

The Role of Social Media in Enhancing Digital Literacy Among Generation Z: A Social and Psychological Perspective

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ABSTRACT

Keywords:
Social Media, Digital Literacy, Generation Z

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This research explores the role of social media and digital education programs in improving Generation Z's digital literacy, including critical thinking, information evaluation and social skills. The research method used a qualitative case study approach, with secondary school students in Probolinggo Regency as the unit of analysis. Data were collected through in-depth interviews, direct observation, and documentation, and analyzed using data reduction, presentation, and verification to produce in-depth and holistic findings. The results showed that students who actively use social media, such as TikTok, Instagram and YouTube, have a better ability to evaluate information than those who are less active. Interactive app-based digital education programs such as *Kahoot* and *Google Classroom* are proven to improve students' learning motivation and critical thinking skills. In addition, collaborative learning positively contributes to the development of social skills, such as communication and cooperation. The findings confirm the importance of integrating social media, learning technology and collaborative approaches to create a more relevant and adaptive learning environment in the digital era. This research provides theoretical and practical contributions in the development of effective technology-based education strategies for Generation Z. Support from teachers, parents and education stakeholders is needed to maximize the positive impact of technology. It also opens up further exploration of demographic factors, such as gender and age, and the long-term impact of social media on education.

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INTRODUCTION

In today's digital age, Generation Z is growing up in a highly connected environment with technology and social media (Abdulai et al., 2021; Agárdi & Alt, 2022; Ameen et al., 2022) . Social media such as TikTok, Instagram, and YouTube have become an integral part of their lives (Ang et al., 2022; Audrin & Audrin, 2022; Cervi, 2021) . The existence of social media is not only a means of entertainment (Djafarova & Bowes, 2021; Djafarova & Fouts, 2022; Dobre et al., 2021) , but also as a platform for sharing information, learning, and building social connections (Chan & Lee, 2023; Cheung et al., 2020; Chukwuere, 2022) . However, the rapid flow of information they receive on social media is often not matched by the ability to evaluate the credibility of that information (Dobrowolski et al., 2022; Farsi et al., 2022; Goldring & Azab, 2021) . This phenomenon creates a major challenge in terms of digital literacy, where Generation Z is often caught up in the spread of false information and hoaxes (Gutiérrez-Ángel et al., 2022, 2022; Hu & Yu, 2021) . Moreover, low critical thinking skills and lack of formal digital literacy education exacerbate this problem (Kuleto et al., 2021; Ling et al., 2024; H. Liu et al., 2021) . Therefore, it is important to explore how social media can serve as a tool to improve digital literacy, especially for Generation Z who are the main drivers in this digital era.

Previous literature suggests that social media has an ambivalent impact on digital literacy. Some research suggests that social media can be an effective informal learning tool, improving critical thinking skills and information evaluation abilities (Liu et al., 2023; Martzoukou et al., 2022, 2024) . However, another study Meet et al.,(2022) also noted the risk of spreading false information, which could hinder Generation Z's digital literacy skills. Studies on digital learning apps such as *Google Classroom* and *Kahoot* have shown effectiveness in increasing learning motivation and student engagement, but there is little research integrating aspects of social media in formal learning (Milenkova & Lendzhova, 2021; Panopoulos et al., 2023; Parmelee et al., 2023) . This literature suggests a gap in understanding how social media and digital apps can be used together to improve students' digital literacy and social skills.

This research aims to explore the role of social media and digital education programs in improving digital literacy among Generation Z. . The focus of the research is to understand how the use of social media, digital learning apps and collaborative learning can help students develop critical thinking skills, information evaluation abilities and social skills. Based on these objectives, this research raises several key issues: (1) How do social media activities contribute to Generation Z's digital literacy? (2) To what extent do digital education programs, such as *Kahoot* and *Google Classroom*, improve students' motivation and skills?.

(3) How does collaborative learning affect students' social interaction and critical thinking skills? By answering these questions, this research is expected to make an important contribution to the development of technology-based education strategies for Generation Z. This research is based on the assumption that social media, if used appropriately, can be an effective tool to improve digital literacy among Generation Z. The main finding of the study is that students who are active on social media and use digital learning apps show better digital literacy skills than students who are less active. The use of social media helped students develop the ability to evaluate information through discussion and exposure to multiple perspectives, while digital apps such as *Kahoot* and *Google Classroom* improved their learning motivation. In addition, collaborative learning contributes to the development of students' social and critical thinking skills. Thus, this research argues that the integration of social media, educational technology and collaborative learning can create a more relevant and effective educational environment for Generation Z.

METHOD

This research focuses on Generation Z in Probolinggo Regency, with the unit of analysis being high school students involved in social media activities, digital education programs and collaborative learning. This research uses a qualitative approach with a case study design to understand how social media and educational technology influence students' digital literacy. The case study approach was chosen because it allows researchers to explore in depth a particular phenomenon in a real context. This research seeks to understand Generation Z's unique experiences in utilizing social media and learning apps and their impact on critical thinking, social skills and learning motivation. This approach is relevant because it emphasizes social context, individual experiences and the complexity of the relationship between technology and education.

The sources of information in this study involved three main groups of respondents: students, teachers and parents. The first group were Generation Z students, aged 15-18, who actively use social media and technology in the learning process. The respondent teachers are those who have integrated technology in their teaching methods, particularly through apps such as *Kahoot* and *Google Classroom*. Parents involved are those who accompany their children in the use of social media and learning technology at home. The selection of respondents was done by purposive sampling to ensure that the data collected was relevant to the focus of the study. Students, teachers and parents provided diverse views that helped identify the impact of social media and educational technology on digital literacy from different perspectives.

Data were collected through in-depth interviews, direct observation and documentation. Interviews were conducted with students, teachers and parents to explore their experiences, perceptions and views on social media, digital education programs and collaborative learning. Observations were conducted in the classroom to directly observe students' interactions in technology-based learning, while documentation included school reports, records of learning activities, and student evaluation results. The collected data were analyzed using data reduction, data presentation, and data verification methods. Data reduction is done by filtering relevant information, data display is done in the form of tables and diagrams, while data verification is done through triangulation between interviews, observations, and documentation. The following table shows the coding of the interviewees used to maintain their privacy.

Table 1. Interview Codes

Source Code	Source	Description
I_S1_2024	Students	High school students, active social media users.
I_S2_2024	Students	Secondary school students, users of digital education apps.
I_G1_2024	Teacher	Teachers who integrate technology in learning.
I_G2_2024	Teacher	Teachers who observe student behavior in collaborative learning.
I_P1_2024	Parents	Parents who monitor their children's use of technology.
I_P2_2024	Parents	Parents involved in discussions on digital literacy.

The table above is used to identify interviewees in data collection. For example, an interview coded I_S1_2024 describes students' views on the use of social media, while an observation involving code I_G1_2024 observes how teachers utilize digital applications in the classroom. The use of this coding helps to maintain the confidentiality of the interviewees, while providing structure in the analysis of the research data.

FINDINGS AND DISCUSSION

Social Media Activity and Generation Z Digital Literacy

The main findings of the study show that social media plays a central role in the formation of Generation Z's digital literacy. Based on interviews with a number of students, many of them rely on social media platforms to seek information and share knowledge. These activities, while providing quick access to information, often come with challenges in evaluating the credibility of information sources. Most students stated that they often find it difficult to distinguish between valid and false information.

This data provides an overview of the large role social media plays in students' academic and personal lives, as well as the digital literacy-related challenges they face. Further efforts are needed to improve digital literacy skills to avoid the negative impact of misinformation. Interviews with a number of students revealed that although they use social media to search for educational information, most of them do not have sufficient skills to critically evaluate information sources. As expressed by one student, "I often see information on social media that looks credible, but sometimes I doubt whether it is true. I usually look for additional information from other sources to verify." (I_ARN_2024). In addition, some students also noted the role of parents and teachers who sometimes help direct them in choosing reliable information. Another student revealed, "My teacher often reminds us not to quickly believe what we see on social media without finding out first." (I_BAN_2024). These findings show that while there is awareness of the importance of verification, more needs to be done to strengthen students' digital literacy skills.

Figure 1 below provides a visualization of how the influence of social media and the role of teachers and parents play an important role in improving Generation Z's digital literacy. In addition, the challenge of evaluating information and the need for digital literacy education are key elements that must be managed to balance students' understanding and skills in a complex digital environment.

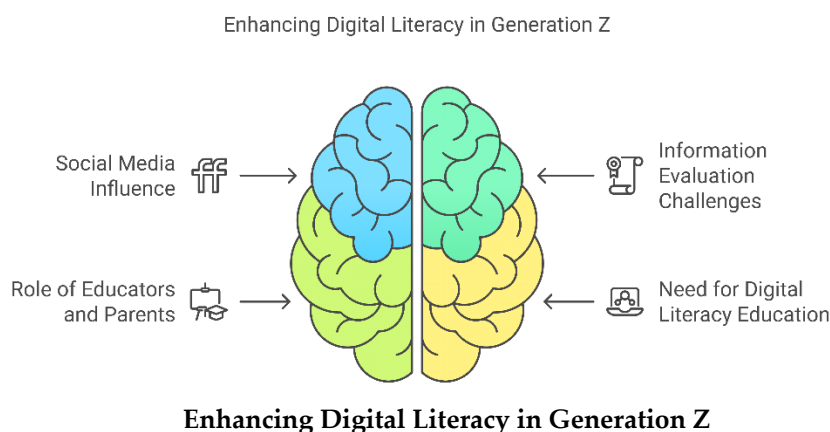


Figure 1 shows that although Generation Z is highly connected to social media, they still find it difficult to evaluate the accuracy of the information they receive. As one student said, "Sometimes I feel confused by the amount of information circulating, because it is difficult to know which one is really trustworthy." (I_ARN_2024). This research highlights the importance of deeper learning on information verification and a more critical understanding of social media.

While many students are aware of false information, the skills to identify and respond to misinformation still need to be improved. This points to the need for deeper integration of digital literacy education in the curriculum.

Effectiveness of Digital Education Program in Improving Student Motivation and Skills

Findings from the observations show that digital education programs implemented in some schools show a positive impact in improving students' technology skills. The use of digital devices such as tablets and laptops has enabled students to be more active in learning, by utilizing interactive learning applications. Some students appear more motivated and find it easier to follow the learning materials as the apps present the materials in an interesting way and make it easier for them to understand complex concepts. On the other hand, some students also indicated that they felt more confident when using technology in learning, which strengthened their digital problem-solving skills. This shows that digital education programs have a positive impact, but their effectiveness depends on how the technology is integrated in learning and accepted by students.

During the observation, it was observed that the use of technology in learning provides increased motivation among students. The implementation of digital education programs with interactive learning applications such as Kahoot and Google Classroom has a positive impact on student engagement, learning motivation and the development of their learning skills. Kahoot helps increase motivation through gamification, where students respond enthusiastically to quizzes and receive immediate feedback that reinforces their understanding. On the other hand, Google Classroom allows students to organize tasks more efficiently, thus increasing their sense of responsibility and engagement in the learning process. Figure 2 below illustrates how interactive learning apps promote increased student engagement, motivation, and critical thinking and collaboration skills. With gamification, immediate feedback and collaborative learning features, the program provides a practical solution to traditional learning challenges. The findings suggest that digital education, if implemented effectively, can create a more engaging learning environment and support the growth of students' overall skills.

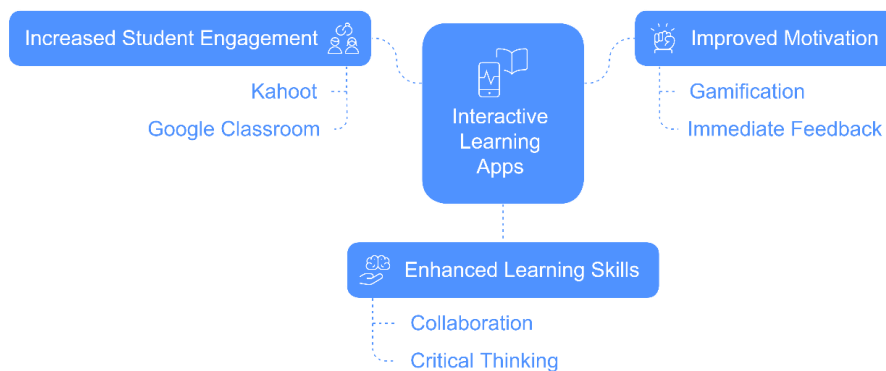


Figure 2: Impact of Interactive Learning Application on Student Engagement and Skills

Overall, the use of technology in education has a positive impact on student motivation and skills, especially in interactive and app-based learning. The digital education program that has been implemented helps students to be more active and confident in utilizing technology. However, there is a significant difference between students who are already familiar with technology and those who are new to the use of digital devices in learning. This suggests that technology education needs to be accompanied by more intensive training and support, especially for students who are not familiar with digital tools. This research underscores the importance of purposeful and structured technology integration to improve learning effectiveness.

Collaborative Learning and Student Social Interaction

The findings from the observation show that collaborative learning has a significant impact on students' social interaction. Students involved in collaborative activities are more active in communicating and working together in completing tasks. Groups consisting of students with different backgrounds tend to be more open in sharing ideas, solving problems together, and providing support for each other. This group-based learning also helps reduce students' anxiety in public speaking, as they feel safer and supported by their group mates. In addition, the social interaction that occurs during collaborative learning helps students build better social skills, such as the ability to listen, give constructive feedback, and respect others' opinions. This proves that collaborative learning not only develops students' academic ability, but also their social skills.

In the observation activities, it was seen that students working in groups were more open in conveying their ideas and listened more to the opinions of their group mates. This liveliness improves the dynamics of social interaction and strengthens students' self-confidence. Some students revealed that they felt more comfortable when collaborating with their classmates on group tasks.

Activities such as group discussions and joint problem solving encouraged them to be more active in sharing information and helping each other solve problems. In addition, most of the students involved in collaborative learning felt that they could utilize the various expertise of their friends, which made them more confident in academic tasks. These observations suggest that collaborative learning enhances social skills and builds stronger relationships between students, as well as providing opportunities to develop together in an academic context.

The findings suggest that collaborative learning not only strengthens students' academic understanding, but also their social skills. Students who engage in group discussions and activities are more active, confident and have a sense of mutual respect. Collaborative learning encourages them to work together to complete tasks, share knowledge and support each other in facing challenges. Overall, this collaboration leads to the development of better social skills and closer relationships between students, which ultimately improves the quality of learning.

Discussion

The results of this study can be connected to digital literacy theory which emphasizes the importance of the ability to access, evaluate, and use information effectively and ethically (Parmelee et al., 2023; Parzonko et al., 2021; Pérez-Escoda et al., 2021). Students who habitually use social media are often exposed to unverified information, which can negatively impact their understanding of certain topics. Therefore, this study shows that although students have extensive access to information, their skills in assessing the credibility of information are lacking. As a solution, digital literacy education should be an integral part of the curriculum for students to develop the critical skills needed to filter information effectively and responsibly.

These findings can be attributed to educational technology theories that emphasize the importance of technology integration in the curriculum to improve students' skills (Pérez-Escoda et al., 2021; Rzemieniak & Wawer, 2021; Sakdiyakorn et al., 2021). The use of technology in learning can provide a more engaging and interactive experience, which in turn increases students' motivation to learn. However, the challenges in facilitating technology adoption among unfamiliar students suggest that technology integration requires time and the right approach. Effective training programs and support from teachers and parents are necessary to ensure that all students can make optimal use of technology in learning. Therefore, it is important to design digital education programs that can be tailored to the students' level of technological capability.

These results are in line with social learning theory which states that social interaction within groups can strengthen the learning process (Saripudin et al., 2022; Sconti, 2022; Seldal & Nyhus, 2022) . Collaborative learning allows students to not only acquire knowledge, but also develop social skills needed in everyday life. The interactions that occur within the group encourage communication skills and empathy, which are crucial in an educational context. Collaborative learning teaches students to work together, overcome differences and solve problems collectively. The findings also confirm the importance of creating an environment that supports cooperation between students, which can accelerate their learning and improve their social skills.

CONCLUSION

This research has shown that social media, such as TikTok, Instagram and YouTube, play a significant role in improving digital literacy among Generation Z. Key findings revealed that students who actively use social media tend to be more skilled at understanding and evaluating digital information compared to those who are less active. In addition, digital education programs, with the use of interactive applications such as *Kahoot* and *Google Classroom*, were shown to increase students' learning motivation and critical thinking skills. Collaborative learning also showed a positive impact on students' social interactions, encouraging the development of communication, collaboration and problem-solving skills. This research provides new insights that digital literacy is not only about technical mastery, but also about critical thinking, information evaluation and effective social engagement. An important lesson from this research is the need for stronger integration between social media, digital technologies and educational approaches to create learning environments that are relevant and support the development of 21st century skills.

The contribution of this research lies in the in-depth exploration of the relationship between social media activities, digital education programs and collaborative learning with Generation Z's digital literacy. It enriches the literature by providing a more holistic theoretical and practical perspective on the role of technology in modern education. However, this study has limitations, such as the scope being limited to specific research sites and the focus on Generation Z samples without considering age or gender factors in depth. In addition, the qualitative method used provided rich insights, but the results are difficult to generalize. Further research is needed to explore demographic differences, such as gender and age, and apply a broader quantitative approach to get a more comprehensive picture. Thus, this research can serve as a basis for more inclusive and effective digital education policies in the future.

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