online groups purposefully for resource sharing, peer explanation, assignment reminders, and collaborative problem-solving, with clear expectations that minimise unrelated traffic.
4. Future research should distinguish academic from non-academic use, measure duration and multitasking, use probability or longitudinal designs where feasible, and examine potential confounders before causal claims are considered.

Reference

- Akinleye, E. O., & Akinde, T. A. (2024). Effects of social media use on the study habits of undergraduates of library and information science in two Nigerian universities. *Tropical Journal of Education*, 6(1/2), 56–76. <https://doi.org/10.47524/tje.v6i1.57>
- Alshalawi, A. S. (2022). Social media usage intensity and academic performance among undergraduate students in Saudi Arabia. *Contemporary Educational Technology*, 14(2), Article ep361. <https://doi.org/10.30935/cedtech/11711>
- Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning: The new domain of learning. *Smart Learning*

Environments, 7, Article 9. <https://doi.org/10.1186/s40561-020-00118-7>

Bandura, A. (1977). *Social learning theory*. Prentice-Hall.

Bandura, A. (2001). Social cognitive theory of mass communication. *Media Psychology*, 3(3), 265–299. https://doi.org/10.1207/S1532785XMEP0303_03

Credé, M., & Kuncel, N. R. (2008). Study habits, skills, and attitudes: The third pillar supporting collegiate academic performance. *Perspectives on Psychological Science*, 3(6), 425–453. <https://doi.org/10.1111/j.1745-6924.2008.00089.x>

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE.

Gong, Z., Guo, Y., & Tan, J. (2025). Social media use and academic performance among college students: The chain mediating roles of social anxiety and fear of missing out and the moderating effect of teacher-student relationship. *Frontiers in Psychology*, 16, Article 1649890. <https://doi.org/10.3389/fpsyg.2025.1649890>

Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *Public Opinion Quarterly*, 37(4), 509–523. <https://doi.org/10.1086/268109>

Kolhar, M., Kazi, R. N. A., & Alameen, A. (2021). Effect of social media use on learning, social interactions, and sleep duration among university students. *Saudi Journal of Biological Sciences*, 28(4), 2216–2222. <https://doi.org/10.1016/j.sjbs.2021.01.010>

Malik, M. J., Ahmad, M., Kamran, M. R., Aliza, K., & Elahi, M. Z. (2020). Student use of social media, academic performance, and creativity: The mediating role of intrinsic motivation. *Interactive Technology and Smart Education*, 17(4), 403–415. <https://doi.org/10.1108/ITSE-01-2020-0005>

Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, 3(1), 3–37. https://doi.org/10.1207/S15327825MCS0301_02

- Shafiq, M., & Parveen, K. (2023). Social media usage: Analyzing its effect on academic performance and engagement of higher education students. *International Journal of Educational Development*, 98, Article 102738. <https://doi.org/10.1016/j.ijedudev.2023.102738>
- Tafesse, W. (2022). Social networking sites use and college students' academic performance: Testing for an inverted U-shaped relationship using automated mobile app usage data. *International Journal of Educational Technology in Higher Education*, 19, Article 16. <https://doi.org/10.1186/s41239-022-00322-0>
- Whelan, E., Islam, A. K. M. N., & Brooks, S. (2020). Applying the SOBC paradigm to explain how social media overload affects academic performance. *Computers & Education*, 143, Article 103692. <https://doi.org/10.1016/j.compedu.2019.103692>