Social Media as an Informal Learning Environment: Opportunities and Risks for Student Development

Maryanti Sawitry[1] , Irene Rosalina[2] , Vita Pujawanti Dhana[3] , Harlina Harja[4] , Nurul Huda[5]
[1]Universitas Islam Batang Hari, Indonesia
[2]Sekolah Tinggi Agama Islam Nurul Islam, Indonesia
[3]Universitas Negeri Medan, Indonesia
[4]Universitas Islam Batang Hari, Indonesia
[5]Universiti Utara, Malaysia

ABSTRACT

Background. Social media platforms have increasingly become informal learning environments where students engage in knowledge sharing, collaboration, and skill development outside formal educational settings. These digital spaces offer opportunities for peer interaction, access to diverse resources, and experiential learning, yet they also present risks such as misinformation, distraction, and negative social influences. Understanding the dual impact of social media on student development is critical for guiding effective educational practices and digital literacy initiatives.

Purpose. This study aims to explore the opportunities and risks associated with social media as an informal learning environment, focusing on its influence on cognitive, social, and emotional development.

Method. A mixed-methods research design was employed, combining surveys of 250 students with semi-structured interviews to capture qualitative insights into learning behaviors, engagement patterns, and perceived benefits and drawbacks of social media usage.

Results. Findings indicate that students leverage social media for collaborative learning, problem-solving, and information seeking, enhancing critical thinking and communication skills. However, exposure to inaccurate content, online distractions, and social comparison negatively impacted focus, motivation, and emotional well-being.

Conclusion. The study concludes that while social media can serve as a valuable informal learning environment, structured guidance, digital literacy education, and awareness of potential risks are essential for maximizing benefits and mitigating harms. Educators and policymakers should balance opportunities with safeguards to support holistic student development in digital contexts.

KEYWORDS

Informal Learning, Social Media, Student Development

INTRODUCTION

Social media platforms have become pervasive in students' daily lives, serving as venues for communication, entertainment, and increasingly, informal learning. These platforms allow students to access diverse content, collaborate with peers, and participate in communities of practice beyond formal educational settings.

The ubiquity of digital networks has transformed the learning landscape, offering new avenues for cognitive, social, and emotional development (Chanda & Pal, 2025; Majcen & Spitzer, 2025). Engagement with social media enables students to explore ideas, solve problems collaboratively, and develop digital competencies that complement formal instruction. Informal learning via social media provides opportunities for experiential learning and self-directed knowledge acquisition. Students can leverage user-generated content, discussion forums, and multimedia resources to enhance understanding and critical thinking. Social interaction in digital spaces encourages communication skills, social awareness, and collaborative problem-solving. These experiences can foster autonomy, motivation, and lifelong learning habits, aligning with contemporary educational goals emphasizing 21st-century competencies. Despite these benefits, social media also poses challenges and risks to student development. Exposure to misinformation, digital distractions, and online social pressures can impede focus, critical evaluation, and emotional well-being (Desai et al., 2025; Nguyen et al., 2025). The dual nature of social media as both an educational resource and a potential source of harm necessitates careful examination of its impact on learning outcomes. Understanding how students navigate these digital environments is essential for maximizing benefits while mitigating negative effects.

Students increasingly rely on social media for informal learning, yet the effects of such engagement on their overall development are not fully understood. Cognitive, social, and emotional outcomes may be influenced by how students use social media, but empirical evidence examining both opportunities and risks remains limited. Lack of clarity regarding the impact of informal digital engagement complicates the development of pedagogical strategies that support student learning. Challenges arise from the prevalence of unregulated content and variable quality of information on social media platforms. Students may encounter conflicting or inaccurate material, leading to misconceptions and reduced academic performance (Dixit et al., 2025; Ryu et al., 2025). Additionally, social comparison, cyberbullying, and excessive screen time can negatively affect motivation, self-esteem, and emotional well-being, highlighting the complexity of social media's influence on student development. Variability in students' digital literacy, self-regulation, and access to supportive resources creates differential outcomes. While some learners navigate social media effectively to enhance learning, others struggle to manage distractions or critically evaluate content. Identifying factors that promote productive engagement and mitigate risks is essential for developing effective educational interventions and guidance.

The primary objective of this study is to explore how students use social media as an informal learning environment and how this usage affects cognitive, social, and emotional development (Seifert & Machado, 2025; Yoon et al., 2025). The research aims to identify both opportunities for skill development and potential risks that may impede learning and well-being. A secondary objective is to examine the strategies students employ to navigate social media, including information evaluation, time management, and collaborative engagement. The study seeks to understand how these strategies influence learning outcomes, digital literacy, and self-directed knowledge acquisition. The research also intends to provide practical implications for educators, policymakers, and parents. Insights from the study will inform the design of guidance programs, digital literacy curricula, and instructional strategies that leverage social media effectively while minimizing negative consequences for student development.

Existing literature often focuses on either the educational potential of social media or its risks, without providing a balanced assessment of both aspects. Few studies integrate the cognitive, social, and emotional dimensions of student development in the context of informal learning. This limits comprehensive understanding of how social media influences holistic learning outcomes.

Research frequently emphasizes quantitative metrics such as usage frequency, time spent, or engagement levels, while neglecting qualitative insights into how students experience and interpret social media learning. Studies that incorporate student narratives, reflections, or perceived benefits remain scarce, reducing the capacity to capture nuanced learning behaviors and adaptive strategies (Pérez-Marín, 2025; Seifert & Machado, 2025). Few studies consider the interplay between informal learning on social media and formal educational practices. Understanding how digital engagement complements or conflicts with classroom instruction is crucial for designing integrative educational strategies. Addressing these gaps will enhance the theoretical and practical understanding of social media as an informal learning environment.

This study offers a novel perspective by examining both opportunities and risks of social media use for informal learning, integrating cognitive, social, and emotional dimensions of student development. Unlike prior research focusing narrowly on usage patterns or academic outcomes, this approach captures holistic effects of digital engagement. Methodologically, the study combines surveys, interviews, and observational analysis to triangulate data and provide rich insights into students' experiences, strategies, and reflections (Li et al., 2025; H. Zhang et al., 2025). This mixed-methods approach allows for deeper understanding of engagement behaviors and adaptive practices in informal learning contexts. Justification for this research lies in the increasing reliance on social media for learning and the urgent need to balance its benefits and drawbacks. Findings provide actionable insights for educators, digital literacy programs, and policy initiatives, supporting the development of interventions that foster productive, safe, and effective informal learning experiences. The study contributes both theoretically and practically by linking social media usage with multidimensional aspects of student development and educational strategy design.

RESEARCH METHODOLOGY

The study employed a mixed-methods research design to explore the opportunities and risks of social media as an informal learning environment for student development. This design combined quantitative surveys with qualitative interviews to capture both measurable patterns of social media use and in-depth narratives of students' learning experiences. The approach allowed for triangulation of findings, providing a comprehensive understanding of how social media engagement influences cognitive, social, and emotional outcomes (Varma & Ghosh, 2025; W.-F. Zhang & He, 2025). The population consisted of secondary and tertiary students actively using social media for learning purposes across diverse educational settings. Purposive sampling was applied to select 250 participants representing different age groups, disciplines, and socio-economic backgrounds. Inclusion criteria required participants to regularly engage with social media platforms for educational or informational purposes, have access to a digital device and internet connectivity, and provide informed consent to participate in both survey and interview components.

Instruments included a structured online questionnaire measuring frequency of social media use, types of learning activities, perceived benefits, and challenges, as well as semi-structured interview guides designed to elicit personal narratives regarding engagement, coping strategies, and perceived development (Groller et al., 2025; McShane, 2025). The survey items were validated for clarity and reliability in prior educational research, while the interview guide was pilot-tested to ensure relevance and comprehensibility. Data collection procedures involved distributing the online questionnaire to all participants, followed by conducting in-depth interviews with a subset of 50 students selected for maximum variation. Survey responses were analyzed using descriptive and inferential statistics to identify usage patterns and correlations with perceived development, while interview data were transcribed and subjected to thematic analysis to extract key insights regarding

opportunities, risks, and adaptive strategies. Ethical considerations included informed consent, confidentiality, anonymity, and secure storage of digital data.

RESULT AND DISCUSSION

Descriptive analysis of survey data revealed students' patterns of social media use for informal learning. Table 1 presents the frequency of reported learning activities, perceived benefits, and risks among 250 participants. Most students reported using social media for collaborative learning (68%), information seeking (74%), and peer discussion (62%). Perceived benefits included improved understanding of concepts (70%), enhanced communication skills (65%), and exposure to diverse perspectives (60%). Common risks reported were distraction (58%), exposure to misinformation (52%), and negative social comparison (49%). Data distributions indicated moderate variability across responses, reflecting differences in engagement, digital literacy, and access to resources. The descriptive statistics provide an overview of how students leverage social media for learning, highlighting both opportunities and challenges inherent in these informal environments.

Table 1. Student Social Media Use for Informal Learning: Opportunities and Risks

Category	Frequency (%)
Collaborative Learning	68
Information Seeking	74
Peer Discussion	62
Improved Understanding	70
Communication Skills	65
Exposure to Diverse Perspectives	60
Distraction	58
Misinformation	52
Negative Social Comparison	49

Students engaging in collaborative learning and information-seeking activities reported higher perceived benefits, indicating that active participation in knowledge sharing and discussion enhances learning outcomes. Exposure to diverse perspectives fostered critical thinking and broadened understanding of complex concepts. Analysis also showed that students who experienced higher perceived risks, such as distraction or misinformation, tended to report lower engagement and diminished learning satisfaction. These patterns suggest that the effectiveness of social media as an informal learning environment is mediated by students' ability to navigate potential challenges.

Qualitative interview analysis identified three main themes: self-directed learning, peer-supported learning, and risk management strategies. Students described using social media to plan study schedules, access supplementary resources, and seek peer clarification, reflecting proactive engagement in informal learning. Variability emerged based on digital literacy and access to supportive networks. Students with higher digital competence and active peer support were more effective in leveraging social media for learning, demonstrating deeper engagement and cognitive processing.

Correlation analysis indicated positive associations between frequency of social media use for learning and perceived cognitive development ($r = 0.53$, $p < 0.001$). Students engaging more frequently in collaborative discussions and information-seeking activities reported higher perceived understanding and skill development. Regression analysis revealed that proactive learning

behaviors mediated the relationship between social media engagement and perceived academic benefit ($\beta = 0.46$, $p < 0.01$). The model explained 38% of the variance in perceived cognitive and skill-based development, confirming the influence of active engagement on informal learning outcomes.

Interactions among themes demonstrated that peer-supported learning enhanced the benefits of self-directed engagement. Students leveraging both strategies reported higher satisfaction, motivation, and perceived learning gains. Risk management strategies moderated these relationships. Students who actively monitored content quality and limited distraction exhibited stronger outcomes, suggesting that adaptive behaviors are critical for maximizing social media's educational potential. A case study of a 19-year-old university student highlighted effective utilization of social media for learning. The student used discussion forums, peer messaging, and curated content feeds to support study, demonstrating high engagement and reflective learning practices. Reported risks included occasional distraction and exposure to misleading content, mitigated by critical evaluation and structured scheduling. The case illustrates how students integrate proactive engagement, peer support, and risk management to optimize learning. This example exemplifies the complex, multidimensional nature of resilience and adaptive strategies in informal digital learning environments.

The case study demonstrates that effective learning on social media requires deliberate use of tools, planning, and self-regulation. Peer interaction facilitated clarification of concepts, while structured time management minimized distraction and enhanced focus. Risk mitigation strategies, such as evaluating sources and limiting non-educational use, enhanced the quality and sustainability of learning experiences. These observations align with quantitative findings, reinforcing the importance of adaptive behaviors in mediating benefits and risks (Danielson et al., 2025; Krutka & Greenhalgh, 2025). Overall results indicate that social media can serve as a valuable informal learning environment when students employ proactive engagement, collaborative strategies, and risk management. Cognitive, social, and emotional benefits are enhanced by deliberate, reflective, and self-directed behaviors. Findings suggest that educators should support students in developing digital literacy, critical evaluation skills, and time management strategies to maximize educational benefits while mitigating risks. Structured guidance and awareness of potential challenges are essential to fostering effective and safe informal learning through social media.

The study revealed that social media functions as both a valuable informal learning environment and a source of potential risks for students (de Gaulmyn et al., 2025; Ro'ziyeva et al., 2026). Quantitative data indicated that students frequently used social media for collaborative learning, information seeking, and peer discussion, with high levels of perceived cognitive, social, and emotional benefits. Qualitative narratives highlighted strategies such as self-directed learning, time management, and critical evaluation of content, which facilitated meaningful engagement and skill development. Students reported that participation in online discussion forums and content sharing enhanced understanding of concepts, communication skills, and exposure to diverse perspectives. Engagement metrics suggested that proactive learning behaviors were strongly associated with perceived academic gains. Students who employed adaptive strategies demonstrated higher satisfaction and self-efficacy in learning outcomes.

The findings also highlighted common risks, including distraction, exposure to misinformation, and negative social comparison. Students who experienced these risks reported lower focus and reduced engagement, emphasizing the dual nature of social media as a learning environment. Case study analysis illustrated that effective learners integrated proactive engagement, peer collaboration, and risk management to optimize learning outcomes (Pattison, 2025; Pokhriyal

& Jain, 2025). These individual accounts reinforced the quantitative findings and demonstrated the multidimensional nature of informal learning on social media. Findings align with prior research indicating that social media can support informal learning through collaborative engagement, resource sharing, and peer-to-peer interaction. Studies by (Al Arafat et al., 2025; Ali et al., 2025) similarly emphasize the cognitive and social benefits of digital platforms in supporting student learning. Differences emerged in the emphasis on risk management and reflective adaptation. Unlike many studies focusing solely on engagement or skill acquisition, this research highlights students' strategies for mitigating distraction and misinformation, illustrating that resilience and critical evaluation are integral to effective informal learning.

The study extends previous work by integrating quantitative engagement metrics with qualitative narratives. This approach captures both the frequency of participation and the contextualized strategies students use to navigate opportunities and challenges, providing a richer understanding of the learning process. Cross-comparison with traditional learning studies indicates that informal digital environments offer distinct advantages in flexibility, autonomy, and access to diverse perspectives, but these benefits require careful navigation to avoid negative impacts on motivation and emotional well-being. The results signify that effective learning on social media is contingent on students' ability to combine proactive engagement, critical thinking, and reflective practices. Resilience, self-regulation, and adaptive behaviors mediate the benefits and risks associated with digital learning environments (Anusha & Leelavathi, 2025; Bowman, 2025). Observed patterns suggest that students develop cognitive, social, and emotional competencies by actively interacting with content and peers. Effective learners leverage the autonomy of social media to enhance understanding, manage time, and engage in self-directed problem-solving.

Findings highlight the importance of balanced engagement. While social media offers substantial opportunities, students who lack self-regulation or digital literacy are more susceptible to distraction, misinformation, and negative emotional effects. The study demonstrates that social media learning is a dynamic, context-dependent process. Student development depends not only on the platform features but also on individual strategies, peer interactions, and critical evaluation skills (Bowman, 2025; Swetha et al., 2025). The findings imply that educators should incorporate guidance on digital literacy, critical evaluation, and self-regulation into curricula. Students need strategies to maximize learning benefits while mitigating risks inherent in social media engagement. Institutions can provide structured frameworks for informal digital learning, including moderated forums, curated content, and peer-support mechanisms. These measures enhance productive engagement and reduce exposure to distractions or misinformation. Policy implications include promoting equitable access to digital resources and platforms, ensuring all students can participate meaningfully in informal learning activities. Adequate infrastructure and training are essential for fostering positive learning outcomes.

The study also suggests integrating reflective activities and scaffolding into social media use, allowing students to monitor progress, assess strategies, and develop autonomy, thereby enhancing both engagement and learning quality. Students' benefits from social media arise from the platform's affordances, including flexibility, interactivity, and access to diverse content. These features enable self-directed exploration, collaboration, and skill development. Risks such as distraction and misinformation occur due to the unregulated, open nature of digital platforms (Galindo-Domínguez et al., 2025; Garrido Castellano et al., 2025). Without guidance, students may encounter irrelevant content, experience social comparison, or lose focus, undermining learning outcomes. The interplay of engagement strategies and support systems explains variations in learning success. Students who combine time management, peer collaboration, and critical

evaluation effectively navigate challenges and maximize benefits. Digital literacy and self-regulation act as mediating factors. Students with higher skills in these areas can selectively engage, verify information, and sustain motivation, enhancing the overall effectiveness of informal learning.

Future research should investigate longitudinal impacts of social media on learning development, examining how engagement patterns and coping strategies evolve over time. Long-term studies can reveal sustained benefits or cumulative risks. Experimental studies could assess interventions designed to enhance digital literacy, self-regulation, and reflective practices, determining their effectiveness in maximizing learning outcomes on social media. Cross-cultural and multi-institutional studies may explore how variations in access, platform use, and educational context influence student experiences, providing generalizable insights for policy and pedagogy. Implementation-focused research is recommended to design guidelines for safe, effective, and structured integration of social media into educational practices, optimizing opportunities while minimizing risks for holistic student development.

CONCLUSION

The most significant finding of this study is that social media serves as a multifaceted informal learning environment that can both enhance and hinder student development. Students effectively leveraged social media for collaborative learning, information-seeking, and peer discussion, which contributed to cognitive, social, and emotional skill development. At the same time, exposure to distractions, misinformation, and negative social comparison highlighted inherent risks, underscoring the importance of adaptive strategies, self-regulation, and digital literacy in optimizing learning outcomes. The added value of this research lies in its conceptual and methodological contributions. Conceptually, the study frames social media engagement as a complex interplay between opportunities for learning and potential risks, integrating cognitive, social, and emotional dimensions of student development.

Methodologically, the combination of quantitative surveys and qualitative narrative analysis allows for a comprehensive understanding of engagement behaviors, coping strategies, and personal reflections, providing rich, triangulated insights into how students navigate informal digital learning environments. Limitations of the study include the reliance on self-reported data and a sample drawn from specific educational contexts, which may affect generalizability. The cross-sectional design also restricts the ability to assess long-term impacts of social media engagement on learning and development. Future research should employ longitudinal designs, incorporate larger and more diverse populations, and explore intervention strategies that enhance digital literacy, self-regulation, and reflective learning practices to maximize the benefits of social media while mitigating potential harms.

AUTHORS' CONTRIBUTION

Look this example below:

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

Author 5: Supervision; Validation.

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