



The Effect of Social Media on Students' School Life in Indonesia

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ABSTRACT: Social media has emerged as a ubiquitous force in today's society, facilitating global interactions and information exchange across virtual networks. Numerous studies have been conducted to uncover both the positive and negative effects of social media on students and education. This article explores the pervasive influence of social media on students' school lives, focusing on four key factors: motivating students in academic achievement, utilization for academic discussions, accessibility of study materials through social media, and the potential distraction of school assignments. We investigate the effect of students' screen time on social media on these aspects of their educational experience using a quantitative approach. A survey methodology was employed, with data gathered from 67 students in Indonesia. Preliminary results indicate that social media may not have a significant effect on students' school lives. Additionally, students reported experiencing both negative and positive impacts of social media on their academic endeavors.

KEYWORDS: Social media; school life; Indonesia; positive and negative effects; education

1. Introduction

Social media has undeniably become a pervasive force in today's world, serving as interactive platforms that enable global interactions, communication, and the exchange of information and ideas across virtual networks. These community-based platforms prioritize communication, content sharing, and collaboration among diverse users, including content creators, influencers, and companies [1]. In the 21st century, social media has seamlessly integrated into daily life, with millions of users worldwide signing up for accounts each day [2]. According to Stacy Jo Dixon, in 2017, social media had 2.73 billion users worldwide. However, the number has skyrocketed to almost twice as much since 2017. In 2023, there were approximately 4.89 billion social media users every day, and there will be almost 6 billion users by 2027 [3]. There are a plethora of reasons why social media is being used in today's post-modernist world. Statistics published by Stacy Jo Dixon show that in 2022, 47.1% of social media users use the platforms to stay in touch with family and friends, and 36.2% of users claimed that they use social media as a way to fulfill their entertainment urges [4]. As these platforms evolve and expand, they play an increasingly central role in shaping the way individuals connect, share, and engage in the digital age. Additionally, the proliferation of social media platforms has led to the

development of numerous apps and platforms, contributing to the continuous growth in the number of annual social media users [5].

Moreover, social media has evolved into a vital tool for humanity. According to a survey conducted by Cisco Connected World Technology, 90% of young people prioritize checking their phones as the first task upon waking in the morning [6]. In the USA, a survey conducted in 2019 shows that 40% of social media users aged 18-22 from the US agreed that they found themselves obsessed with social media [4]. In Indonesia, 79.5 percent of teenagers are social media users [7]. The increase in social media usage has major impacts on people's lives, both negatively and positively, especially for young people. In the educational landscape, social media offers a myriad of benefits for students. As highlighted by [8], in Morocco one significant advantage is the enhancement of communication within the educational system. Platforms such as Facebook, Myspace, and Twitter act as valuable backchannels, facilitating interaction among students and fostering communication between teachers and students, both within and between classes. On an individual level, social media provides a platform for personal expression and creativity, as noted by [9]. Individuals can explore their creativity, with opportunities like creating blogs to share thoughts and ideas. While social media can positively impact education, it also brings about negative consequences. [10] point out that students may succumb to the temptation of repeatedly checking their messages or becoming addicted to social media, leading to a loss of concentration during the learning process. This concern is substantiated by statistical data from [11], indicating that 57% of female students aged 17–29 are addicted to social media. As the educational landscape continues to integrate social media, it becomes imperative to strike a balance and mitigate the adverse effects to ensure a positive and productive learning environment. In the context of education in Indonesia, numerous studies have examined the influence of social media on students. According to [12], junior high school students who use social media more frequently tend to have lower motivation to achieve academic goals. [13] conducted a literature review and found that while social media can positively impact students in Indonesia by providing easy access to educational materials, it also contributes to negative effects such as laziness and procrastination in completing school assignments. [14] emphasize the role of social media in promoting collaboration among students, large social media platforms serve as effective tools for learners to collaborate in groups, working collectively towards shared educational goals by collecting and sharing information. Furthermore, [15] conducted research at the vocational high school level and discovered a significant impact of social media on student behavior. Their findings suggest that students who use social media frequently are more likely to engage in online shopping, showcase their activities, and share news without verifying its accuracy. In a separate study investigating the impact of social media on students' cyberbullying behavior, [16] found that social media contributed to 24% of student cyberbullying incidents among teenagers.

Recognizing social widespread influence worldwide, in conclusion, this article delves into the pervasive effect of social media on students academically. Our research focuses on exploring the multifaceted effect of social media on students' school lives, encompassing four key factors: (1) the role of social media in motivating students to achieve academic goals, (2) the role of social media utilization for academic discussions, (3) the contribution of social media to providing accessible study materials and resources, (4) and social media potential as a distraction from school assignments. Through this study, we seek to investigate the extent to

which students' screen time on social media influences these aspects of their educational experience.

2. Methods

The research design for this study employed a quantitative approach, facilitating the collection and analysis of numerical data to address the research questions [17]. A survey methodology was utilized to gather data from the participants. For this survey, a self-developed questionnaire was tested. Due to time and budget constraints, the questionnaire was only distributed to 67 students in Indonesia. This sample size adheres to the guidelines proposed by [18], which suggest that a sample size of 64 participants is suitable for detecting differences between means with a medium level of confidence. The data were collected by administering questionnaires to Indonesian students over a week, spanning from February 1st to February 7th, 2024. The researcher utilized two types of questionnaires, both offline and online, and distributed them through various channels. For the offline questionnaire, responses were received from 11 students, while for the online questionnaire, responses were obtained from 55 students. The statistical analysis methods used to support the interpretation of this study's findings are described as follows: (1) means and standard deviation that employed to assess the average frequency and duration of students' screen time; (2) descriptive analysis that used to evaluate the frequency and percentage of social media usage among students, as well as the negative and positive effects of social media experienced by students; (3) an independent-sample t-test that utilized to examine the differences in screen time between females and males; linear regression analysis that employed to assess the effect of social media usage on students' school life.

3. Validity

To ensure construct validity, factor analysis was conducted. The suitability of the data matrix for factor analysis was assessed using the Kaiser-Mayer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity. If the results from the factor analysis of the Kaiser-Meyer-Olkin Measure (0.620) are bigger than 0.5, the result is considered good. It indicates that there is a high degree of correlation among the questions in the questionnaire, suggesting that questions are suitable for factor analysis or structural equation modeling. Bartlett's Test (Chi-Square = 46.607 df = 6, Sig. 0.001) p-value is reported as 0.001 (which is smaller than 0.05), This result suggests that questions in our questionnaire are sufficiently correlated and suitable for factor analysis. It implies that there are underlying factors driving the relationships among the variables, supporting the use of factor analysis techniques to uncover those latent factors.

4. Reliability

The questionnaire assessing the effect of social media on students' school life is considered good reliability, as indicated by a Cronbach's alpha coefficient of 0.620.

Table 1. Cronbach's Alpha in questionnaire number 1-4.

Cronbach's Alpha	N of Items
0.620	4

5. Results and Discussion

5.1. Social media used by students.

Figure 1 presents the results of a survey conducted to understand the frequency and percentage of usage of various social media platforms among students. The total number of students who participated in our questionnaire was 67. WhatsApp emerged as the most frequently used platform, with 48 respondents out of the total sample, constituting approximately 72.73% of the students. YouTube closely followed WhatsApp, with 41 respondents (62.12%), indicating its popularity among the surveyed individuals. Instagram and TikTok showcased considerable usage as well, with 40 respondents (60.61%) and 21 students (31.82%), respectively, reflecting the trend of video-centric social media engagement. Platforms like Reddit and Quora showed lower usage percentages, suggesting that they might be less frequently utilized by the surveyed individuals for social interaction. Comparing these findings with a global survey, while Facebook remained the most widely used platform globally, followed by YouTube, Instagram, and WhatsApp, our study highlighted distinct social platform preferences among students in Indonesia [19]. In a qualitative study conducted in 2023, insights shed light on the specific functions and purposes of social media platforms within the context of student life, where Indonesian students primarily used three social media platforms: WhatsApp, Instagram, and Facebook. WhatsApp and Instagram were predominantly used for group assignments and academic purposes, while Facebook served as a platform for conversations with college friends [20]. Overall, this data provided insights into the varied preferences and usage patterns across different social media platforms among students, highlighting the dominance of messaging and video-sharing platforms in today's social media landscape.

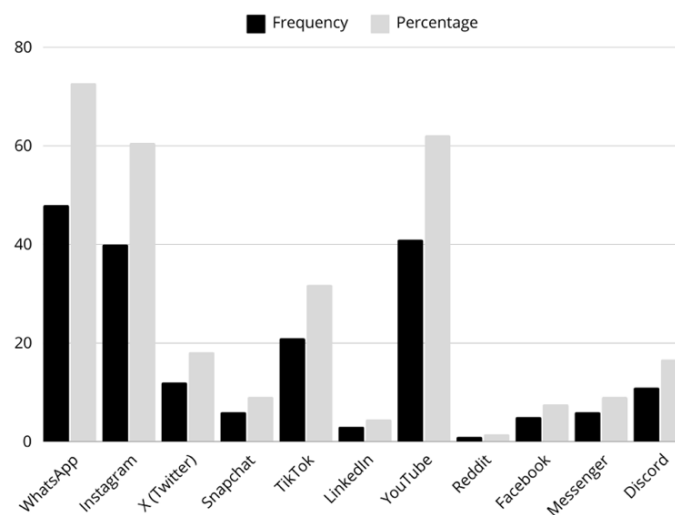


Figure 1. Descriptive analysis: the frequency of students who use social media.

5.2. Students screen time on social media.

We gathered data on the average screen time of students in Indonesia through questionnaires. Our dataset encompassed six distinct groups categorized by varying screen time durations. Delving into the specifics, the questionnaire responses revealed insightful statistics regarding secondary students' daily screen time habits. Notably, 27% of students reported dedicating 3 to 4 hours to screen activities daily, as illustrated in the bar graph below. However, according to

recommendations from the Health Behaviour in School-Age Children (HBSC), children and adolescents should ideally limit their daily screen time to a maximum of 2 hours. Alarmingly, only 11% of students reported adhering to this recommended limit. This discrepancy suggested that the screen time of students in Indonesia exceeded these guidelines, raising concerns about the potential negative effects of excessive screen exposure on their health and well-being (Figure 2).

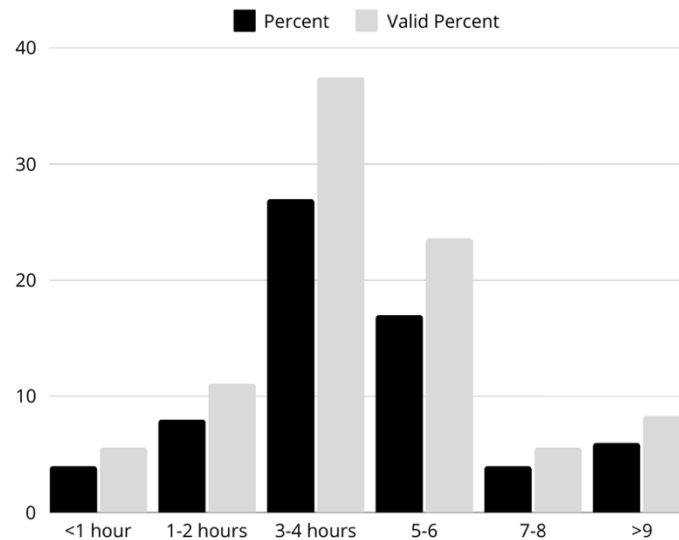


Figure 2. Descriptive analysis: daily screen time of students in Indonesia.

In order to gain further insight into the gender disparities in students' daily screen time, we also conducted an independent-sample t-test. The analysis revealed that there was no statistically significant difference in screen time between the two groups (Sig = 0.528), as depicted in the table below. On average, female students reported spending approximately 3.3750 hours on social media daily, while male students reported a slightly lower average of 3.1935 hours. These findings suggest that, on the whole, gender did not appear to be a significant factor influencing daily screen time among students (Table 2).

Table 2. Independent-sample t-test: daily screen time between female and male students.

Screen time	Equal variance assumed	Sig.	t	Significance (Two-sided p)
	Equal variance not assumed	0.988	0.635	0.528

5.3. The effect of social media on students' school life.

To examine the influence of students' screen time on various aspects of their school life, our study employed linear regression analysis. Through this analytical approach, we sought to explore the intricate relationship between the amount of time students spent on screens and its effects on various dimensions of their educational experience. Specifically, our investigation focused on four key factors pivotal to students' academic journey: (1) the degree to which screen time influenced motivation levels in achieving academic success, (2) its role in facilitating or hindering academic discussions among peers, (3) the extent to which it affected the accessibility of study materials via social media platforms, and (4) its potential to serve as a source of distraction from school assignments.

5.3.1. How social media gives students motivation to achieve goals at school.

According to the linear regression findings presented ($R^2 = 0.004$), it appears that the duration of students' screen time on social media does not influence their motivation levels to attain academic objectives. The p-value linked with screen time stands at 0.607, surpassing the significance threshold of 0.05. This indicates that the screen time spent on social media does not hold statistical significance in projecting students' motivation levels for academic achievement. In summary, based on the provided regression analysis, there exists no notable correlation between students' social media screen time and their academic motivation levels (Table 3).

Table 3. Linear regression analysis: impact of social media usage on students' motivation to achieve academic goals.

Group	R ²	Standardized Coefficients Beta	t.	Sig.
(constant)	0.004	0.064	6.148	<.001
Screentime			0.517	0.607

¹Predictors: (constant), Screentime; ²Dependent variable: Social media gives students motivation to achieve goals at school.

5.3.2. Social media's role in topic discussion.

The linear regression analysis revealed an R^2 value of 0.044, indicating that only about 4.4% of the variance in the dependent variable—social media use for discussing academic topics—can be attributed to the independent variable, student screen time on social media. Additionally, the p-value associated with the coefficient of student screen time was 0.723, significantly exceeding the conventional significance level of 0.05. Consequently, these findings suggest there is scant statistical evidence to uphold a significant association between student screen time on social media and the utilization of social media for discussing academic topics. Essentially, the model falls short in elucidating the fluctuations in social media use for academic discussions, hinting that other unaccounted-for factors likely exert a more considerable influence on this behavior (Table 4).

Table 4. Linear regression analysis: impact of social media usage on academic topic discussions.

Group	R ²	Standardized Coefficients Beta	t.	Sig.
(constant)	0.044	-0.04	7.602	<.001
Screentime			-0.356	0.723

¹Predictors: (constant), Screentime; ²Dependent variable: social media used to discuss academic topics.

5.3.3. Social media's accessibility to study materials for students.

The regression analysis unveils an R^2 value of 0.014, signifying that merely 1.4% of the variance in the perception of social media's assistance in providing accessible study materials/resources is clarified by screen time on social media. Furthermore, the p-value for the coefficient of screen time on social media stands at 0.914, substantially surpassing the traditional significance level of 0.05, indicating that the correlation between these variables lacks statistical significance. In essence, the model falls short in effectively elucidating the variability in students' perceptions of social media's utility for accessing study materials/resources (Table 5).

Table 5. Linear regression: the impact of social media on students' academic access to study resources.

Group	R ²	Standardized Coefficients Beta	t.	Sig.
(constant)	0.014	0.14	5.504	<.001
Screentime			0.108	0.914

¹Predictors: (constant), Screentime; ²Dependent variable: Social media helped students by providing accessible study materials and/or resources

5.3.4. How social media effects student focus on school assignments.

The regression analysis indicated that approximately 21% of the variance in the perception of social media as a distraction from school assignments was explained by screen time, as reflected by the R² value of 0.21 (Table 6). However, the p-value for the coefficient of screen time was 0.865, well above the conventional significance level of 0.05, suggesting that the relationship between screen time and the perception of social media as a distraction from school work was not statistically significant. While screen time showed some explanatory power in understanding this perception, it appeared that other factors beyond screen time alone might have played a more influential role. When comparing our study findings with previous research conducted in Indonesia, several notable differences emerged regarding the impact of social media on students' school lives. While our study did not find significant results regarding students' motivation for academic achievement, utilization for academic discussions, accessibility of study materials, or potential distraction from school assignments, previous research has indicated diverse effects of social media on students' academic experiences.

For instance, previous study [12] suggested that junior high school students who used social media more frequently tended to have lower motivation to achieve academic goals, contrasting with our findings. Additionally, in our quantitative study, we did not uncover evidence supporting the positive effect of social media usage on academic topic discussion. However, a qualitative study conducted in 2023 [20] revealed a contrasting finding: WhatsApp and Instagram emerged as primary channels for group assignments and academic discussions, while Facebook served as a platform for informal conversations among college friends. Furthermore, our study did not find evidence to support the positive effect of social media on providing easy access to educational materials, previous studies [13, 14] indicate that social media can serve as an effective tool for facilitating access to educational materials and promoting collaboration among students. Lastly, regarding the issue of social media distractions hindering students' academic tasks such as school assignments, we found limited existing literature addressing this variable.

Table 6. Linear regression: The effect of social media on students' academic focus from doing homework.

Group	R ²	Standardized Coefficients Beta	t.	Sig.
(constant)	0.21	0.21	7.076	<.001
Screentime			0.865	0.865

¹Predictors: (constant), Screentime; ²Dependent variable: Social media distracts from doing work, such as school assignments

While our findings did not reveal significant effects in these areas, the comparison with previous research conducted in Indonesia highlights the complexity and variability of the relationship between social media usage and students' academic experiences. These differences underscore the need for further research to explore the contextual factors and individual differences that may influence the effects of social media on students' academic lives. Future

studies could adopt mixed-methods approaches to gain a more comprehensive understanding of the multifaceted impacts of social media on students, considering both quantitative analyses and qualitative insights.

5.4. The positive and negative effects of social media on students.

In the contemporary educational landscape, the pervasive presence of social media has emerged as a transformative force, influencing the lives of students worldwide. Through a survey, we delved into both the beneficial and detrimental aspects of social media on students in Indonesia. Our goal was to offer a nuanced understanding of how social media shapes students' experiences, behaviors, and mindset. The data showed insights into the negative and positive effects of social media (Figure 3).

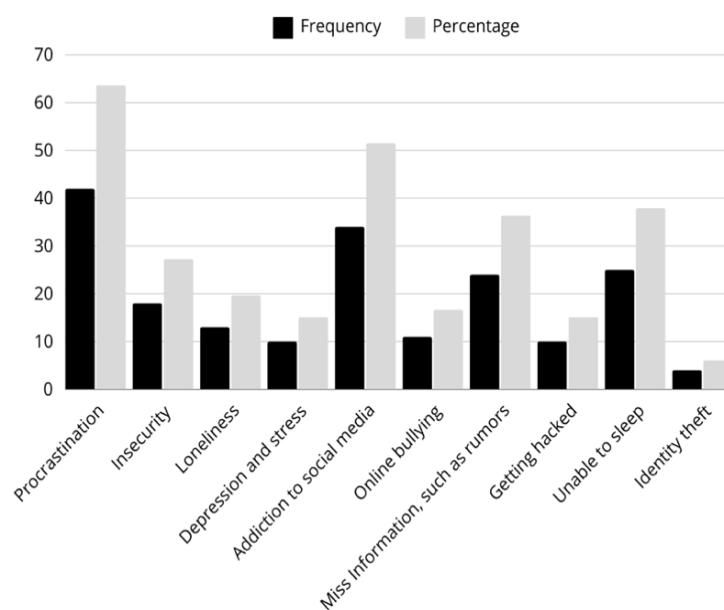


Figure 3. Descriptive analysis: negative effects of social media on students.

Due to the increasing usage of social media among students, it impacted them in various ways. Through our observations, we found that 63.63% of the participants admitted to procrastinating and postponing their responsibilities, such as school assignments. Additionally, 51.51% of students were addicted to social media, and 37.88% of them experienced difficulties sleeping due to their fixation on social media (Figure 4). These findings align with a qualitative study conducted in Bandung [21] in 2021, where students acknowledged the detrimental effects of social media, citing addiction and toxicity. Additionally, supporting evidence from a qualitative literature review highlighted the adverse consequences of social media on youth's mental well-being, including increased susceptibility to cyberbullying, body image concerns, and technology addiction. Consequently, such negative influences hindered their engagement in healthy, real-world activities [22].

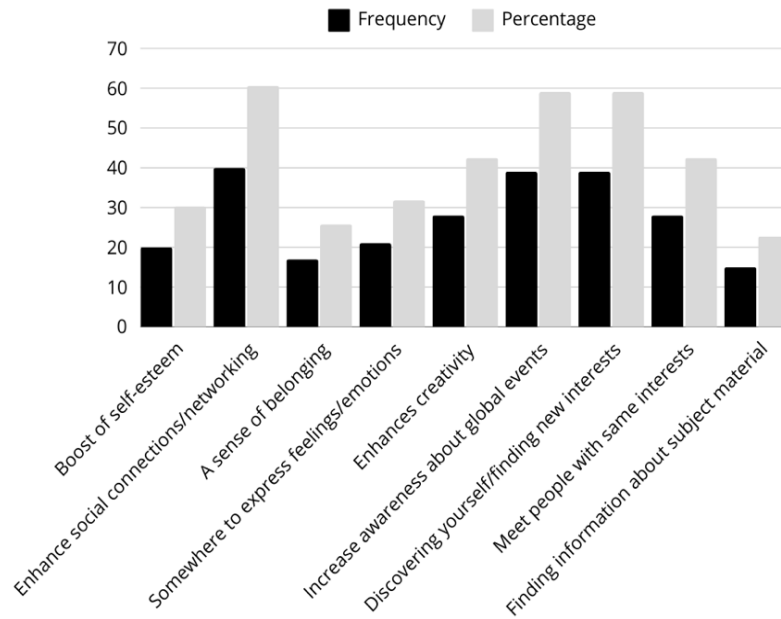


Figure 4. Descriptive analysis: Positive effect of social media on students.

On the other hand, social media offers a myriad of benefits despite its distinct negative effects. Among the array of positive effects obtained from our research, we observed that a majority of students, 60.60%, use social media to enhance social connections and networks. Additionally, an equal percentage of 59.09% of students utilize social media to increase awareness about global events and discover new interests. Conversely, a smaller percentage of students, 22.72%, use social media to find information about subject material. A qualitative research study conducted in Bandung, Indonesia in 2021 also supported our findings as they similarly concluded that students often use social media as a tool for self-development, to enhance their understanding of global events—a concept referred to as "kejadian yang lagi rame" in Bahasa Indonesia—and as an unlimited source of knowledge and information [21].

6. Conclusion

Our findings reveal diverse preferences and usage patterns across different social media platforms, with WhatsApp emerging as the most frequently used platform. Additionally, Our study did not find significant effects of social media usage on various aspects of student's school life, such as motivation for academic achievement, utilization for academic discussions, accessibility of study materials, or distraction from school assignments, while previous research in Indonesia has indicated diverse effects of social media on students' academic experiences. These differences underscore the need for further research to explore contextual factors and individual differences that may influence the effects of social media on students' academic lives. Furthermore, while a significant number of students reported negative consequences such as procrastination and addiction to social media, many also utilize social media for positive purposes, such as enhancing social connections and increasing awareness about global events.

Competing interest

All authors declare no competing interest.

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