The Impact of Educational Transformation and Social Media on Students' Achievement

Dusita Sirisakpanich[1] and Kittichai Suthasinobol[2]

Abstract

The traditional education system, characterized by teacher-centered instruction and standardized curricula, is increasingly seen as inadequate for developing essential 21st-century skills such as collaboration, critical thinking, and adaptability. In response, educational transformation has emerged, driven by technological advancements and the increasing use of social media. This study explores the impact of educational transformation, focusing on how social media fosters collaborative learning, enhances digital literacy, and supports student engagement. While social media has become a powerful tool in reshaping the educational landscape, challenges such as privacy concerns, digital distractions, and misinformation remain significant. By analyzing current research, this paper provides a comprehensive understanding of how social media can both enhance and hinder educational outcomes. The study also highlights the importance of developing strategies to maximize the benefits of social media while addressing its risks, ultimately contributing to the ongoing transformation of education.

Keywords: *Educational Transformation, Social Media, Student's Achievement*

INTRODUCTION

The traditional education system, characterized by teacher-centered instruction, standardized testing, and rigid curricula, is increasingly considered inadequate for developing essential 21st-century skills such as collaboration, critical thinking, and adaptability (Zhao, 2012). In response, educators and policymakers are advocating for new models that prioritize learner-centered approaches and technology-enhanced instruction (Mishra & Koehler, 2006). Many researchers have extensively studied the education transformation for example Schleicher (2018) notes that educational transformation seeks to create more flexible, accessible systems that are aligned with global economic demands. This transformation involves redesigning educational practices to meet modern societal, technological, and economic needs. Further study by Christensen et al. (2010), they emphasize that technological advancements, including digital learning tools and personalized learning pathways, are key drivers of this shift. Another major factor in educational transformation is the increasing use of social media for lifelong learning and anytime, anywhere access to educational resources (Redecker, 2017). In today's rapidly changing world, individuals must continuously acquire new skills, challenging the traditional view of education as confined to the early years of life (Schleicher, 2018). In addition, Greenhow and Lewin (2016) argue that social media plays a pivotal role in reshaping how information is shared, consumed, and created, fostering collaborative and student-centered learning environments. Moreover, platforms such as Facebook, Twitter, LinkedIn, and YouTube are becoming integral to education, allowing educators and institutions to incorporate them into teaching methods, further enhancing collaboration and connected learning experiences (Veletsianos, 2020).

One of the primary ways social media contributes to educational transformation is by fostering communication and collaboration. Students and educators can now connect across geographic boundaries, engage in real-time discussions, and share resources instantly (Greenhow & Lewin, 2016). For instance, platforms like Twitter allow students to follow experts, participate in academic conversations, and access real-time information. This transforms education from a one-way transmission of knowledge into an interactive process, promoting deeper engagement and active learning. Additionally, social media enhances access to information and learning opportunities through open educational resources, webinars, and educational videos that can be easily shared via platforms like YouTube and LinkedIn, creating new pathways for self-directed learning (Gikas & Grant,

---

[1] Faculty of Education, Kasetsart University E-mail: Dusita.s@ku.th

[2] Faculty of Education, Srinakharinwirot University E-mail: dr.kittichai2010@gmail.com

2013). Educators also increasingly use social media to disseminate research, facilitate discussions, and encourage peer-to-peer learning, contributing to a more inclusive and globalized educational experience.

However, integrating social media into education presents challenges, particularly in relation to digital literacy, privacy, and the potential for distraction. Educators must develop strategies to guide students in using these platforms responsibly and effectively, ensuring that social media enhances learning without detracting from it (Manca & Ranieri, 2016).

Education Transformation

Educational transformation refers not only to changes in how subjects are taught but also to a reimagining of what is taught and how learners engage with knowledge. This transformation is essential for developing key 21st-century skills, including critical thinking, creativity, and digital literacy (OECD, 2018). According to Darling-Hammond et al. (2020), educational transformation emphasizes inclusivity and equity, ensuring that all students—regardless of their background—have access to quality educational opportunities. Patrick, Kennedy, and Powell (2013) highlight that personalized learning approaches are gradually replacing the traditional "one-size-fits-all" model, allowing students to take ownership of their learning by tailoring it to their individual interests and needs. This shift often requires rethinking assessment practices, moving away from standardized testing towards methods that capture deeper understanding and the application of knowledge in real-world contexts (Hargreaves & Fullan, 2012). This comprehensive reimagining is designed to foster not only academic achievement but also adaptability and lifelong learning (Schleicher, 2019).

Education is undergoing a profound transformation, driven by rapid technological advances, evolving pedagogical approaches, and the growing recognition of the need to adapt to changing societal and economic demands. These changes affect curriculum design, teaching methods, learning environments, and the role of educators, all aimed at preparing students for the complexities of the 21st century. The traditional model of education, focused on rote learning and standardized testing, is being replaced by dynamic, student-centered approaches that emphasize critical thinking, creativity, collaboration, and digital literacy skills (Voogt et al., 2013). Understanding these changes is crucial, as they have significant implications for student learning outcomes and the overall educational experience.

The transformation in education is largely influenced by global trends such as technological innovation, the integration of Information and Communication Technologies (ICT), and the demand for skills relevant to a knowledge-based economy (Selwyn, 2016). These changes have prompted educators and policymakers to reevaluate and redesign educational systems to better equip students with the competencies required for lifelong learning, employability, and active citizenship. Additionally, the COVID-19 pandemic has accelerated the adoption of online learning, highlighting both the potential and the challenges of digital education (Hodges et al., 2020).

This literature review will focus on the various dimensions of educational transformation and their implications for student learning. It will explore how emerging educational practices, such as technology-enhanced learning, student-centered pedagogies, and personalized education, impact the development of skills, knowledge, and learner engagement. By examining current research, this review aims to provide a comprehensive understanding of how educational transformation shapes the learning landscape and influences educational outcomes.

Understanding Educational Transformation

Educational transformation refers to fundamental changes in teaching and learning, encompassing shifts in pedagogical practices, educational technologies, curriculum content, and assessment strategies (Fullan & Langworthy, 2014). This shift involves moving from traditional teacher-centered instruction to a more flexible, student-centered learning model prioritizing active participation, collaboration, and real-world problem-solving. One significant aspect of educational transformation is integrating digital tools into learning, known as Technology-Enhanced Learning (TEL). Several key areas of TEL have been extensively studied for their impact on learning, including:

E-Learning and Online Education: Research indicates that online learning platforms provide flexible, self-paced learning opportunities. Allen and Seaman (2017) note that students can access a wide range of educational resources, enhancing their ability to learn autonomously. However, Anderson (2008) emphasizes balancing learner autonomy with appropriate guidance to ensure effective learning outcomes.

Blended Learning: Blended learning combines traditional face-to-face instruction with online components, creating a hybrid model that optimizes both modalities (Garrison & Vaughan, 2008). Studies have shown that blended learning can enhance student engagement and knowledge retention (Alammary et al., 2014), allowing for more personalized and adaptive learning pathways.

Flipped Classrooms: In the flipped classroom model, students engage with new content outside of class—typically through online videos or readings—and then apply their knowledge through in-class activities (Bergmann & Sams, 2012). Research suggests this approach leads to deeper understanding, critical thinking, and the development of higher-order cognitive skills (Lai & Hwang, 2016).

The Role of Social Media in Educational Transformation

The emergence of social media has been extensively studied in academic literature, with researchers focusing on its potential to democratize information, create virtual communities, and influence social behavior. Kaplan and Haenlein (2010) define social media platforms by their ability to facilitate user-generated content, allowing individuals to participate in creating and sharing content actively. This user-centric nature distinguishes social media from traditional media, which relies on one-way communication. According to Boyd and Ellison (2007), they argue that social networking sites promote social capital formation by helping users maintain existing relationships and establish new ones. This ability to connect has been particularly vital during crises like the COVID-19 pandemic, where social media served as a key tool for maintaining social interaction amid physical distancing (Zhao & Wu, 2020).

Social media's role in educational transformation has been widely studied, with much of the literature highlighting its potential to foster collaborative learning and student engagement. Tess (2013) notes that platforms such as Facebook and Twitter are valuable for increasing interaction between students and instructors, offering immediate feedback and discussion channels. Similarly, Manca and Ranieri (2016) emphasize that social media enables knowledge sharing and peer-supported learning, enhancing students' understanding of course material.

Other studies underscore the motivational aspects of social media in learning. Zhang et al. (2020) found that the interactive nature of these platforms can boost students' motivation by incorporating features like gamification and real-time feedback. Platforms like YouTube and TikTok also provide diverse visual and auditory learning materials, catering to different learning styles and supporting inclusive education (Pimmer et al., 2018).

However, scholars like Selwyn (2016) urge caution in integrating social media into education, highlighting potential downsides such as distraction and the erosion of formal learning boundaries. While social media can foster an informal learning culture, it may not always align with structured academic goals, posing challenges to traditional teaching methods.

Current research continues to explore the multifaceted impact of social media in education. Studies over the past five years reflect the benefits and risks of social media use. For instance, Greenhow and Lewin (2019) demonstrated that social media supports social constructivist learning environments, where students co-create knowledge through discussions and collaborative projects. Their findings emphasize the importance of peer-to-peer interaction facilitated by these platforms, which enhances problem-solving and critical thinking skills.

At the same time, issues related to student privacy and data security are increasingly coming into focus. Educators and institutions are concerned about the use of commercial social media platforms for educational purposes. Veletsianos et al. (2021) examined the ethical dilemmas of data collection by social media companies and the limited control educators and students have over their digital footprints. These concerns highlight the need for robust data security and ethical usage policies as educational activities move online.

Additionally, the reliance on social media in educational settings raises questions about the quality and depth of learning. While these platforms offer quick access to information, they may inadvertently encourage surface-level engagement. For example, the brevity of information shared on platforms like Twitter can lead to a shallow understanding of complex topics. Educators must, therefore, carefully assess how social media is integrated into curricula to ensure that it promotes deep cognitive engagement rather than passive content consumption.

METHODOLOGY STUDY

This section employs a document research methodology to explore the relationship between social media use and student achievement. Document research involves the systematic collection, review, and interpretation of relevant written materials—such as academic papers, government reports, and institutional data—previously published. This method allows an in-depth examination of existing literature to identify trends, findings, and theoretical frameworks on how social media influences student performance in educational settings.

A comprehensive review of academic databases from Google Scholar was conducted to achieve this. The search focused on peer-reviewed articles from the past decade, ensuring the inclusion of up-to-date research. Key terms like "social media," "student achievement," "academic performance," and "educational outcomes" were used to identify relevant documents. The selected literature includes empirical studies, meta-analyses, and theoretical discussions that offer insights into the impact of social media on student achievement.

FINDINGS

The Relationship Between Social Media and Education Transformation

Social media's role in education has generated both excitement and concern, as it reshapes traditional learning environments. On one hand, social media contributes to educational transformation by fostering collaborative learning and enhancing digital literacy. Numerous studies highlight its potential to promote peer-to-peer interaction, resource sharing, and the creation of knowledge networks beyond the confines of the classroom. This shift has been particularly beneficial in supporting a more student-centered approach, where learners actively participate in their education rather than passively receiving information.

Moreover, social media plays a crucial role in enhancing digital literacy, a key 21st-century skill. Platforms like Facebook, Twitter, Instagram, TikTok and LinkedIn expose students to multimodal literacy, enabling them to interpret and create meaning across various media formats such as text, video, and interactive content. Dabbagh and Kitsantas (2012) assert that students using social media develop essential skills for navigating and critically engaging with digital content, which is vital for both academic and professional success. These platforms also promote self-regulated learning, allowing students to take control of their education by setting goals, accessing resources, and monitoring their progress—aligning with modern educational goals of fostering lifelong learning.

However, despite these benefits, integrating social media into education also presents significant challenges. One of the primary concerns is privacy. As students and educators increasingly interact on public or semi-public platforms, data privacy becomes a critical issue. Selwyn (2016) warns that while social media facilitates collaboration, it also exposes students to risks such as data breaches and the inappropriate use of personal information. Educators and institutions must establish adequate policies and frameworks to safeguard student privacy while maximizing the advantages of social media.

Another major challenge is digital distraction. Social media platforms, designed to capture user attention, can detract from focused learning. Kirschner and Karpinski (2010) report that frequent social media use disrupts students' concentration and reduces academic performance. The multitasking behavior encouraged by these platforms interferes with deep learning, as students struggle to focus on educational tasks while managing notifications and online interactions. This poses a challenge for educators, who must integrate social media into learning in ways that avoid cognitive overload.

Thus, while social media offers significant opportunities for educational transformation—particularly in fostering collaboration and developing digital literacy—it also presents challenges that require careful management. Educators and policymakers must find a balance between leveraging social media's benefits and

mitigating its risks, especially concerning privacy and distraction. This research aims to provide a comprehensive analysis of the evolving relationship between social media and education, exploring how it can both enhance and hinder the learning experience.

Enhanced Communication and Collaboration

Social media has revolutionized communication in education by enabling real-time interaction between students and educators beyond traditional classroom settings (Tess, 2013). Platforms like Facebook and Twitter allow students to collaborate, share resources, and engage with course content remotely (Greenhow & Lewin, 2016). This connectivity fosters a more dynamic and interactive learning environment, improving student engagement.

Access to Global Knowledge and Resources

Social media provides access to a broad array of resources and global perspectives. Through platforms like YouTube and LinkedIn, students can connect with professionals and experts worldwide, gaining exposure to diverse viewpoints and cutting-edge developments (Amin et al., 2016). Such access aligns with educational transformation goals by promoting global awareness and digital literacy.

Student-Centered Learning and Engagement

Social media supports active, student-centered learning by encouraging students to create and share multimedia projects, helping them develop communication skills and demonstrate content mastery in innovative ways (Junco, Heiberger, & Loken, 2011). Its interactive nature promotes participation, particularly among students who may be less inclined to engage in traditional classroom discussions (Dabbagh & Kitsantas, 2012).

Challenges and Critical Concerns

Despite its advantages, social media introduces challenges, including distractions, misinformation, and privacy concerns. Excessive social media use can reduce academic performance, while the spread of misinformation underscores the need for students to develop critical media literacy skills (Kirschner & Karpinski, 2010; Vosoughi, Roy, & Aral, 2018). Additionally, privacy concerns highlight the importance of establishing guidelines to safeguard students' data (Livingstone, 2018).

Professional Development and Networking

Social media also serves as a platform for educators' professional growth. Networks like LinkedIn and Edmodo foster collaborative learning communities where educators can share best practices, research innovations, and pedagogical insights (Trust, 2012). Ongoing professional development is crucial for educators to stay current with emerging trends and technological advancements.

Importance of Social Media in Student Achievement

As social media became widely adopted for personal interactions, educators and institutions began exploring its educational applications. Today, social media plays a significant role in facilitating communication between students and teachers, fostering online learning communities, and enabling peer-to-peer interaction. Platforms like Twitter are used for academic discussions, while YouTube provides educational videos that supplement traditional learning (Junco et al., 2011). Tools like Google Classroom and Facebook groups further support course material sharing, collaboration, and the creation of virtual spaces where students can engage with course content and projects (Tess, 2013). Social media's impact on student achievement—encompassing academic performance, skill development, and overall educational success—has become a focal point of educational research. Social media offers several unique opportunities to enhance student outcomes:

Collaboration and Peer Learning: Social media promotes collaborative learning, which has been shown to improve understanding and retention of information. Students can collaborate in online groups, share resources, and engage in academic discussions, deepening their grasp of course content (Greenhow & Lewin, 2016).

Access to Resources and Expertise: Platforms like LinkedIn and Twitter provide students access to a vast array of knowledge and expertise beyond their immediate academic environment. They can connect

with professionals, participate in educational webinars, and stay informed on the latest developments in their field of study (Amin et al., 2016).

Personalized Learning and Engagement: Social media supports personalized learning by offering diverse content formats—videos, blogs, podcasts, and interactive content—that cater to different learning styles. This flexibility can enhance engagement, which is directly linked to student achievement (Dabbagh & Kitsantas, 2012).

Development of Digital Literacy Skills: Social media helps students develop critical digital literacy skills, such as evaluating information, navigating online platforms, and engaging in digital communication—all essential for academic and professional success (Selwyn, 2016).

Challenges of Social Media in Enhancing Student Achievement

Despite its benefits, the integration of social media into education presents several challenges that can hinder student achievement:

Digital Distraction: One of the major drawbacks of social media is its potential to distract students from academic tasks. Social media platforms are designed to capture attention, often diverting students from focused study, leading to reduced productivity and academic performance (Kirschner & Karpinski, 2010).

Misinformation and Lack of Critical Media Literacy: Social media is rife with misinformation. Students may struggle to differentiate between reliable and unreliable sources, which can negatively affect their academic work. This emphasizes the need for improved critical media literacy education (Vosoughi, Roy, & Aral, 2018).

Privacy and Data Security: The use of social media in education raises concerns about privacy and data security. Sharing personal information on social platforms increases the risk of data breaches or misuse, potentially undermining trust in these tools (Livingstone, 2018).

Cyberbullying and Negative Interactions: The open nature of social media can expose students to harmful interactions, such as cyberbullying. Such negative experiences can affect students' mental health and academic performance, highlighting the need for safeguards (Selwyn, 2016).

Over-reliance on Social Media: Excessive reliance on social media can lead to shallow learning experiences. The fast-paced, short-form nature of social media communication can limit deep engagement with complex academic materials (Tess, 2013).

Positives and Negatives of Social Media in Enhancing Student Achievement

Social media has become integral parts of students' academic achievement. It plays a crucial role in offering both opportunities and challenges for the enhancing achievement process. In spite of its various advantages contributing to educational advancement, it has been subjected to controversy. Besides, its values raise a number of questions in public arguments. To understand both the positive and negative aspects provided by social media, the discussion below shows the dual impacts of social media on students' academic achievement.
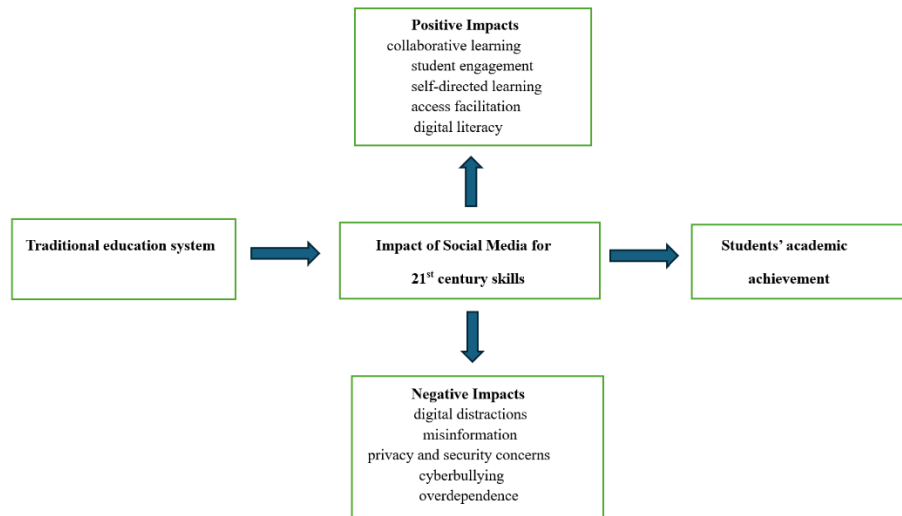
Picture 1: The relevance of positive and negative impacts of social media to students' academic achievement

Positive Impacts of Social Media

Promotes Collaborative Learning: Social media platforms like Facebook, Twitter, and LinkedIn facilitate peer collaboration, resource sharing, and academic discussions beyond the classroom. This peer-to-peer interaction helps students solve complex problems and enhances their academic outcomes (Greenhow & Lewin, 2016).

Increases Student Engagement: Social media enables students to interact with course content in engaging ways, such as creating multimedia projects or participating in discussions. Platforms like YouTube, Instagram, and TikTok cater to various learning styles, fostering motivation and participation, which can ultimately improve achievement (Junco, Heiberger, & Loken, 2011).

Supports Self-Directed Learning: Social media offers students access to vast amounts of information, empowering them to explore topics independently. Platforms like LinkedIn Learning and Reddit help foster self-regulated learning, where students manage their own learning pace, goals, and resources (Dabbagh & Kitsantas, 2012).

Facilitates Access to Expert Knowledge: Through social media, students can connect with experts, educators, and professionals worldwide, gaining diverse perspectives and insights beyond the traditional classroom (Amin et al., 2016). Platforms like Twitter allow students to follow subject-matter experts or participate in webinars, enriching their understanding of academic content.

Enhances Digital Literacy: Social media enables students to develop critical digital literacy skills, including evaluating online content, effective digital communication, and ethical digital behavior. These skills are crucial not only for academic success but also for future employability (Selwyn, 2016).

Negative Impacts of Social Media

While social media offers numerous educational benefits, it also presents challenges that can negatively impact students' academic performance:

Distraction and Reduced Focus: Social media is designed to capture attention, often pulling students away from academic tasks. Excessive multitasking between social media and academic work can decrease focus and learning quality, ultimately affecting academic performance (Kirschner & Karpinski, 2010).

Misinformation and Lack of Reliable Sources: Social media is prone to the spread of misinformation, making it difficult for students to discern credible sources. This can lead to misconceptions or incorrect

information in academic work, highlighting the need for strong media literacy skills (Vosoughi, Roy, & Aral, 2018).

Privacy and Security Concerns: Sharing personal data on social platforms can expose students to privacy breaches, hacking, or misuse. Schools must ensure that student data is protected, and students need to understand the risks of oversharing personal information (Livingstone, 2018).

Potential for Cyberbullying and Negative Interactions: The open nature of social media makes students vulnerable to cyberbullying, which can negatively impact their mental health and academic performance. Schools must implement policies to create safe online learning environments (Selwyn, 2016).

Overdependence on Social Media: Overreliance on social media for learning can hinder deep engagement with academic content. The bite-sized, fast-paced nature of social media may reduce students' ability to think critically and engage deeply with complex material (Tess, 2013).

CONCLUSION

The role of social media in educational transformation is both promising and complex. As the education landscape continues to evolve, social media platforms have emerged as powerful tools to foster collaborative learning, enhance digital literacy, and promote student engagement. Social media has significantly influenced the shift from traditional, teacher-centered approaches to dynamic, student-centered learning models, which provides new opportunities for students to take control of their learning and connect with global resources. However, despite its advantages, integrating social media into education presents notable challenges. Issues such as digital distractions, misinformation, privacy concerns, and over-reliance on these platforms must be carefully managed to ensure that social media enhances rather than detracts from academic achievement. Educators and policymakers must strike a balance between leveraging the benefits of social media and mitigating its risks to maximize its potential for educational transformation. Future research should explore the long-term impact of social media on academic performance, particularly across different age groups, disciplines, and educational levels. It would be valuable to investigate the effectiveness of various strategies educators can implement to manage the risks associated with social media, such as digital distraction and misinformation. Additionally, more studies are needed on the role of critical media literacy in empowering students to navigate and evaluate online content responsibly. Another area for future inquiry is the exploration of professional development models for educators, focusing on how they can effectively integrate social media into their teaching while safeguarding student privacy and fostering meaningful, deep learning experiences. The continuous evolution of educational technologies demands an ongoing assessment of how best to use social media to meet the needs of the modern learner while overcoming its inherent challenges.

REFERENCES

Amin, Z., Saeed, R., Lodhi, R. N., & Iqbal, A. (2016). Social media impact on student performance: An empirical study of students of University of Central Punjab, Lahore. Arabian Journal of Business and Management Review, 6(308), 1-6.

Allen, I. E., & Seaman, J. (2017). Digital learning compass: Distance education enrollment report 2017. Babson Survey Research Group.

Alammary, A., Sheard, J., & Carbone, A. (2014). Blended learning in higher education: Three different design approaches. Australasian Journal of Educational Technology, 30(4), 440-454.

Anderson, T. (2008). The theory and practice of online learning. Athabasca University Press.

Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. International Society for Technology in Education.

Christensen, C. M., Horn, M. B., & Johnson, C. W. (2010). Disrupting class: How disruptive innovation will change the way the world learns (2nd ed.). McGraw-Hill.

Dabbagh, N., & Kitsantas, A. (2012). Personal learning environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. The Internet and Higher Education, 15(1), 3-8.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2020). Effective teacher professional development. Learning Policy Institute.

Fullan, M. (2011). The new meaning of educational change (4th ed.). Teachers College Press.

Fullan, M., & Langworthy, M. (2014). A rich seam: How new pedagogies find deep learning. Pearson.

Garrison, D. R., & Vaughan, N. D. (2008). Blended learning in higher education: Framework, principles, and guidelines. John Wiley & Sons.

Gikas, J., & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. The Internet and Higher Education, 19, 18-26.

Greenhow, C., & Lewin, C. (2016). Social media and education: Reconceptualizing the boundaries of formal and informal learning. Learning, Media and Technology, 41(1), 6-30.

Hargreaves, A., & Fullan, M. (2012). Professional capital: Transforming teaching in every school. Teachers College Press.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. Educause Review, 27(1), 1-12.

Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. Journal of Computer Assisted Learning, 27(2), 119-132.

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook® and academic performance. Computers in Human Behavior, 26(6), 1237-1245.

Lai, C., & Hwang, G. (2016). A self-regulated flipped classroom approach to improving students' learning performance in a mathematics course. Computers & Education, 100, 126-140.

Livingstone, S. (2018). Online risk, harm and vulnerability: Reflections on the evidence base for child Internet safety policy. Zer: Revista de estudios de comunicación, 23(45), 13-28.

Manca, S., & Ranieri, M. (2016). Facebook and the others. Potentials and obstacles of social media for teaching in higher education. Computers & Education, 95, 216-230.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers College Record, 108(6), 1017-1054.

OECD (Organisation for Economic Co-operation and Development). (2018). The future of education and skills: Education 2030. OECD Publishing.

Patrick, S., Kennedy, K., & Powell, A. (2013). iNACOL blended learning teacher competency framework. International Association for K-12 Online Learning.

Redecker, C. (2017). European framework for the digital competence of educators: DigCompEdu. Publications Office of the European Union.

Schleicher, A. (2018). World class: How to build a 21st-century school system. OECD Publishing.

Schleicher, A. (2019). Educating for the 21st century. OECD Observer.

Selwyn, N. (2016). Education and Technology: Key Issues and Debates. Bloomsbury Publishing.

Tess, P. A. (2013). The role of social media in higher education classes (real and virtual)—A literature review. Computers in Human Behavior, 29(5), A60-A68.

Trust, T. (2012). Professional learning networks designed for teacher learning. Journal of Digital Learning in Teacher Education, 28(4), 133-138.

Veletsianos, G. (2020). Learning and teaching with social media: From the lens of an open educator. Educational Technology Research and Development, 68(1), 7-8.

Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. Science, 359(6380), 1146-1151.

Voogt, J., Erstad, O., Dede, C., & Mishra, P. (2013). Challenges to learning and schooling in the digital networked world of the 21st century. Journal of Computer Assisted Learning, 29(5), 403-413.

Zhao, Y. (2012). World class learners: Educating creative and entrepreneurial students. Corwin Press.

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. Journal of Computer-Mediated Communication, 13(1), 210-230.

Greenhow, C., & Lewin, C. (2019). Social media and education: Reconceptualizing the boundaries of formal and informal learning. Learning, Media and Technology, 44(1), 6-17.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. Business Horizons, 53(1), 59-68.

Manca, S., & Ranieri, M. (2016). Facebook and the others: Potentials and obstacles of Social Media for teaching in higher education. Computers & Education, 95, 216-230.

Pimmer, C., Mateescu, M., & Gröhbiel, U. (2018). Supporting students in their transitions from school to university: The use of mobile social media for collaboration and learning in higher education. Interactive Learning Environments, 26(4), 507-519.

Selwyn, N. (2016). Social media in higher education. The Wiley Handbook of Learning Technology, 62-77.

Tess, P. A. (2013). The role of social media in higher education classes (real and virtual)–A literature review. Computers in Human Behavior, 29(5), A60-A68.

Veletsianos, G., Kimmons, R., & French, K. (2021). Privacy, surveillance, and data collection in education: Ethics and dilemmas in a post-COVID-19 era. Educational Technology Research and Development, 69(3), 115-127.

Zhang, X., Jiang, F., & Watson, R. T. (2020). Gamification in education: Improving learning motivation through the use of game elements. Journal of Educational Technology & Society, 23(1), 28-38.

Zhao, N., & Wu, Z. (2020). Social media use and social connectedness during the COVID-19 pandemic. Applied Psychology: Health and Well-Being, 12(4), 1240-1256.