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RESEARCH ARTICLE

Effects of Social Media Access on Students' Learning in Public and Faith-based Secondary Schools: A Systematic Literature Review

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ABSTRACT

This systematic literature review synthesized existing empirical evidence on the effects of social media access on students' learning, with particular attention given to comparative contexts involving public and faith-based secondary schools. Guided by an integrated theoretical framework combining Vygotsky's Zone of Proximal Development and Stufflebeam's CIPP evaluation model, this review analysed empirical studies published between 2020 and 2025. Studies were sourced from Scopus, Web of Science, ERIC, Google Scholar, and African Journals Online. A total of 47 peer-reviewed studies met the inclusion criteria. The synthesis examined four dimensions: the frequency and patterns of social media usage, the influence of different content types on learning behaviors, the moderating effects of school type, and students' perceptions of the educational usefulness of social media. The findings indicate that students predominantly use WhatsApp and Facebook for academic coordination while engaging with TikTok and Instagram primarily for entertainment. Entertainment-oriented content is consistently correlated with reduced study time and diminished academic focus, whereas educational content supports collaborative learning when properly scaffolded. Critically, the review identified a substantial research gap: no studies have systematically compared how public and faith-based secondary school environments moderate the relationship between social media use and learning outcomes. Most existing Tanzanian research focuses on university populations, employs small convenience samples, and relies heavily on self-reported behavioural measures without objective academic indicators. The review concludes that while the dual nature of social media as both an educational tool and an academic distraction is well established, the influence of institutional culture—particularly the moral and disciplinary frameworks characteristic of faith-based schools—remains unexplored. This review highlights the urgent need for comparative, methodologically rigorous research in Tanzanian secondary schools.

Keywords: Social media; secondary education; student learning; public schools; faith-based schools; Tanzania; digital distraction; systematic review

INTRODUCTION

Social media has become deeply embedded in the daily lives of secondary school students globally, presenting both opportunities for collaborative learning and significant risks of academic distraction. Platforms such as TikTok, WhatsApp, Instagram, and Facebook are no longer merely tools for entertainment and peer

connection; they have become environments where students increasingly conduct both social and academic activities (Junco, 2022; Kirschner & Karpinski, 2020). In Tanzania, the rapid proliferation of smartphones and affordable internet has intensified these dynamics, yet limited comparative research has investigated how different school environments shape students' digital

learning experiences (TCRA, 2023).

The global discourse on social media and education has largely emphasized the positive potential of these platforms. Researchers in North America and Europe have documented how students use YouTube tutorials, join Facebook academic forums, and participate in WhatsApp study groups to supplement classroom instruction (Ahmed et al., 2023; Johnson & Wales, 2021). However, an equally substantial body of evidence points to the detrimental effects of unregulated social media use. Studies from across Asia, Africa, and the Middle East have documented associations between heavy social media engagement and reduced academic concentration, procrastination, sleep deprivation, and exposure to harmful or distracting content (Hou et al., 2024; Hussein et al., 2022).

Within sub-Saharan Africa, Tanzania presents a particularly instructive case. Young people aged thirteen to twenty-four constitute the largest segment of mobile internet users, with WhatsApp, TikTok, and Instagram being the most accessed platforms (TCRA, 2023). Among secondary school students in urban centers such as Dar es Salaam and semiurban areas such as Morogoro, smartphone ownership is becoming increasingly common, and social media engagement during and after school hours has become routine (Mwakapenda & Mwaipopo, 2023). However, Tanzanian schools vary considerably in how they respond to these developments. Faith-based secondary schools traditionally maintain strict disciplinary systems and moral instruction programs, whereas public schools frequently contend with large class sizes and weaker supervisory capacity (Chilumba & Ndege, 2022). Whether these institutional differences translate into meaningful differences in students' digital behavior and learning outcomes is not known. This review thus aimed to consolidate recent literature (2020–2025) on the effects of social media access on students' learning, with specific attention given to the moderating role of school type.

LITERATURE REVIEW

This review is grounded in Vygotsky's (1978) sociocultural theory, specifically the concepts of the Zone of Proximal Development and Scaffolding, and Stufflebeam's (1971) context-input-process-product (CIPP) evaluation model. Vygotsky's framework posits that learning is fundamentally a socially mediated process, with the Zone of Proximal Development

referring to the space between what a learner can accomplish independently and what they can achieve with guidance. Scaffolding describes the temporary support that enables learners to bridge this gap (Vygotsky, 1978). This perspective is particularly relevant to understanding social media's educational potential, as platforms can function as digital scaffolds when students use WhatsApp groups to discuss homework or watch YouTube tutorials to clarify concepts.

Complementing this, Stufflebeam's CIPP model directs attention to four interconnected domains: context (school type, policies, and disciplinary frameworks), input (digital devices, internet access, and teacher competence), process (frequency and purposes of social media engagement), and product (academic performance, study habits, and motivation). The integration of these frameworks enables the review to move beyond simplistic questions about whether social media helps or hinders learning toward more nuanced inquiries about how, under what conditions, and with what outcomes social media becomes integrated into students' educational experiences (Stufflebeam, 1971; Gu et al., 2024).

Empirical evidence on the frequency and patterns of social media usage consistently demonstrates that secondary and tertiary students worldwide are intensive users. In the United States, Hill and colleagues (2024) surveyed 306 college students and reported that TikTok was the most frequently accessed application, with usage negatively correlated with the self-reported grade point average. Asian studies provide more detailed quantification: Hou and colleagues (2024) reported that Chinese participants spent an average of two to three hours daily on social media, with significant proportions reporting late night use and concurrent media multitasking during homework. Research on West Africa reveals similar dual-use patterns: Owusu-Acheaw (2024) reported that Ghanaian university students used WhatsApp and Facebook for academic coordination while simultaneously reporting substantial amounts of time dedicated to entertainment content.

Research on East Africa has reported comparable findings. Kamau and colleagues (2024) examined Kenyan secondary school students and reported that WhatsApp groups functioned as important sites for homework assistance, whereas TikTok and Instagram served primarily entertainment functions. In Tanzania, Nkolimwa (2024) surveyed higher education students and reported that social media use was perceived as

both academically beneficial and significantly time-consuming. Ponera and Madila (2024) examined knowledge sharing through social networking sites among Tanzanian postgraduate students, reporting frequent academic engagement alongside infrastructural and policy-related barriers.

With respect to content types, the evidence consistently supports a distinction between educational and entertainment content effects. Hill (2024) reported that students who reported watching educational tutorials on YouTube and TikTok also reported better study habits, whereas those who predominantly consumed entertainment content reported more frequent procrastination. A SMART School trial in England revealed that unstructured entertainment use, particularly during evening hours, was associated with poorer sleep quality and reduced next-day classroom attention, even after controlling for total screen time (Wood et al., 2023). Hou and colleagues (2024) demonstrated that exposure to problematic short-video content was associated with reduced sustained attention, a relationship partially mediated by increased multitasking behavior and sleep disruption. In Tanzania, Ponera and Madila (2024), postgraduate students valued social networking sites for knowledge exchange but expressed concerns about distinguishing credible educational content from entertainment.

However, while most studies affirm the impact of content types on engagement, they often treat the variable as isolated from broader institutional dynamics. Few studies, particularly in Tanzania, have examined how school type—public versus faith-based—moderates the relationship between social media use and learning outcomes. Direct tests of whether school type moderates this relationship are almost entirely absent from the international, regional, and Tanzanian literature. A SMART School study revealed that restrictive school policies alone did not improve student outcomes, suggesting that school culture may be more influential than formal rules are (Wood et al., 2023). However, policy restrictiveness is not synonymous with the distinctive combination of moral instruction, religious values, and disciplinary traditions that characterize faith-based schooling.

North American qualitative research provides insights into how faith-based school environments shape students' digital experiences. Small-scale interview studies suggest that students who attend religious secondary schools perceive stricter institutional norms regarding phone use and report greater self-censorship

of their online behavior during school hours (Hill, 2024). However, none have linked these self-reported differences to objective academic outcomes. East African research offers only slightly more: Kamau and colleagues (2024) note that Kenyan faith-based secondary schools tend to enforce stricter in-school phone restrictions but provide no comparative data on students' social media behaviors or academic outcomes. Tanzanian evidence on school-type moderation is almost nonexistent. No studies have systematically compared usage patterns or learning outcomes between students attending public and faith-based secondary schools in Tanzania.

Students' perceptions of the usefulness and impact of social media reveal complex ambivalence. North American studies indicate that most students perceive social media as educationally useful for quick information access and peer Q&As while simultaneously acknowledging significant distraction costs (Hill, 2024; Al Mosharrafa et al., 2024). European research revealed that English adolescents' perceptions were moderated by socioeconomic background and school support; students in better-resourced schools with more structured digital guidance reported more positive perceptions and more adaptive usage patterns (Wood et al., 2023). Research on the perceptions of people from West Africa highlights pragmatic orientations: Ghanaian university students describe social media as a necessary tool for accessing information where physical libraries are inadequate (Owusu-Acheaw, 2024). Studies in East Africa have revealed tensions between the recognition of the educational potential of social media and parental concerns about moral decay (Kamau et al., 2024). In Tanzania, Ponera and Madila (2024) reported that postgraduate students perceived social networking sites as valuable knowledge exchange platforms but identified infrastructural limitations and information quality concerns as significant barriers.

The empirical insights from this review highlight critical gaps. Compared with university students, secondary school students are substantially underrepresented. Studies rarely employ probability sampling methods that would permit generalization. The almost exclusive reliance on self-reported usage measures raises concerns about recall accuracy and social desirability bias. Most critically, no studies have systematically compared how public and faith-based secondary school environments moderate the relationship between social media use and learning outcomes. The assumption that

faith-based institutions effectively manage digital challenges remains entirely untested empirically.

METHODOLOGY

This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) framework. A comprehensive search was conducted in Scopus, Web of Science, ERIC, PsycINFO, Google Scholar, and African Journals Online (AJOL) for studies published between January 2020 and January 2025. The search terms included combinations of keywords such as social media, social networking sites, Facebook, WhatsApp, TikTok, Instagram, YouTube, student learning, academic performance, secondary school, Tanzania, East Africa, and sub-Saharan Africa. Only peer-reviewed empirical or systematic review studies published between 2020 and 2025 were included.

The inclusion criteria for studies were as follows: (1) they examined the relationships between social media access or use and students' learning outcomes, behaviors, or perceptions; (2) they employed empirical research methods (quantitative, qualitative, or mixed); (3) they involved participants in secondary or tertiary education; (4) they were published in English; and (5) they were available in full text. The exclusion criteria included studies lacking empirical data, studies without clear measures of learning outcomes or behaviors, opinion pieces or theoretical papers without original data, and non-peer-reviewed sources.

A total of 847 articles were initially identified. After 234 duplicates were removed, 613 records underwent title and abstract screening. Of these, 412 were excluded because they were clearly irrelevant to the research questions. The remaining 201 full-text articles were assessed for eligibility. After the full-text review, 154 articles were excluded for the following reasons: no direct measure of learning outcomes or behaviors ($n=67$), exclusively technical focus ($n=31$), duplicate publication ($n=12$), insufficient methodological detail ($n=28$), or population outside educational settings ($n=16$). A total of 47 studies representing varied geographical settings and institutional backgrounds were ultimately included in the final synthesis. Given the heterogeneity of study designs, outcome measures, and populations, thematic synthesis was employed, involving iterative reading and coding of extracted findings, identification of recurrent patterns, and organization of themes according to the four review objectives and the integrated theoretical framework.

Study quality was assessed using appropriate tools for each design. Quantitative studies were evaluated using an adapted version of the Joanna Briggs Institute Critical Appraisal Checklist. Qualitative studies were assessed using the Critical Appraisal Skills Programme Qualitative Checklist. Mixed-methods studies were assessed using both instruments. No studies were excluded solely on quality grounds, but quality assessments informed the interpretation and weighting of findings in the synthesis.

Table 1. Assessment tools for mixed methods

Author(s) & Year	Title	Study Design	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Overall Quality Judgment
Hill, K. et al. (2024)	The role of a major social media platform on students' academic performance: Perception versus reality	Quantitative nonrandomized	Yes	Yes	Yes	Yes	Yes	High
Hou, Y., Qin, C., & Xu, P. (2024)	Social media use and academic performance in Chinese children and adolescents	Quantitative nonrandomized	Yes	Yes	Yes	Cannot tell	Yes	High
Kamau, P., Otieno, J.,	Social media and	Mixed methods	Yes	Yes	Yes	Yes	Yes	High

& Wanjiru, M. (2024)	collaborative learning among secondary school students in Kenya							
Nkolimwa, D. (2024)	The influence of social media on Tanzanian higher learning students' performance	Quantitative descriptive	Yes	Yes	Yes	Cannot tell	Yes	Moderate
Ponera, J. M., & Madila, S. S. (2024)	The extent of social media usage for exchanging knowledge by higher education students in Tanzania	Quantitative descriptive	Yes	Yes	Yes	Cannot tell	Yes	Moderate
Wood, G. E. R. et al. (2023)	Smartphones, social media and adolescent mental well-being: The impact of school policies	Quantitative nonrandomized	Yes	Yes	Yes	Yes	Yes	High

RESULTS

Characteristics of Included Studies

The 47 studies included included 29 quantitative surveys, 11 qualitative studies, and 7 mixed-methods investigations. Geographically, 19 studies were conducted in North America or Europe, 14 in Asia, 8 in West Africa, 4 in East Africa (including 3 in Tanzania), and 2 were multicountry comparisons. Only 6 studies focused exclusively on secondary school populations; the remainder examined university or tertiary students. The sample sizes ranged from 12 participants in a qualitative interview study to 4,872 in a large-scale national survey. Only 4 studies employed probability sampling methods; the remainder used convenience, purposive, or snowball sampling.

Frequency and Patterns of Social Media Usage

The synthesis confirms that secondary and tertiary students worldwide are intensive social media users, with the majority reporting daily or near-daily access. Platform preferences vary somewhat by region, with WhatsApp dominating in African and Asian contexts, TikTok and Instagram being preferred in North America and Europe, and Facebook maintaining substantial usage in older student populations. Students typically engage with multiple platforms and navigate between

academic and entertainment purposes, often within the same session. Studies consistently report that students substantially underestimate their usage time when asked retrospectively. The Tanzanian studies included in the review provide initial evidence that similar patterns characterize local tertiary students but are insufficient to establish prevalence or patterns among secondary school populations. No comparative data by school type exist.

Influence of Different Content Types on Learning Behaviors

The evidence consistently supports a distinction between educational and entertainment content effects. Studies that differentiate content types across all regions and educational levels have shown that educational content engagement is positively associated with self-reported learning outcomes, whereas entertainment content engagement is negatively associated with academic focus and study time. Qualitative studies provide rich accounts of students' navigating between content types. Students describe the genuine educational benefits of tutorials, explainer videos, and peer academic discussions, alongside the significant difficulty of regulating entertainment consumption. The algorithmic design of

major platforms, which optimizes for engagement rather than educational value, was frequently identified as a contributor to unintended time loss. No studies have examined whether the effects of different content types are moderated by school type, and no Tanzanian studies have systematically differentiated content effects among secondary students.

Moderating Effect of School Type on the Social Media–Learning Relationship

No studies directly testing whether school type (public versus faith-based) moderates the relationship between social media use and learning outcomes have been conducted. This finding constitutes the review's most significant negative result. Studies that have examined school policies or private–public differences provide suggestive but nondefinitive evidence; however, none have specifically analysed faith-based institutions as a distinct category with characteristic institutional cultures, disciplinary philosophies, and value frameworks. This gap is particularly notable given that faith-based schools constitute a substantial proportion of secondary education provision in Tanzania and many other sub-Saharan African countries. The assumption that these institutions are effectively managing digital challenges, whether through stricter discipline or moral formation, remains entirely untested empirically.

Students' Perceptions of Usefulness and the Impact of Social Media on Learning

Students across all regions expressed complex, ambivalent perceptions of the educational value of social media. They simultaneously recognize its ability to access information, collaborate with peers, and supplement with classroom learning while acknowledging significant costs in terms of distraction, time displacement, and exposure to irrelevant or harmful content. These perceptions are shaped by institutional contexts, available resources, and cultural norms, not merely individual attitudes. Tanzanian tertiary students' perceptions align with these broader patterns, although secondary students' perspectives remain underresearched. No comparative studies have examined whether students attending faith-based schools hold systematically different perceptions than their public school counterparts do or whether such perceptual differences correspond to differences in actual usage patterns or academic outcomes.

DISCUSSION

This review confirms that social media access has a dual effect on students' learning: educational content

can support collaborative learning and access to information, whereas entertainment content is consistently correlated with reduced study time, diminished academic focus, and poorer self-reported outcomes. The distinction between content types is empirically meaningful and should inform both research and intervention design. Students' perceptions of the educational value of social media are complex and ambivalent, reflecting genuine trade-offs rather than simple attitudes.

The observed patterns align with Vygotsky's theory: When students receive appropriate scaffolding from teachers, peers, or structured digital resources, social media can function as a tool for extending their cognitive capacity. However, the entertainment content that dominates many students' feeds rarely meets the criteria for effective scaffolding (contingent support, gradual withdrawal, and orientation toward meaningful goals). The CIPP model further illuminates how contextual factors (school type and policies), input factors (digital access and teacher competence), and process factors (usage patterns and supervision) interact to shape learning products (outcomes).

Critically, this review revealed that while the global evidence base on social media and student learning is substantial, it is characterized by significant geographical, methodological, and conceptual gaps that severely limit its applicability to the Tanzanian secondary education context. The absence of comparative research examining public and faith-based schools is particularly striking and particularly consequential. These findings cannot be safely extrapolated to Tanzanian secondary schools and, in particular, cannot be extrapolated differentially to public and faith-based institutions. The institutional cultures, disciplinary philosophies, resource constraints, and community expectations that characterize Tanzanian secondary education are sufficiently distinctive that context-specific research is essential.

Several limitations constrain the conclusions of this review. The included studies predominantly rely on cross-sectional designs and self-reported measures, limiting causal inference. Compared with university students, secondary school students are substantially underrepresented. Few studies employ probability sampling methods. The almost exclusive reliance on self-reported usage measures raises concerns about recall accuracy and social desirability bias. Moreover, the limited number of longitudinal and experimental studies constrains the causal understanding of the

mediating effects.

Future research should explore how social media use interacts with school type, gender, rurality, and community participation to shape learning engagement. Specifically, future research should employ longitudinal and mixed-method designs with representative sampling from public and faith-based secondary schools. Such research should incorporate objective measures of both social media usage (e.g., screen time analytics) and academic outcomes (e.g., examination results, teacher-rated engagement) rather than relying exclusively on self-reported data. Additionally, qualitative research exploring how the distinctive moral and disciplinary frameworks of faith-based schools shape students' digital practices could generate practically useful knowledge for educators, policymakers, and parents.

CONCLUSION

This systematic literature review has demonstrated that while social media presents both opportunities for collaborative learning and risks of academic distraction, the influence of institutional culture, particularly the moral and disciplinary framework characteristics of faith-based schools, remains unexplored. This review establishes that the dual nature of social media is well documented across multiple national contexts and that the distinction between educational content and entertainment content is empirically meaningful. However, the review also establishes that these findings cannot be safely extrapolated to Tanzanian secondary schools and particularly cannot be extrapolated differentially to public and faith-based institutions. The contribution of this review is both substantive and procedural: It provides the first comprehensive synthesis of evidence on the specific comparative question of school-type moderation, demonstrating both what is known and what remains to be investigated. The review concludes that there is an urgent need for comparative, methodologically rigorous research in Tanzanian secondary schools that employs mixed-methods designs, representative sampling, and objective outcome measures to determine whether and how school type moderates the relationship between social media access and students' learning outcomes.

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