The Impact of Self-Efficacy on The Connection Between Social Media Usage and Digital Literacy in Relation to Academic Performance Among Students

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Abstract

As Internet technology continues to advance, devices, websites and software are becoming increasingly important in daily lives. Social media in particular plays an important role among Internet users. Social media platforms are used for a variety of purposes, such as creating and sharing blogs, photos and videos, and finding news and information. For students, social media has become an integral part of their lives, with some students spending several hours a day on these platforms. The way in which social media is used and what it is used for has had a significant impact on the lives and studies of the students. At the same time, the digital literacy skills that students possess are critical to the use of social media. It is closely related to a user's ability to recognize, understand and appreciate online media content. For students who use social media for academic purposes, their level of digital literacy directly impacts their ability to effectively search for and understand information. In addition, students' self-efficacy is important to consider when influencing their academic performance. Social media use and users' level of digital literacy greatly influence their beliefs about their abilities (self-efficacy), which are closely related to their academic performance. This study aims to investigate the mediating role of students' self-efficacy in the relationship between their social media usage, digital literacy level, and academic performance in higher education.

Keywords: Academic performance, digital literacy, self-efficacy, social media usage, higher-education

Introduction

The emergence of the Internet, big data, social networking sites and the proliferation of related devices such as smartphones, iWatches, and iPads have significantly decreased the distance between human beings, extending the scope of socialization (Lu, 2020). Mohammed et al. (2021) further stated that students are increasingly turning to social networks to fulfill everyday tasks such as attending lectures, completing homework and resolving assignments. Meanwhile, Yustika and Iswati (2020) emphasized that university students engaging with social media platforms for academic purposes must possess a high level of digital literacy. This proficiency is crucial for the effective and efficient searching, filtering, and absorption of knowledge from online media content. Digital literacy stands as a foundational skill necessary for the successful utilization of the Internet and its diverse resources. It is intricately connected to the recognition, comprehension, and understanding of various forms of media content, as highlighted by Reddy et al. (2020). Therefore, this paper will review on the relationship between self-efficacy, social media usage and digital literacy with students’ academic performance.
Literature Review

Social Media and Students’ Academic Performance

Social media plays a significant role on students and exerts an impact on their academic performance. The connection between using social media and academic performance is complex, encompassing positive and negative consequences. Previous studies have demonstrated that the impact of social media use on student's academic performance is multifaceted. Several investigations have revealed that positive utilization of social media can enhance students' engagement in academic activities and access to information. For instance, Bhandarkar et al. (2021) conducted a study that indicated a positive correlation between academic performance and activities such as reading health-related news, completing assignments, and conducting academic research on social media platforms (Bhandarkar et al., 2021). Similarly, the research by Savita Gupta and Liyaqat Bashir emphasized that social media usage can offer students valuable academic resources and information, facilitate academic communication and collaborative learning, and consequently lead to improvements in their academic performance (Ansari & Gupta, 2021).

However, other studies have explored how social media affects students' academic performance. Alamri et al. (2020) used structural equation modeling to investigate the link between students' social media use and academic performance. Their survey, involving 192 college students, discovered that excessive involvement with social media could lead to distractions, difficulties in managing time, and increased academic stress, ultimately negatively impacting academic performance. In summary, social media platforms significantly influence the sustainability of student academic performance (Alamri et al., 2020). On the other hand, Mindajao (2023) found no significant connection between social media addiction and students' academic performance. Therefore, the underperformance of students in science courses cannot be solely attributed to social media addiction (Mindajao, 2023).

A comprehensive literature study by Tang et al. (2021) examined how young Chinese people utilize social media. Their study aimed to close the knowledge gap on the topics, theories, factors, and conceptual frameworks related to young people's usage of social media in China. Using the PRISMA approach, a thorough examination of 20 publications from the Scopus and Google Scholar databases yielded ten key research themes, eight hypotheses or models, and a full causal framework. According to the study, future social media research should encompass a wider range of topics and additional social media platforms and use other theories or models. A more thorough and systematic method should be used by researchers when assessing the literature on social media research in China.

In the field of higher education, social media usage has grown to be a hot subject. The usage of social networks in higher education has a good impact on students' learning processes, academic achievement, and teaching effectiveness, according to research by Zachos et al. (2018). Their review study examined the use of social networks by educators and students for support, the improvement of communication and teamwork, and learning management systems. The results imply that social networks have several uses in higher education. However, academic staff and institutions of higher learning have not yet utilized social networks to their full potential.

Therefore, it is crucial to conduct more in-depth research to understand the underlying mechanisms that govern the impact of social media on student academics. This research should aim to identify optimal strategies for harnessing the positive aspects of social media while mitigating potential drawbacks (Dwivedi et al., 2020). Gaining a precise understanding and assessment of how social media influences student academic performance is important for developing effective educational approaches and offering guidance on students' social media engagement (Nortvig et al., 2018). Sarwar et al. (2019) highlighted a strong association between social media use and student learning interactions, active and collaborative learning, and academic performance. Additionally, social media serves as a widely used tool in higher education for supplementary instruction and as a learning management system (Manca, 2020). However, despite its immense potential, there is still significant room for improvement in how faculty and higher education institutions utilize social media (Ali & Abdel-Haq, 2021). Consequently, future research should explore enhanced integration of social media and educational practices to boost student academic achievements and improve teaching efficacy (Amin et al., 2022).

Digital Literacy and Academic Performance

Digital literacy is a term used to describe an individual's capacity to use and understand digital technologies, encompassing the ability to explore, evaluate, and utilize information including exploring, evaluating, and utilizing information, as well as using digital tools for communication, collaboration, and creation (Falloon, 2020). Research by Jin et al. (2020) and Limniou et al. (2021) indicates that students with higher levels of digital literacy tend to perform better academically. This is because digital literacy equips students with the skills and resources they need throughout the learning process (Anthonyssamy et al., 2020). For example, students with effective information-seeking and evaluation skills can access reliable and accurate academic resources to improve their research and writing (Miraj et al., 2021). Furthermore, Jafar
et al. (2020) claimed that students who possess proficiency with digital tools and applications can organize and present their academic work more effectively, thus enhancing their academic presentation skills.

Research findings indicate a strong connection between students’ frequency of social media use and the variety of activities they engage in on social networking sites, such as social interactions, communication, and educational components. This relationship is closely linked to their level of digital literacy (Durak & Seferoğlu, 2020). students who exhibit higher levels of digital literacy are more likely to use social media as an effective learning tool. Additionally, research by Buck (2012) suggests that digital literacy practices on social networking sites influence personal literacy and identity practices. Knowing these habits offers insight into how students use digital literacy outside the classroom and how they could affect academic writing abilities.

Higher levels of digital literacy have been found to improve academic performance across disciplines and student learning outcomes (Vrana, 2014). This shows that integrating digital literacy into the academic curriculum might improve students' academic performance. Additionally, it has been demonstrated that there are gender variations in the degrees of digital literacy, with female students demonstrating stronger abilities than male students (Rodniam, 2020). This emphasizes the need to address gender disparities in digital literacy and support granting all kids the equal opportunity. Investigations into the effects of digital literacy on academic achievement and preparedness for self-directed learning were also conducted (Sari, 2022). The results showed a strong correlation between digital literacy skills and academic success, particularly for students who spoke English as a second language.

Furthermore, the significance of digital literacy in enhancing learning capacity, workforce readiness, and employability has been emphasized (Khan et al., 2022). The study highlights that cultivating critical thinking abilities, manipulation skills, visual learning preferences, group learning preferences, and learning systems can enhance digital literacy, which ultimately contributes to improved academic achievement and employability. Although digital literacy affects students' communication, research, and confidence abilities, its effects on their cumulative grade point average (CGPA) may vary (Abbas et al., 2019). These results highlight the significance of comprehending the various aspects of academic achievement and the complex link with digital literacy.

This research often highlights the multifaceted character of digital literacy and its importance to student’s academic achievement (Mehrvarz et al., 2021). These results underline the necessity of addressing gender gaps, incorporate digital literacy skills into courses, and support students in acquiring digital capabilities to harness the benefits of digital literacy in improving their academic achievement. Therefore, more research and practical interventions are required (Udeogalanya, 2022).

**Social Media Usage and Digital Literacy**

Dhillon and Murray (2021) displayed that the field of academic development for modern students focuses on social media use and digital literacy. The widespread use of social media has affected various aspects of people's lives, including communication, information sharing, and learning (Pan et al., 2020). The development of the information age has led to the emergence of digital literacy, which is highly valued in the educational community. Some studies have been carried out to explore the relationship between these two factors. Furthermore, some studies have demonstrated that social media use and digital literacy correlate positively.

The impact of social media on language and literacy skill development has been the subject of research. Studies have demonstrated that using multiple modes and text types on social media platforms can promote learners' literacy and language use skills (Yadav, 2021). Consequently, social media use can enhance students' digital literacy development by providing opportunities for information search, innovation, and social communication (Falloon, 2020). Through social media, students can actively explore, evaluate, and utilize digital information resources and improve their information acquisition and processing skills. These findings suggest that educators can harness the power of social media by incorporating it into curriculum and instruction to stimulate students' interest in learning and support their language and literacy learning.

The research indicates that social media use is primarily driven by entertainment and social needs, with less emphasis on digital literacy activities for academic purposes. This implies that students tend to prioritize personal interests and social interactions over social media's potential as a learning tool. As a result, educators and schools need to promote a more intentional use of social media among students, encouraging activities related to digital literacy. This includes tasks like information search, creative thinking, and academic communication, aiming to enhance their digital literacy skills more effectively.

Additionally, digital literacy plays an important role in the social media environment, and social media literacy is a framework for assessing an individual's digital literacy skills in social media environments (Hu & Yu, 2021). This framework highlights how individuals influence information choices, values, the construction of social media reality, and the development of cognitive skills such as critical thinking, social-emotional skills, and technological skills. Therefore, individuals need the necessary skills to adapt to the social media environment to comprehend and interact with it while managing their online identities and privacy (Hargittati & Micheli, 2019).
Additionally, digital literacy holds great importance in the realm of social media, and social media literacy serves as a framework for assessing an individual’s digital literacy skills within social media environments (Hu & Yu, 2021). This framework highlights how individuals shape information choices, values, the construction of social media reality, and the development of cognitive skills like critical thinking, social-emotional skills, and technological proficiency. Therefore, individuals need the necessary skills to navigate the social media environment effectively, understanding and engaging with it while managing their online identities and privacy (Hargittai & Micheli, 2019). Studies have consistently shown a strong correlation between students’ academic performance and their proficiency in digital literacy. Higher levels of digital literacy contribute to improved information access, creative thinking, and overall academic success (Yustika & Iswati, 2020). Thus, fostering digital literacy among students enables them to effectively utilize information on social media platforms, establishing a solid foundation for their academic growth.

Combining these studies helps us understand how social media affects learners and the vital role of digital literacy. Recognizing the interconnection between social media use and digital literacy is crucial (Sirlin et al., 2021). Although using social media can improve students’ digital literacy, too much focus on social and entertainment aspects might overshadow academic digital literacy activities (Balt et al., 2023). Therefore, educators and schools should provide necessary guidance and education to facilitate the effective use of social media for digital literacy practices, contributing to enhanced academic performance and digital literacy among students.

**Self-Efficacy and Students’ Academic Performance**

In educational settings, self-efficacy refers to an individual’s self-assessment of their confidence and capability to succeed in a specific area or task (Chung et al., 2021). Hayat et al. (2020) asserted that self-efficacy significantly influences academic performance, shaping students’ learning strategies and motivation. According to Blanco et al. (2020), students with high self-efficacy levels tend to perform better academically because they believe in their ability to handle academic challenges. This confidence leads to a positive outlook on meeting academic demands, fostering motivation and ultimately resulting in improved academic achievement. Moreover, students with high self-efficacy are inclined to set ambitious learning goals and consistently strive to attain them (Dixon et al., 2020). Their motivation extends to employing diverse learning strategies, such as creating study plans, seeking assistance, and persistently solving problems, as they hold the belief that hard work and effective learning methods can enhance their academic performance.

Oyuga et al. (2019) have demonstrated a positive link between self-efficacy and academic performance in college students. In this correlation, individuals with higher self-efficacy tend to set challenging goals, persevere in overcoming obstacles, and employ effective learning strategies (Icekson et al., 2021). Consequently, this increased self-efficacy translates into greater motivation, academic performance, and retention compared to individuals with lower levels of self-efficacy. Therefore, educational institutions that prioritize the development of students’ self-efficacy can significantly contribute to enhancing overall student success and satisfaction (Baroudi et al., 2022).

Cattelino et al. (2021) explained that self-efficacy is a belief individuals hold when faced with challenges. To understand the impact of self-efficacy on aspects such as academic achievement, achievement motivation, and mental health, studies have emphasized on college students (Turner et al., 2021).

Khanshan and Yousefi (2020) showed that beliefs about self-efficacy are related to specific disciplines. For example, a student may believe that he is more competent and confident in studying physics or chemistry than others; or he may believe that he is more competent in studying history, culture, and language than others. The variations in self-efficacy beliefs could provide insight as to the reason for students in different academic disciplines exhibit different levels of confidence and competence in their studies.

Recognizing students’ discipline-specific self-efficacy allows educators to fit their instructional approaches and support systems, catering their individual needs and enhancing their learning experiences (Krause et al., 2020). This approach can potentially lead to improved academic outcomes and enhanced personal growth. The connection between students’ self-efficacy and their motivation to learn is a topic of great interest in the field of education. Those who possess a greater sense of self-efficacy are more inclined to be intrinsically motivated to learn, showing a greater interest and satisfaction in the learning process (Shin & Bolkan, 2021). Moreover, they are more willing to actively engage in educational activities, believing in their ability to achieve greater academic goals through diligence and effort. However, it must be noted that the relationship between self-efficacy and academic performance is not straightforward and can be influenced by various factors such as the learning environment, familial support, and school resources (Gutiérrez & Tomás, 2019). Furthermore, discrepancies between personal abilities and self-perceptions may also impact the correlation between self-efficacy and academic performance (Perera & John, 2020). In conclusion, a strong correlation exists between students’ self-efficacy and academic performance, with those with higher self-efficacy exhibiting better performance and demonstrating more confidence in their ability to tackle academic challenges.
**Students' Self-Efficacy, Social Media Usage and Academic Performance**

With the rapid expansion of social media, there has been an increase in research on the effects of social media on self-efficacy. In recent years as the Internet has rapidly developed, social media has become a vital tool in people's daily lives, drawing considerable attention to its impact on self-efficacy (Hussain et al., 2021). Existing studies have identified a significant relationship between social media use and self-efficacy in the following three ways:

Firstly, using social media as a means for students to access learning resources and information may positively impact their self-efficacy and academic performance (Pumptow & Brahm, 2021). Students can obtain learning materials through social media, engage in academic discussions, and receive academic support. The process of obtaining and sharing learning resources may enhance students' self-efficacy. When students interact with others through social media and receive positive feedback, share academic achievements, or resolve learning problems, their self-efficacy may increase, thereby positively impacting their academic performance (Hayat et al., 2020).

Secondly, the usage of social media may affect students' time management skills, thus affecting their academic performance (Whelan et al., 2022). Students who become excessively immersed in social media may potentially neglect their academic tasks and study time. Alhadabi and Karpinski (2020) noted that these negative impacts on time management may decrease students' self-efficacy, making them feel powerless in academic pursuits, consequently leading to negative consequences for their academic performance.

Thirdly, social media usage may indirectly impact academic performance by influencing students' learning motivation (Gumasing & Castro, 2023). For example, when students observe their peers sharing successful academic achievements or learning experiences on social media, it can motivate them, enhancing their desire to learn (Ng, 2020). This motivation and encouragement may increase students' sense of self-efficacy, strengthening their confidence to face academic challenges and actively participate in learning.

**Students' Self-Efficacy, Digital Literacy Level and Academic Performance**

Self-efficacy is commonly believed to have a closely linked relationship with academic achievement (Tus, 2020). When students possess high levels of self-efficacy, it indicates that they are more likely to set clear learning goals, employ proactive learning strategies, persevere in the face of academic challenges, and have a strong belief in their ability to achieve academic success (Yen & Lin, 2022). These positive attitudes and behaviors towards learning are likely to positively impact academic performance.

Students with high self-efficacy are also more likely to exhibit confidence in approaching learning and using digital technologies and tools (Hatlevik & Bjarnø, 2021). This confidence may encourage them to explore new digital skills and address digital-related issues, contributing to their overall digital literacy. Moreover, self-efficacy can also influence students' motivation and attitude toward developing their digital literacy, which indirectly impacts their level of digital literacy and academic performance (Jeon & Kim, 2022). Therefore, it can be evident that an individual's level of self-efficacy plays a crucial role in determining their willingness to engage with and excel in the domain of digital literacy.

**Conclusion**

The ongoing evolution of internet technology has heightened the significance of devices, websites, and software in our daily lives, with a central emphasis on the role of social media, particularly among students who dedicate substantial time to these platforms. The profound impact of social media on students' daily lives and academic pursuits is intricately intertwined with their digital literacy skills, essential for comprehending, discerning, and valuing online content. Notably, for students utilizing social media for academic purposes, digital literacy assumes a pivotal role in their ability to efficiently search for and comprehend information. Additionally, the pivotal role of students' self-efficacy becomes evident as a determining factor in academic performance, shaped by their convictions regarding their capabilities and intimately connected to their patterns of social media use and digital literacy proficiency.

**Reference**


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