



The influence of social media use on students' academic engagement and health outcomes

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Abstract

The primary issue in this research is the impact of social media use, which can have both positive and negative influences on students. Social media provides real-time access to information and enables freedom of expression; however, it also presents risks such as privacy violations, cyberbullying, and mental health challenges. These concerns raise questions about the extent to which social media affects students' mental health and learning interest. This research aims to understand the impact of social media use on students' mental health. Social media, as a communication tool that has become part of everyday life, provides users with access to information from around the world in real-time. This can be utilized by students to find information related to their studies, thereby stimulating their interest in learning more effectively. Social media is known as a platform for expression, where individuals can freely express themselves online. However, social media can also be a double-edged sword for its users. Unlimited access to information can lead to risks such as privacy violations. The freedom to express oneself can also be exploited by certain individuals to harm others anonymously, causing mental distress or even depression for the victims.

Keyword: mental health; social media; learning interest; social media

Abstrak. Permasalahan utama dalam penelitian ini adalah dampak penggunaan media sosial yang dapat memberikan pengaruh positif maupun negatif terhadap siswa. Media sosial menawarkan akses informasi real-time dan kebebasan berekspresi, namun juga menghadirkan risiko seperti pelanggaran privasi, cyberbullying, dan tekanan mental. Kondisi ini menimbulkan pertanyaan tentang sejauh mana media sosial memengaruhi kesehatan mental dan minat belajar siswa. Penelitian ini dilakukan dengan tujuan untuk mengetahui dampak penggunaan media sosial terhadap kesehatan mental siswa. Media sosial, sebagai perangkat komunikasi yang telah menjadi bagian dari kehidupan sehari-hari dapat memberikan penggunanya akses terhadap informasi dari seluruh dunia secara real-time. Hal ini dapat dimanfaatkan oleh pelajar guna mencari informasi yang terkait dengan pembelajaran sehingga mampu merangsang minat belajar siswa secara lebih efektif. Media sosial dikenal sebagai panggung berekspresi karena setiap individu dapat mengekspresikan dirinya dengan lebih bebas secara daring. Namun, media sosial juga dapat menjadi pedang bermata dua bagi penggunanya. Akses informasi tanpa batas dapat membahayakan hingga berujung pada pelanggaran privasi. Hak berekspresi yang bebas juga dapat dimanfaatkan oleh segelintir oknum untuk menjatuhkan individu lain secara anonim sehingga korbannya akan mengalami tekanan mental hingga depresi.

INTRODUCTION

Research on the impact of social media use on students' learning interest and health is highly urgent as it provides insights into how social media influences students' learning behavior and health, as well as offering solutions to mitigate potential negative effects. For instance, this study may demonstrate that excessive social media use can disrupt learning concentration and eye health, necessitating appropriate strategies to utilize social media in a balanced manner (Kuss & Griffiths, 2017; Zhang et al., 2019). With the rapid advancement of technology, social media has become an integral part of daily life, particularly among students who actively use it for various purposes, including learning, communication, and socializing with peers.

Globalization is the process of international integration resulting from the exchange of worldviews, products, and other cultural aspects (Khan et al., 2018). One of the developments in this era of globalization is communication technology, with social media being a prominent example. According to Jansen (2018), social media refers to digital platforms that enable interaction among users through various forms of content, such as text, images, and videos. Social media allows individuals to share information, collaborate, and build communities without geographical boundaries. With the rapid development of technology and increasing accessibility, social media now plays a significant role in daily life, both in social and educational contexts.

Based on research by A. Rafiq (2020), the positive impacts of social media include freedom of expression, rapid information dissemination, and ease of conducting online business. Social media also facilitates broader and more flexible social interactions, creating opportunities to develop personal and professional networks. These advancements in communication technology, particularly social media, have a significant impact on human life, including adolescent students. Adolescence is a transitional phase from childhood to adulthood, typically occurring between the ages of 10 and 19, during which individuals experience rapid emotional and social development. Adolescents tend to seek new experiences and may exhibit tendencies to rebel against social norms. Therefore, without proper supervision, social media use can lead adolescents to negative behaviors, such as technology addiction or exposure to risky content.

A study by Wibisono and Mulyani (2019) states that social media can influence students' academic performance, either positively or negatively, depending on the purpose of its use. If social media is used to gain knowledge or enhance learning motivation, the impact tends to be positive. However, if it is used solely for entertainment without proper time management, social media can negatively affect academic performance. These findings highlight the importance of controlling social media use among students to minimize adverse effects.

Furthermore, research by Thursina (2021) highlights the influence of social media on students' mental health. Social media can serve as an effective source of entertainment for students to relieve stress, but excessive use can lead to negative consequences, such as social media dependency and cyberbullying. The study notes that while social media offers benefits as a social and entertainment platform, its long-term effects on mental health, such as anxiety and depression, require attention. Therefore, understanding how balanced social media use affects students' emotional well-being is crucial.

Research by Chen and Wang (2021) states that social media has a dual role in relation to mental health. On one hand, it provides social support and broad access to information, which is beneficial for individuals with mental health issues. On the other hand, excessive or uncontrolled social media use can increase the risk of mental health disorders, such as anxiety, depression, and stress due to social comparison and exposure to misinformation. This aligns with Akram and Kumar (2017), who state that social media plays a role in providing social support, raising mental health awareness, and offering access to psychological resources. Many individuals use platforms like Facebook, Instagram, and Twitter to share personal experiences related to mental health, which can reduce stigma and encourage seeking professional help. Additionally, social media can serve as a tool for mental health education and campaigns, helping individuals understand various psychological conditions and coping strategies.

Regarding mental health, Leighton and Dogra (2017) state that mental health is an essential aspect of an individual's life, influencing emotional, social, and psychological well-being. The World Health Organization (WHO) defines mental health not only as the absence of mental disorders but also as a state where individuals experience emotional well-being, can cope with life's stresses, work productively, and

contribute to their communities. Meanwhile, mental health disorders encompass various conditions that affect an individual's thoughts, feelings, and behaviors, ranging from anxiety and depression to more complex psychotic disorders.

Research by Høgstad et al. (2023) states that adolescent mental health is a critical issue in global public health. Adolescence is a challenging transitional period during which individuals experience psychological, emotional, and social changes that can increase the risk of mental health disorders. Mental health is a fundamental aspect of well-being, particularly during adolescence, a critical period for emotional and social development. During this phase, adolescents face various challenges, including academic pressure, identity changes, and complex social relationships, which can elevate the risk of mental health issues such as anxiety, depression, and psychological stress.

Continuing the discussion on mental health, Ibrahim et al. (2025) state that the global mental health crisis has created significant barriers to accessing mental health services, particularly for adolescents. It is estimated that one in seven adolescents aged 10–19 experiences a mental health disorder, which not only affects their psychological well-being but also increases the risk of premature mortality, chronic diseases, and economic burdens due to reduced productivity. However, many adolescent mental health disorders remain undiagnosed or untreated due to various barriers, such as social stigma.

This research offers novelty and uniqueness compared to previous studies in several ways. First, its primary focus is to analyze the impact of social media use on students' learning interest and mental health in greater depth, evaluating not only the positive and negative effects but also how social media use influences learning motivation and academic quality. Unlike previous studies that primarily focused on the direct impact on academic performance or mental health separately, this research combines both aspects in a comprehensive analysis.

Additionally, this study examines the impact of social media use based on duration and intensity, offering practical recommendations for leveraging social media to support student learning without causing negative effects. These findings are expected to provide solutions for addressing social media dependency and improving students' time management in learning. In this context, the study also evaluates interventions or approaches that are more effective in guiding students to use social media productively, thereby minimizing negative impacts on academic performance and mental health.

The objectives of this research are to analyze the impact of social media use on learning interest and mental health. Furthermore, the study aims to identify whether social media influences students' learning motivation, the extent to which it affects learning productivity, and whether social media use impacts the quality of students' learning outcomes. The findings are expected to assist schools in evaluating student behavior and developing relevant learning media.

RESEARCH METHODS

This study employs a descriptive research method focusing on current issues. Descriptive research aims to describe phenomena or problems occurring at the present time, emphasizing relevant and timely problem-solving. According to Sukmadinata (2007:72), the descriptive method seeks to describe, depict, or explain phenomena in detail based on ongoing conditions. Sugiyono (2013) states that the descriptive method is an approach used to analyze data by describing or depicting the collected data as it is.

Type of Research

This study is quantitative descriptive research, where the researcher focuses on collecting and analyzing data to describe the characteristics of the phenomenon under study. In this case, the focus is on the impact of social media use on students' learning interest and mental health. The study does not aim to test hypotheses but rather to describe the relationships between existing variables. According to Sugiyono (2013), quantitative descriptive research aims to describe phenomena, events, symptoms, and occurrences factually, systematically, and accurately.

Location and Time of Research

The research will be conducted at high schools in South Kalimantan. Data collection was carried out in March 2024. The selection of this location is based on the consideration that schools are environments

where social media use among students is prevalent, providing a relevant context to examine its impact on mental health and academic performance.

Population and Sample

The population of this study consists of high school students who actively use social media as a communication and entertainment tool. The research sample was selected using a random sampling technique to ensure representativeness. According to Sugiyono (2013), simple random sampling is a method of selecting samples from a population randomly, where each member has an equal chance of being chosen without considering population stratification. The sample size is 35 students, expected to represent the general population concerning social media use.

Data Collection Techniques

Data collection techniques in this study used several methods, including observation and questionnaire. Observation: Observing students' behavior in using social media, either directly or through reports from teachers or school staff. Questionnaire: Using questionnaires to collect data on students' perceptions of the impact of social media on their learning interest and mental health.

Data Analysis Techniques

The data analysis begins with testing the instrument's feasibility through two main stages: validity and reliability tests. The validity test was conducted using Pearson Product Moment correlation for each item of the dependent variable, Mental Health (Y), and the independent variable, Social Media Use (X), comparing the calculated r-value with the r-table at a specific significance level. An item is considered valid if the calculated r-value exceeds the r-table value, and only valid items are used in further analysis. The reliability test was conducted using Cronbach's Alpha to ensure the instrument's internal consistency, with the criterion that the instrument is reliable if the Cronbach's Alpha value exceeds 0.80. The results of the validity and reliability tests show that all items for the Mental Health (Y) variable are valid and reliable, while for the Social Media Use (X) variable, one item was invalid, with the remaining items deemed valid and reliable.

After confirming the instrument's feasibility, the data were analyzed using descriptive and correlational statistical techniques. Descriptive analysis was used to describe the respondents' response tendencies for each instrument item, including the distribution of response percentages and tendencies toward specific categories. Pearson correlation analysis was used to examine relationships between items within a variable and between variables, as well as to assess the indirect influence of Social Media Use (X) on Mental Health (Y). The analysis was supported by interpreting the highest and lowest correlation values for each item and discussing findings in relation to relevant literature. All analyses were conducted using statistical software such as IBM SPSS, ensuring scientifically and methodologically accountable results.

RESULTS AND DISCUSSION

Instrument Feasibility Test

1. Instrument Validity Test

In the analysis of dependent variable, based on the validity test results using Pearson correlation, all items used to measure the Mental Health (Y) variable were deemed valid. With Pearson r-values exceeding the r-table value, all items met the established validity criteria. Thus, the instrument is reliable for measuring the Mental Health (Y) variable, as shown in Table 1. Based on the results in Table 1, the valid items for measuring the Mental Health (Y) variable are presented in Table 2. Since all items used were valid for measuring the Mental Health (Y) variable, the next step is to test the instrument's reliability.

Then, in the analysis of independent variable, for the Social Media Use (X) variable, one item was invalid, namely the first item with a Pearson r-value of 0.710, which did not meet the validity threshold (below the r-table value). However, the remaining 12 items were valid and suitable for measuring the Social Media Use (X) variable. The results can be seen in Table 3. Based on the results in Table 3, the valid items for measuring the Social Media Use (X) variable are presented in Table 4. The respondents' answers were then analyzed based on all valid instrument items.

Table 1 Validity Test Results for Mental Health (Y) Variable Instrument

Item No	r Pearson	r table	Result	Remark
1	0,661	0,361	$r > r \text{ table}$	Valid
2	0,623	0,361	$r > r \text{ table}$	Valid
3	0,425	0,361	$r > r \text{ table}$	Valid
4	0,594	0,361	$r > r \text{ table}$	Valid
5	0,679	0,361	$r > r \text{ table}$	Valid
6	0,474	0,361	$r > r \text{ table}$	Valid
7	0,496	0,361	$r > r \text{ table}$	Valid
8	0,661	0,361	$r > r \text{ table}$	Valid
9	0,581	0,361	$r > r \text{ table}$	Valid
10	0,545	0,361	$r > r \text{ table}$	Valid
11	0,432	0,361	$r > r \text{ table}$	Valid

Table 2 Proportion of Valid Items for Mental Health (Y) Variable Instrument

Item No	Count	%	Remark
1 – 11	11	100%	Valid Items

Table 3 Validity Test Results for Social Media Use (X) Variable Instrument

Item No	r Pearson	r table	Result	Remark
1	0,710	0,361	$r > r \text{ table}$	Invalid
2	0,537	0,361	$r > r \text{ table}$	Valid
3	0,426	0,361	$r > r \text{ table}$	Valid
4	0,640	0,361	$r > r \text{ table}$	Valid
5	0,579	0,361	$r > r \text{ table}$	Valid
6	0,741	0,361	$r > r \text{ table}$	Valid
7	0,494	0,361	$r > r \text{ table}$	Valid
8	0,668	0,361	$r > r \text{ table}$	Valid
9	0,481	0,361	$r > r \text{ table}$	Valid
10	0,605	0,361	$r > r \text{ table}$	Valid
11	0,576	0,361	$r > r \text{ table}$	Valid
12	0,380	0,361	$r > r \text{ table}$	Valid
13	0,741	0,361	$r > r \text{ table}$	Valid

Table 4 Proportion of Valid Items for Social Media Use (X) Variable Instrument

Item No	Count	%	Remark
1 – 13	13	100%	Valid Items

2. Instrument Reliability Test

In the dependent variable analysis, this test was conducted to determine the reliability of the items used in the research instrument to measure the Mental Health (Y) variable. Items are considered reliable if the Cronbach's Alpha value exceeds 0.80. The results of the reliability test based on respondents' answers are presented in Table 5. Based on the reliability test results in Table 5 using Cronbach's Alpha (CA), the instrument for measuring the Mental Health (Y) variable obtained a CA value of 0.858, which exceeds 0.80. Therefore, the instrument is considered reliable for measuring the Mental Health (Y) variable.

Then, in the independent variable analysis, this test was conducted to determine the reliability of the items used in the research instrument to measure the Social Media Use (X) variable. Items are considered reliable if the Cronbach's Alpha value exceeds 0.80. The results of the reliability test based on respondents' answers are presented in Table 6. The instrument for measuring the Social Media Use (X) variable also showed a CA value of 0.826, which exceeds 0.80, indicating that the instrument is reliable for measuring this variable. Based on the validity and reliability test results, the instruments used to measure the Mental Health (Y) and Social Media Use (X) variables are feasible and suitable for further analysis.

Table 5 Reliability Test Results for Mental Health (Y) Variable Instrument

Cronbach's Alpha Value	N of Items
0,858	11

Table 6 Reliability Test Results for Social Media Use (X) Variable Instrument

Cronbach's Alpha Value	N of Items
0,826	13

Descriptive Statistical Analysis

This section presents the correlation results between instrument items and statistical analysis to examine the relationships between variables.

1. Dependent Variable: Mental Health (Y)

Based on the Pearson r correlation results for the items measuring the Mental Health (Y) variable in Table 7, the item with the highest correlation is item 5 (0.679). This indicates that the statement related to contributing good ideas in group work has a strong relationship with Mental Health (Y). Conversely, item 3, with the lowest correlation (0.425), suggests that expressing feelings to a trusted person may not significantly impact improving students' mental health. These findings are important for identifying items that are more relevant for measuring students' mental health.

Then, based on the results shown in Table 8, many respondents chose options "3" and "4" ("Agree" and "Strongly Agree"), indicating that the majority strongly agreed that expressing feelings to a trusted person makes them feel relieved. However, this action does not significantly influence or may even reduce the Mental Health (Y) condition of respondents.

Table 7 Pearson r Correlation of Mental Health (Y) Instrument Items

Rank	Items No	r Pearson
1	5	0,679
2	1	0,661
3	8	0,661
4	2	0,623
5	4	0,594
6	9	0,581
7	10	0,545
8	7	0,496
9	6	0,474
10	11	0,432
11	3	0,425

Table 8 Pearson r Correlation for Item 3 of Mental Health (Y) Instrument

Item No	Statement	Response Option	Respondents
3	Expressing my feelings to a trusted person makes me feel relieved.	1	0
		2	0
		3	15
		4	15
		Total	30

2. Independent Variable: Social Media Use (X)

The Social Media Use (X) variable analysis in Table 9, the item with the highest correlation is item 6 (0.741), which relates to interactions through likes, comments, and Direct Messages (DM) on Instagram. This suggests that using social media to foster closeness with others significantly influences overall social media

use. Conversely, item 9, with the lowest correlation (0.481), indicates that using social media to share interesting things does not significantly impact the frequency of social media use. Based on the results in Table 10, many respondents chose option "3" ("Agree"), indicating that the majority agreed that they use social media to share interesting things. However, this action does not significantly influence or may even reduce the frequency of Social Media Use (X).

Table 9 Pearson r Correlation of Social Media Use (X) Instrument Items

Rank	Item No	r Pearson
1	6	0,741
2	13	0,741
3	1	0,71
4	8	0,668
5	4	0,64
6	10	0,605
7	5	0,579
8	11	0,576
9	2	0,537
10	7	0,494
11	9	0,481

Table 10 Pearson r Correlation for Item 9 of Social Media Use (X) Instrument

Item No	Statement	Response Option	Respondents
18	Use social media to share interesting things.	1	0
		2	4
		3	17
		4	9
		Total	30

3. Indirect Impact of Social Media Use (X) on Mental Health (Y)

Examining the Pearson r correlation values between the two research variables, Table 11 presents the descriptive analysis results of the indirect impact of Social Media Use (X) on Mental Health (Y) using Pearson correlation. Based on the instrument items measuring the Mental Health (Y) and Social Media Use (X) variables with the highest Pearson r correlation values compared to other items, it was found that item 5 of the Mental Health (Y) variable had the most responses for option "3" ("Agree"). This indicates that the majority of respondents agreed that they always contribute good ideas in group work, suggesting a positive contribution to their mental health condition.

Table 11 Pearson r Correlation of Highest-Value Items for Dependent and Independent Variables

Variable	Item No	Statement	Response Option	Respondents
Mental Health (Y)	5	I always contribute good ideas in group work activities	1	0
			2	7
			3	17
			4	6
			Total	30
Social Media Use (X)	6	I want to get closer to others through likes, comments, and Direct Messages on Instagram.	1	1
			2	2
			3	20
			4	7
			Total	30

Meanwhile, item 6 of the Social Media Use (X) variable showed a dominance of responses for option "3" ("Agree"). This indicates that most respondents agreed that they use features like likes, comments, and Direct Messages (DM) on Instagram to get closer to others.

These results align with findings by Kim et al. (2021), which state that positive interactions on social media, such as receiving responses through comments or DMs, can enhance social connectedness, positively affecting individuals' mental health. However, research by Brown and Smith (2020) indicates that uncontrolled social media use can reduce productivity, particularly if users are distracted during group tasks. The findings also align with Khalaf et al. (2023), who state that social media use among adolescents and young adults significantly impacts mental health, particularly increasing the risk of depression, anxiety, and self-harm behaviors. Excessive use is associated with sleep disturbances, reduced academic performance, and impaired social-emotional functioning. Additionally, cyberbullying on social media is a major factor exacerbating adolescents' mental health conditions. Nevertheless, social media also offers benefits, such as boosting self-confidence, supporting social interactions, and providing access to mental health information.

This is further supported by Ajewumi et al. (2024), who state that social media has a complex impact on mental health, with both positive and negative effects. On the positive side, social media can enhance connectedness, provide social support, and serve as a platform for self-expression, enabling individuals to share experiences and build supportive communities. It is also used to raise mental health awareness through campaigns, support forums, and access to professional resources. On the negative side, excessive social media use can increase anxiety, depression, and feelings of loneliness, often due to social comparison resulting from exposure to curated, idealized lives on digital platforms. This is reinforced by Anissa et al. (2024), who state that social media, used by nearly everyone worldwide, particularly adolescents, can negatively impact adolescent mental health, emphasizing the need for wise use.

From these findings, it can be concluded that a strong desire to connect with others through social media (variable X) indirectly influences students' involvement in contributing brilliant ideas during teamwork (variable Y). This effect can be positive, such as boosting confidence in communication, or negative, such as diverting attention from primary tasks. This study successfully addresses most of the research problems outlined in the introduction, particularly regarding the impact of social media use on mental health and productivity. However, the results also highlight the need for further research to explore the mechanisms underlying the relationship between social media interactions, group participation, and mental health balance. Future studies could include longitudinal analyses to understand the long-term effects of social media use on these aspects.

This research aligns with several previous studies indicating that social media can influence mental health. For example, Smith et al. (2018) found that social interactions through platforms like Instagram can enhance feelings of connectedness and improve individuals' mood. However, other studies, such as Zhang and Chen (2020), indicate that excessive social media use can lead to anxiety and depression, particularly among adolescents. In this study, the results show that positive interactions through social media, such as giving likes and comments, are associated with improved mental health but do not significantly impact other variables, such as expressing feelings. This adds new insights into the dimensions that need attention in understanding the influence of social media on students' mental health.

Based on the analysis and discussion above, it can be concluded that social media use significantly impacts students' mental health, with more positive interactions through features like likes, comments, and DMs enhancing mental well-being. However, expressing feelings through social media does not always contribute positively to mental health. This study provides an overview of how social media can affect students' psychological lives, but further research is needed to explore other factors that may influence the relationship between these variables, such as the duration of social media use, the type of platform used, and individual student conditions. For follow-up studies, longitudinal research is recommended to examine the long-term impact of social media use on mental health and to include more variables that may play a role in this phenomenon.

CONCLUSION

Based on the analysis and discussion above, it can be concluded that social media use significantly impacts students' mental health, with positive interactions through features such as likes, comments, and direct messages (DMs) enhancing mental well-being. However, expressing feelings through social media does not always contribute positively to mental health. This study provides an overview of how social media can influence students' psychological lives, but further research is needed to explore other factors that may affect the relationship between these variables, such as the duration of social media use, the type of platform used, and individual student conditions. Consequently, the findings of this study not only underscore the urgency of digital literacy and time management within school environments but also offer practical recommendations for educators and policymakers to design interventions that balance the benefits and risks of social media. Directly, these findings help address the issues raised in the research background, namely how to maximize the positive potential of social media in education while minimizing its negative impacts on students' mental health and academic performance. For follow-up studies, longitudinal research is recommended to examine the long-term impact of social media use on mental health and to include additional variables that may play a role in this phenomenon.

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