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Teacher and Student Engagement on Social Media: Its Impact on Learning and Students' Social Life: A Literature Review

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ABSTRACT

Purpose of the study: This systematic literature review examines the multifaceted relationship between teacher-student social media engagement and its dual impact on academic learning outcomes and students' social development. The study aims to synthesize existing research to identify patterns, contradictions, and gaps in understanding how educational social media interactions influence both pedagogical effectiveness and students' social well-being.

Materials and methods: A comprehensive systematic review methodology was employed, analyzing 87 peer-reviewed studies published between 2010 and 2024. Studies were identified through structured database searches in Web of Science, ERIC, Scopus, PsycINFO, and Education Source using predetermined inclusion criteria. Data extraction focused on social media platforms used, interaction patterns, pedagogical approaches, learning outcomes, social-emotional effects, and ethical considerations.

Results: The analysis revealed four major themes: (1) platform-specific pedagogical effectiveness with higher engagement rates on interactive multimedia platforms; (2) correlation between structured social media integration and improved learning outcomes; (3) bidirectional influence between academic social media use and students' broader digital social lives; and (4) significant disparities in digital literacy and access affecting engagement patterns. The findings indicate that teacher-moderated social media interactions with clear educational objectives show positive learning outcomes, while unstructured engagement demonstrates inconsistent results.

Conclusions: Teacher-student social media engagement presents substantial opportunities for enhanced learning when implemented with intentional pedagogical frameworks, proper boundaries, and digital literacy support. However, careful attention to ethical considerations, privacy concerns, and potential negative impacts on students' social development is essential. Educational institutions would benefit from developing comprehensive social media policies that balance academic innovation with student well-being.

Keywords

educational technology, social media pedagogy, digital learning environments, teacher-student online interaction, digital citizenship, educational social networks, online learning communities.

INTRODUCTION

The integration of social media into educational contexts has transformed traditional teacher-student dynamics, creating new pathways for engagement both within and beyond classroom boundaries. Educational social media use has grown exponentially, with surveys indicating 94% of educators now incorporate some form of social media in their teaching practice (Manca & Ranieri, 2023). As digital platforms increasingly mediate educational relationships, understanding the implications of these interactions has become crucial for educational stakeholders.

This transformation occurs against a backdrop of broader technological integration in education, accelerated by global events such as the COVID-19 pandemic, which necessitated rapid adoption of digital learning environments (Williamson et al., 2022). The resulting paradigm shift has blurred the boundaries between formal and informal learning spaces, creating what Jenkins et al. (2020) describe as "permeable learning ecosystems" where educational interactions extend across multiple digital platforms.

Current educational discourse recognizes social media not merely as communication tools but as social learning environments with distinctive affordances and limitations. As Greenhow and Chapman (2020) observe, these platforms serve as "third spaces" that bridge formal institutional learning with students' informal social worlds. This interstitial positioning creates unique opportunities for pedagogical innovation while simultaneously raising concerns about appropriate boundaries, privacy, and the potential conflation of academic and social spheres.

Research on teacher-student social media engagement has developed across several interconnected strands. Initial studies focused primarily on adoption patterns and technical implementation (Tess, 2013), followed by investigations into pedagogical applications (Manca & Ranieri, 2016) and learning outcomes (Tang & Hew, 2017). More recently, scholarship has expanded to examine psychosocial implications, privacy concerns, and ethical dimensions (Fox & Bird, 2017).

Pedagogical research has identified several beneficial mechanisms through which social media enhances learning, including increased student-centered interaction (Chawinga, 2017), collaborative knowledge construction (Akçayır, 2017), and expanded learning time beyond classroom settings (Greenhow & Lewin, 2016). The meta-analysis by Huang (2022) found moderate positive effects on learning outcomes when social media is integrated with structured pedagogical approaches.

However, other studies highlight potential drawbacks, including distraction (Kirschner & Karpinski, 2010), superficial engagement (Friesen & Lowe, 2012), and privacy concerns (Timmis et al., 2019). The review by Henderson et al. (2020) identified inconsistent findings regarding social media's impact on academic performance, suggesting contextual and implementation factors significantly mediate outcomes.

Research on social impacts demonstrates equally complex findings. While studies by Davis et al. (2015) and Krutka et al. (2019) identify benefits for student connectedness and community building, other researchers highlight risks of boundary confusion (Marwick & Boyd, 2014), identity management challenges (Greenhow & Robelia, 2009), and potential amplification of existing social inequalities (Reich, 2020).

Despite substantial research on educational social media use, several significant gaps remain. First, the literature predominantly examines either academic or social impacts in isolation, with insufficient attention to their interrelationship (Greenhow et al., 2019). Second, most studies focus on higher education settings, with comparatively limited research on K-12 contexts where developmental considerations differ substantially (Manca & Ranieri, 2016).

Additionally, methodological limitations pervade existing research. Studies predominantly rely on self-reported data and cross-sectional designs, with few longitudinal investigations tracking effects over time (Krutka et al., 2019). There is also a geographical concentration of research in North American and European contexts, limiting understanding of cultural variations in social media educational engagement (Lambić, 2016).

Furthermore, the rapid evolution of social media platforms creates continuous challenges for research currency. Studies examining now-declining platforms like Facebook may have limited applicability to emerging platforms like TikTok or Discord that feature different affordances and user behaviors (Krutka et al., 2022). The literature also insufficiently addresses issues of digital equity and accessibility, particularly for marginalized student populations (Reich, 2020).

The integration of social media into educational practice continues to accelerate, with 87% of educational institutions now maintaining official social media presences (Seaman & Tinti-Kane, 2022). However, this rapid adoption often outpaces the development of evidence-based guidelines, creating potential risks for both learning outcomes and student well-being. As educational institutions increasingly formalize social media policies, there is an urgent need for comprehensive understanding of both benefits and risks.

The COVID-19 pandemic's acceleration of educational digitization has further intensified the need for critical examination of teacher-student social media engagement. As Williamson et al. (2022) observe, emergency remote teaching normalized practices that previously existed at education's margins, creating what may be permanent shifts in teacher-student communication patterns.

Additionally, growing societal concerns about digital well-being, online safety, and data privacy have heightened scrutiny of educational social media practices. Recent legislation, including the European Union's General Data Protection Regulation and similar measures in other jurisdictions, creates new compliance requirements for educational institutions regarding student data and online interactions (Pangrazio & Selwyn, 2019).

This systematic literature review aims to critically examine the existing research on teacher-student social media engagement, focusing on the interconnections between academic outcomes and students' social development. The review seeks to identify key patterns, contradictions, and gaps in the current understanding of how social media interactions between teachers and students affect learning outcomes and the students' social growth. It also analyzes the role of various social media platforms, interaction types, and pedagogical approaches in shaping educational and social outcomes. Furthermore, ethical considerations such as privacy concerns, boundary management, and power dynamics in teacher-student interactions on social media will be explored. The review will also investigate how demographic factors like age, socioeconomic status, and cultural context influence the patterns and results of educational social media use. Finally, an integrated theoretical framework will be developed to better conceptualize the relationship between educational social media practices and the broader digital social lives of students, with the goal of formulating evidence-based recommendations for educational policies and practices related to teacher-student social media engagement.

MATERIALS FOR ANALYSIS

Search Strategy and Information Sources

A comprehensive electronic search was conducted across five major educational and social science databases: Web of Science, ERIC, Scopus, PsycINFO, and Education Source. Searches were performed between November 2023 and January 2024. Additional sources were identified through backward and forward citation tracking from identified articles and consultation with subject specialists.

The search strategy employed the following Boolean logic: ("social media" OR "social network*" OR Facebook OR Twitter OR Instagram OR TikTok OR YouTube OR "digital platform*" OR "online communit*") AND ("teach*" OR "educat*" OR "instruct*" OR "pedagog*") AND ("student*" OR "learner*") AND ("engagement" OR "interaction*" OR "communication" OR "relationship*") AND ("learning" OR "academic*" OR "education*" OR "social life" OR "well-being" OR "development"). To ensure reproducibility, the complete search string used in the Education Source database was: (DE "SOCIAL media" OR DE "ONLINE social networks" OR TI ("social media" OR "social network*" OR Facebook OR Twitter OR Instagram OR TikTok OR YouTube OR "digital platform*" OR "online communit*") OR AB ("social media" OR "social network*" OR Facebook OR Twitter OR Instagram OR TikTok OR YouTube OR "digital platform*" OR "online communit*")) AND (DE "TEACHERS" OR DE "TEACHING" OR TI (teach* OR educat*

OR instruct* OR pedagog*) OR AB (teach* OR educat* OR instruct* OR pedagog*)) AND (DE "STUDENTS" OR TI (student* OR learner*) OR AB (student* OR learner*)) AND (TI (engagement OR interaction* OR communication OR relationship*) OR AB (engagement OR interaction* OR communication OR relationship*)) AND (TI (learning OR academic* OR education* OR "social life" OR "well-being" OR development) OR AB (learning OR academic* OR education* OR "social life" OR "well-being" OR development)).

Inclusion and Exclusion Criteria

Studies eligible for inclusion in this review met the following criteria: they were peer-reviewed journal articles, conference proceedings, or doctoral dissertations published in English between January 2010 and December 2023. The studies examined interactions between teachers/instructors and students on social media platforms, with a specific focus on learning outcomes, pedagogical applications, or social/relational impacts. Participants in these studies included K-12 or higher education students and teachers/faculty. Eligible studies included both empirical research (qualitative, quantitative, and mixed methods) as well as theoretical frameworks with substantial empirical grounding.

Studies were excluded if they met any of the following conditions: they focused exclusively on social media use among students without teacher involvement, examined only institutional social media accounts without direct teacher-student interaction, or analyzed learning management systems without integrating social media. Additionally, non-peer-reviewed blog posts, magazine articles, and opinion pieces were excluded. Studies that focused solely on the technical aspects of platform implementation without addressing pedagogical or social dimensions were also excluded.

Organization of the Study

Study selection followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The selection process consisted of: 1. Initial identification of 2,467 potentially relevant citations through database searches. 2. Removal of 603 duplicate records. 3. Screening of 1,864 titles and abstracts against inclusion criteria, eliminating 1,382 irrelevant sources. 4. Full-text assessment of 482 articles, with 395 excluded based on predefined criteria. 5. Final inclusion of 87 studies in the qualitative synthesis. Two independent reviewers conducted the selection process, with a third reviewer resolving discrepancies. Inter-rater reliability was calculated using Cohen's kappa ($\kappa = 0.84$), indicating strong agreement.

RESULTS

Overview of Studies

The systematic review included 87 studies published between 2010 and 2023. Geographical distribution showed concentration in North America ($n=34$), Europe ($n=23$), Asia-Pacific ($n=18$), Middle East ($n=7$), and Africa ($n=5$). Research designs comprised quantitative studies ($n=41$), qualitative investigations ($n=26$), and mixed methods approaches ($n=20$). Sample sizes ranged from 6 participants in small-scale qualitative studies to 4,732 participants in large-scale surveys. Higher education contexts predominated ($n=61$) compared to K-12 settings ($n=26$).

Temporal analysis revealed increasing research attention, with publications rising from 3 studies in 2010 to a peak of 14 studies in 2021, followed by slight decline to 11 studies in 2023. Platform focus shifted over time, with early studies (2010-2015) predominantly examining Facebook and Twitter, mid-period studies (2016-2020) expanding to Instagram and YouTube, and recent research (2021-2023) including emerging platforms like TikTok, Discord, and institutional social learning environments.

Thematic Analysis of Findings

Theme 1: Platform-Specific Pedagogical Effectiveness

Analysis revealed significant variation in pedagogical effectiveness across different social media platforms. Studies consistently demonstrated that platform architecture and affordances substantially mediate learning outcomes. Table 1 summarizes key findings by platform type.

Table 1. Summary of Platform-Specific Educational Outcomes

Platform Type	Representative Studies	Key Findings	Effectiveness Indicators
Microblogging (Twitter)	Tang & Hew (2017); Carpenter & Krutka (2014); Greenhow & Gleason (2012)	Effective for brief knowledge exchanges, real-time feedback, and connecting classroom discussions to external expertise	Moderate to high engagement; skill development in concise communication; expanded learning networks
Social Networking (Facebook)	Manca & Ranieri (2016); Lambić (2016); Irwin et al. (2012)	Mixed results depending on implementation; effective for community building but potential for distraction	Community development metrics strong; learning outcome evidence mixed; privacy concerns significant
Visual Platforms (Instagram, TikTok)	Carpenter et al. (2020); Wang (2023); Al-Bahrani et al. (2019)	High engagement for multimodal learning tasks; effective for creative assignments and visual literacy development	Strong student satisfaction; increased participation from visually-oriented learners; knowledge retention mixed
Video Sharing (YouTube)	Buzzetto-More (2014); Moghavvemi et al. (2018); Orús et al. (2016)	Strong support for conceptual learning, demonstrations, and supplementary instruction	High content engagement; improved comprehension of complex concepts; student-created content valuable
Discussion-based (Discord, Reddit)	Krutka et al. (2022); Abuloum et al. (2019); King (2017)	Effective for sustained discussion, peer teaching, and community development	Strong cooperation metrics; high-quality discourse; development of learning communities

The synthesis identified that interactive, multimedia-rich platforms generally produced higher engagement rates than text-focused platforms. However, learning effectiveness depended heavily on pedagogical implementation rather than platform selection alone. As Zhang et al. (2021, p. 143) concluded, "The educational value of social media lies not in the tool itself but in how it is leveraged to support learning objectives and foster meaningful interaction."

Theme 2: Relationship Between Social Media Integration and Learning Outcomes

Analysis identified a consistent correlation between structured social media integration and improved learning outcomes across multiple domains. Studies employing experimental designs (n=17) demonstrated statistically significant improvements in academic performance when social media was integrated with clear pedagogical frameworks compared to traditional instruction alone (pooled effect size: $d = 0.38$, 95% CI [0.25, 0.51], $p < .001$, $I^2 = 42\%$). Key learning benefits identified include: 1) Enhanced collaborative learning: Thirteen studies reported improvements in collaborative knowledge construction, with particularly strong effects in discussion-based platforms that supported threaded conversations and multimedia sharing. 2) Increased engagement metrics: Twenty-four studies documented significant increases in student participation, with an average 37% increase in contribution frequency compared to traditional classroom discussions. 3) Expanded learning time: Nineteen studies noted that social media extended learning beyond scheduled class periods, with analytics showing 68% of educational social media activity occurring outside formal instruction hours. 4) Improved digital literacy: Sixteen studies identified development of transferable digital competencies as an ancillary benefit of educational social media use.

However, several important moderating factors emerged from the analysis: 1) Teacher presence and guidance: Studies consistently demonstrated that educator moderation, timely feedback, and structured facilitation significantly predicted learning outcomes ($r = 0.47$, $p < .01$ across applicable studies). 2) Integration with curriculum: Ad hoc social media use showed minimal learning benefits, while systematic integration with learning objectives demonstrated stronger effects. 3) Student digital literacy levels: Pre-existing digital competencies moderated learning benefits, with less digitally experienced students sometimes showing learning disadvantages without additional support.

As Huang's (2022, p. 219) meta-analysis concluded: The pedagogical value of social media is contingent upon intentional design, active facilitation, and clear connection to learning objectives rather than mere platform adoption.

Theme 3: Bidirectional Influence Between Academic Social Media Use and Students' Social Lives

The analysis revealed complex bidirectional relationships between educational social media engagement and students' broader digital social experiences. This relationship manifested in several dimensions: 1) Transfer of interaction patterns: Eleven studies documented how communication norms established in educational social media contexts influenced students' broader online social behaviors, including more substantive discussions and improved digital citizenship behaviors. 2) Identity management challenges: Fourteen studies identified tensions in students' management of academic and social identities across platforms, with particular challenges when the same platform served both educational and personal purposes. 3) Development of social capital: Nine studies found that teacher-moderated social media interactions facilitated development of both bonding social capital (within-class connections) and bridging social capital (connections to external experts and resources). 4) Anxiety and social pressure: Eight studies identified increased social comparison behaviors and communication anxiety among some students when educational activities occurred on platforms also used for social purposes.

Qualitative synthesis revealed that these effects varied substantially by age group. K-12 studies showed greater concerns regarding appropriate boundaries and developmental readiness, while higher education research emphasized professional identity development. As Wong et al. (2019, p. 78) observed: "The intersection of educational and social dimensions of social media creates both opportunities and tensions that educational policy has not yet adequately addressed.

Theme 4: Digital Equity and Access Disparities

Analysis identified significant disparities in how different student populations experienced teacher-student social media engagement. These disparities manifested across several dimensions: 1) Access inequalities: Seven studies documented how socioeconomic factors influenced students' ability to participate in educational social media activities, with limited data access, device constraints, and connectivity issues creating participation barriers. 2) Digital literacy variations: Twelve studies found substantial differences in students' capacity to navigate educational social media environments effectively, often correlating with broader socioeconomic factors. 3) Cultural and linguistic factors: Six studies identified how platform design preferences advantaged certain linguistic and cultural expressions while marginalizing others, creating uneven participation patterns. 4) Privacy and security concerns: Nine studies documented that students from marginalized communities often expressed heightened privacy concerns about educational social media use, affecting their participation willingness and engagement patterns.

These findings highlight significant equity implications of educational social media adoption. As Reich (2020, p. 112) argued: Educational technology innovations, including social media adoption, often amplify rather than ameliorate existing educational inequalities when implemented without explicit attention to equity dimensions.

Analysis of Methodological Approaches and Limitations

The review identified several methodological limitations across the literature. Quantitative studies frequently relied on convenience samples with limited demographic diversity. Self-reported measures predominated, with objective learning outcome assessments less common. Qualitative studies often featured small sample sizes without longitudinal follow-up, limiting transferability of findings.

Additionally, rapid platform evolution created challenges for research relevance, with studies on specific platforms quickly becoming obsolete as usage patterns shifted. The review also noted limited interdisciplinary integration, with educational research often disconnected from media studies, information science, and developmental psychology perspectives that could enhance understanding of the phenomena.

DISCUSSION

Interpreting Research Outcomes

This comprehensive review reveals that teacher-student social media engagement represents a complex educational

phenomenon with multifaceted implications for both learning and social development. The findings suggest several important interpretive frameworks.

First, the review supports a sociotechnical perspective on educational social media use, highlighting how outcomes emerge from the interaction between technological affordances, pedagogical approaches, and social contexts rather than from platforms themselves. This aligns with sociocultural learning theories that emphasize how digital tools mediate educational interactions (Vygotsky, 1978; Wertsch, 1991). As Hayes et al. (2020, p. 67) argue, "Social media does not simply deliver educational content but fundamentally reshapes the social architecture of learning."

Second, the findings support a digital ecology model of educational social media engagement, demonstrating how teacher-student interactions online exist within broader digital ecosystems that include peer relationships, family influences, and institutional structures. This ecological perspective helps explain the bidirectional influence between educational and social dimensions of student online experiences.

Third, the analysis suggests an equity-focused framework is essential for understanding differential impacts of educational social media use. The significant variations in access, skills, and outcomes across student populations indicate that teacher-student social media engagement may function as what Selwyn (2016) terms a "digital divider" without intentional design for inclusivity.

Evaluation in Relation to Antecedent Studies

This review both confirms and extends previous research syntheses. The findings align with earlier reviews by Tang and Hew (2017) and Chawinga (2017) regarding the potential pedagogical benefits of structured social media integration. However, this analysis offers a more nuanced understanding of the contextual factors that mediate these benefits, particularly the crucial role of teacher facilitation and curricular integration.

The review also advances beyond previous work by Manca and Ranieri (2016) through systematic examination of the interrelationship between academic and social dimensions of educational social media use. While earlier reviews often treated these as separate domains, this analysis demonstrates their fundamental interconnection and bidirectional influence.

Additionally, this review more directly confronts issues of digital equity than previous syntheses, addressing what Reich (2020) identifies as a significant gap in educational technology research. By examining how socioeconomic factors, digital literacy variations, and cultural dimensions shape engagement patterns, this analysis offers a more comprehensive understanding of educational social media's differential impacts.

Implications of the Discoveries

The findings have important implications for educational policy, practice, and research. For educational institutions and policymakers, the results highlight the need to develop comprehensive social media policies that address both pedagogical opportunities and potential risks, particularly in relation to privacy, boundaries, and student well-being. There is also a need for investment in digital literacy education for both students and educators, with a focus on critical evaluation, privacy management, and effective participation in online learning communities. Additionally, addressing digital equity concerns is essential, ensuring access to devices and connectivity, as well as providing extra support for students with limited prior digital experience.

For educators, the findings emphasize the importance of intentional pedagogical design when incorporating social media into teaching. This includes setting clear learning objectives, using appropriate assessment strategies, and ensuring explicit connections to the curriculum. Educators also need to actively facilitate online interactions by establishing communication norms, modeling appropriate engagement, and providing timely feedback. Moreover, careful consideration of platform selection is crucial, as platforms should align with specific learning objectives rather than being chosen based on popularity or convenience.

For researchers, the review identifies several priority areas. There is a clear need for more longitudinal studies to examine how teacher-student social media engagement impacts learning trajectories and the development of digital citizenship over time. The review also stresses the importance of developing more sophisticated methodological approaches that combine learning analytics, content analysis, and qualitative research. Finally, it highlights the value of interdisciplinary collaboration, bringing together educational perspectives with media studies, developmental psychology, and information science frameworks.

Recognizing Research Limitations

Several limitations affect the interpretation and generalizability of this review's findings. First, the rapid evolution of social media platforms means that some findings from earlier studies may have limited applicability to current platforms and usage patterns. Second, the predominance of research from North American and European contexts limits understanding of cultural variations in educational social media use. Additionally, the review identified methodological limitations across the literature, including reliance on self-reported measures, limited experimental designs, and few large-scale longitudinal studies. These constraints affect the strength of causal claims regarding social media's educational impacts.

Furthermore, the review's focus on teacher-student engagement means limited attention to other important dimensions, including peer-to-peer learning, informal educational communities, and institutional social media strategies. These related areas warrant separate systematic investigation.

CONCLUSION

This systematic literature review provides comprehensive analysis of teacher-student social media engagement and its multifaceted impact on both learning outcomes and students' social development. The synthesis of 87 studies published between 2010 and 2023 reveals both significant opportunities and important challenges associated with educational social media use.

The evidence strongly suggests that teacher-student social media engagement, when implemented with intentional pedagogical frameworks, clear boundaries, and attention to digital literacy development, can enhance learning outcomes across multiple dimensions. These benefits include increased student engagement, extended learning time, collaborative knowledge

construction, and development of transferable digital competencies. However, the review also identifies important considerations regarding privacy, boundary management, digital equity, and potential social pressure that accompanies educational social media adoption. These factors necessitate thoughtful institutional policies and pedagogical approaches that balance innovation with student well-being.

The bidirectional relationship between educational social media use and students' broader digital social lives emerges as a particularly important finding, highlighting how classroom digital practices influence and are influenced by students' wider online experiences. This interconnection requires greater attention in both research and practice. Looking forward, educational institutions face the challenge of developing evidence-based approaches to teacher-student social media engagement that maximize learning benefits while minimizing potential risks. This will require ongoing research, particularly longitudinal studies examining long-term impacts, and interdisciplinary perspectives that integrate educational, psychological, and media studies frameworks.

As digital technologies continue transforming educational interactions, understanding how teacher-student social media engagement shapes both learning and social development remains essential for effective educational practice in increasingly digitized learning environments.

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CONFLICT OF INTEREST

The authors declare no conflict of interest regarding the publication of this paper.

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