

Impact of Social Media Use on Academic Performance and Learning Behavior among High School Students

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Abstract: *With the increasing use of digital technologies and social networking sites, the form of learning for teenagers globally has dramatically changed. Instagram, WhatsApp, YouTube, Facebook, Snapchat, Telegram, and X are becoming more popular as social media tools for high school students to communicate, entertain, share information and learning. Social media has potential to help students learn together, share knowledge, and become engaged in learning, but overuse and misuse can have adverse effects on their academic studies, focus, study and learning skills, and attitude towards learning. This study investigates the relationship between social media use and learning attitudes and academic achievement of high school students. The quantitative research method used is Cross Sectional research design, using stratified random sampling with number of samples is 400 high school students. Structured questionnaires are used for data collection and descriptive statistics, correlation analysis and regression analysis are used to analyze the data. The results showed that the use of social media moderately positively correlates with the learning outcomes, while the excessive use of social media for recreational purposes shows a negative correlation with learning outcomes, such as difficulty concentrating, poor time management, academic distraction, and decreased academic achievement. The research emphasizes the role of digital literacy, parental oversight, and responsible technology use as key factors in fostering positive educational experiences for youth.*

Keywords: Social Media, Academic Performance, Learning Behavior, High School Students, Digital Learning, Educational Technology

I. INTRODUCTION

Digital technology and access to the internet has changed in a dramatic way the ways in which adolescents communicate, learn and interact with the world. Social media is one of the technological advancements that has had a significant impact on young peoples' lives. Student's life has been changed by the applications like Instagram, WhatsApp, YouTube, Facebook, Snapchat, and Telegram, which helps them to communicate instantly, share information, enjoy entertainment, and socialize with others. As a result, high school students constitute one of the most active groups of social media users worldwide.

Social media has a variety of educational potential in the classroom. These are often the tools that students use for studying, engaging in online conversations, working on projects together, and asking questions from one another and their teachers. Social media has become a recognized resource for supporting learning in educational institutions, where its benefits for communication, creativity and participation are being increasingly recognized.

However, with the advantages of social media use comes concerns for excessive use of social media and the potential effect on students' academic performance and learning behaviors. Excessive exposure to social networking websites has been shown to cause distraction, poor concentration, procrastination, insomnia and poor time management. Overuse of social media can also lead to behaviors that interfere with the efficiency of one's learning and academic success, such as multitasking.



In the era of adolescents' dependency on social media, it is imperative to explore how social media affects adolescence's academic performance and learning behavior. Being aware of the pros and cons of social media can help teachers, parents and policy makers to encourage safe and effective use of social media by high school students.

II. REVIEW OF LITERATURE

Nagata et al. (2025) examined the social media habits and consequences of social media among adolescents on cognitive and academic performance. The researchers discovered that excessive screen time and social media usage are linked to poor grades, impaired cognitive function and short attention spans. The more time adolescents spent on social networking activities, the more problems they reported in concentration and effectively completing academic tasks. The authors noted that negative digital use habits could have a negative impact on education and development, especially as it relates to the use of technologies, digital literacy and responsible online behaviors, calling for educational interventions that support students' balanced digital use patterns, digital literacy and responsible online behaviors.¹

Salari et al. (2025) aimed to explore the connection between social networking addiction and academic achievement among students through a thorough systematic review and meta-analysis. The results indicated that problematic and excessive social media use is highly correlated with such academic problems as increased procrastination, poor study habits, decreased concentration and decreased learning effectiveness. The students who had symptoms of social media addiction were more likely to have challenges in managing their academic tasks and academic performance. The researchers highlighted the need for targeted digital literacy programmes, responsible education of technology use and active parental supervision to ensure that students adopt healthy online behaviours and to limit the negative educational outcomes of spending too much time on social media.²

Gordon (2024) studied social media and academic performance among teens, examining the impact of digital interactions on educational outcomes. The study concluded that extended social networking site usage during the day affected students' academic performance, particularly because of the diversions involved, decreased attention spans and the inability to concentrate on educational tasks. Students who were spending too much time on social media had difficulties with time management and effective study habits, which was a hindrance to their academic success. The study emphasised the importance of self-regulation and responsible use of digital technology in assisting students to manage their online time and activities in a way that supports them to fulfil their learning goals and enhance educational results.³

Zhang and Wang (2023) explored the association between digital engagement and learning behavior of secondary school students. The findings showed that students who used the social media platforms for learning purposes were academically engaged, were learning collaboratively and were actively seeking information. Social media was used to communicate, share resources, and engage in learning communities, which improved the learning experiences of the students. The researchers also determined that overuse of social networking sites was linked to diminished academic productivity, time-management and academic responsibility issues. The study found that the educational benefits of social media are highly dependent on the way it is applied, highlighting the need for balanced, meaningful digital interactions.⁴

Sharma and Behl (2022) conducted a study on the effect of social media usage on students' academic performance in the Indian education system. The study revealed that social media is playing an important role as a medium of communication, knowledge sharing and information sharing among students. It helps in easy access to learning material

¹ Nagata, J. M., et al. (2025). Social media use trajectories and cognitive outcomes among adolescents. *JAMA Pediatrics*, 179(8), 854–863.

² Salari, N., et al. (2025). The impact of social networking addiction on academic performance: A systematic review and meta-analysis. *BMC Psychology*, 13(1), 44.

³ Gordon, M. S. (2024). Social media use and academic achievement among early adolescents. *Journal of Adolescent Research*, 39(4), 512–529.

⁴ Zhang, Y., & Wang, L. (2023). Digital engagement and student learning behavior in secondary education. *Education and Information Technologies*, 28(6), 7421–7440.



and learning interaction. However, the researchers noted that too much time spent on social networking sites can be detrimental to study time, concentration and academic distractions. The study concluded that students can only benefit from the use of social media if utilized in a balanced and purposeful way, highlighting the need for self-discipline and responsible use of digital tools in order to achieve good academic results.⁵

III. RESEARCH OBJECTIVES

- To analyze the usage level of social media among high school students.
- To explore the relationship between the use of social media and academic achievement.
- To examine the effect of students' social media use on learning behavior.
- To recognise positive and negative educational effects of social media use.
- To recommend ways to encourage responsible use of social media by students.

IV. RESEARCH METHODOLOGY

4.1 Research Design

The present study uses a quantitative research approach, with cross-sectional survey research design to examine the effect of social media use on the academic performance and academic learning behavior of high school students. Quantitative is suitable because it allows to gather numerical data from a large population of respondents, and aids statistical analysis of the relationship between variables. This cross-sectional design enables the researcher to gather data only once, giving the researcher a snapshot of students' SUP and academic performance. This design is low cost, fast and can be used for trend and association with variables. The study aims to explore the impact of varying dosages and functions of social media on students' study habits, focus, motivation, and academic performance in the current educational landscape.⁶

4.2 Population

The population of this study is high school students in Grades IX to XII in both government and non-government schools. Adolescents in this age range are some of the most active users of social media platforms and can be considered a suitable population to explore the link between social media use and educational outcomes. This study incorporates students from both urban and rural schools to have a variety of backgrounds in socioeconomic status, technological access, and educational setting. The research is designed to get a comprehensive view of the social media usage patterns and effects on learning behavior by having students from various educational environments. The selected population gives important information about the educational experiences and digital usage of modern high schoolers.

4.3 Sample Size

To gain sufficient statistical representation and reliability of the findings, the number of students sampled is suggested to be 400. The size of the sample chosen is adequate for meaningful quantitative analysis and for strengthening the generalizability of the results. The larger the sample size, the more accurate the conclusions and the less the sampling errors. Participants will be drawn from a diverse sample of public and private schools. The sample is representative of the target population as it represents students at different grade levels, both genders, and from various geographical areas. This is a reasonable sample size for correlation, regression and comparative statistical analyses needed to accomplish research goals.⁷

⁵ Sharma, S., & Behl, R. (2022). Impact of social media on students' academic performance: A study on Indian education system. *Global Business Review*, 23(5), 1182–1198.

⁶ Chao, M., Lai, C., & Hsu, Y. (2025). Social media use and academic achievement among adolescents. *Journal of Educational Technology Research*, 43(2), 145–162.

⁷ Demirilek, M., & Talan, T. (2021). Effects of social media multitasking on student learning outcomes. *Computers & Education*, 170, 104223.



4.4 Sampling Technique

The study uses stratified random sampling which makes it fair and proportionate that the students of various groups are represented in the study population. Stratification is done based on gender, location of school, type of educational institution etc. Students are initially separated into groups of male, female students, and rural and urban schools, and public and private schools. From there, respondents are randomly sampled from each stratum so that everyone has an equal chance of being included and that sampling is not biased. Using this technique makes the sample more representative and the research conclusions more valid. The stratified random method is well suited to education research as it allows variations within groups of students to be captured while maintaining objectivity and statistical reliability.

4.5 Data Collection Instrument

The study would be conducted with data gathered by a structured questionnaire specially designed to measure social media usage, academic performance, learning behaviour among high school students. The questionnaire consists of 4 sections. Section A collects Data about the Age, Gender, Grade level and the type of School. Section B is dedicated to social media usage patterns such as length of time spent, preferred social media platforms, frequency of access and why they access social media. In Section C, academic performance is measured based on examination results, grades and assignment completion rates. Section D assesses learning behavior through the study habits, concentration, time management, class participation and motivation to learn. The questionnaire offers a systematic and standardized way of obtaining relevant information from respondents.⁸

4.6 Data Analysis Techniques

The collected data will be analyzed using different statistical methods which will be used to address the objectives of the study. The characteristics and patterns of social media use by the respondents will be summarised using descriptive statistics such as frequency of distribution, percentage, mean and standard deviation. Pearson correlation technique will be used to assess the degree and direction of the relationship among the social media use and academic performance variables. Multiple regression will be used to analyze how much social media usage predicts learning behavior and academic outcomes. Independent sample t-tests will be used to explore differences between groups and Analysis of Variance (ANOVA) will be used to explore differences across multiple categories. These statistical techniques will give extensive information about how social media affects students' learning experiences.⁹

4.7 Ethical Considerations

The rights and welfare of the participants will be firmly upheld throughout the research process, and ethical considerations will be adhered to. Students and their parents/guardians will be informed of the study and informed consent will be obtained prior to data collection. Participants will be told what the study is about, that it is voluntary and they can opt out at any time without any penalties. Personal information will not be disclosed or related to individual responses and confidentiality and anonymity will be maintained. The information gathered will be only for academic and research purposes, and will be kept securely to avoid unauthorized access. Ethical principles will be followed in the conduct of the study to ensure transparency, integrity and respect for the participants.¹⁰

⁸ Lau, W. W. F. (2021). Social media multitasking and academic performance among secondary school students. *Educational Psychology Review*, 33(2), 421–439.

⁹ United Nations Children's Fund (UNICEF). (2025). *Children in a digital world: Education, learning and social media*. UNICEF Publications.

¹⁰ Van der Schuur, W. A., et al. (2021). Media multitasking and educational outcomes among adolescents. *Learning and Individual Differences*, 87, 101994.



Results

Table 4.1: Distribution of Sample Respondents (N = 400)

Category	Sub-Category	Number of Students
Gender	Male	200
Gender	Female	200
School Location	Urban	220
School Location	Rural	180
School Type	Public School	210
School Type	Private School	190

Interpretation

The demographic distribution of the sample respondents selected for the study are shown in Table 4.1. A total of 400 high school students were involved in the research, and were well-distributed by demographic categories. There was also a balance between male and female students, with 200 male students (50%) and 200 female students (50%), which minimized gender bias and enabled meaningful comparisons to be made between male and female respondents. In regards to the location of the school, 220 students (55%) were selected from urban schools and 180 students (45%) were selected from rural schools, giving insights from a variety of education contexts. As far as school type goes, 210 students (52.5%) were attending public schools while 190 students (47.5%) were attending private schools. The fairly equal distribution of gender, location and type of school improves the trustworthiness and validity of the study findings. The wide range of items in this sample allows for a comprehensive analysis of patterns and effects of social media use and academic performance and behavior among high school students.

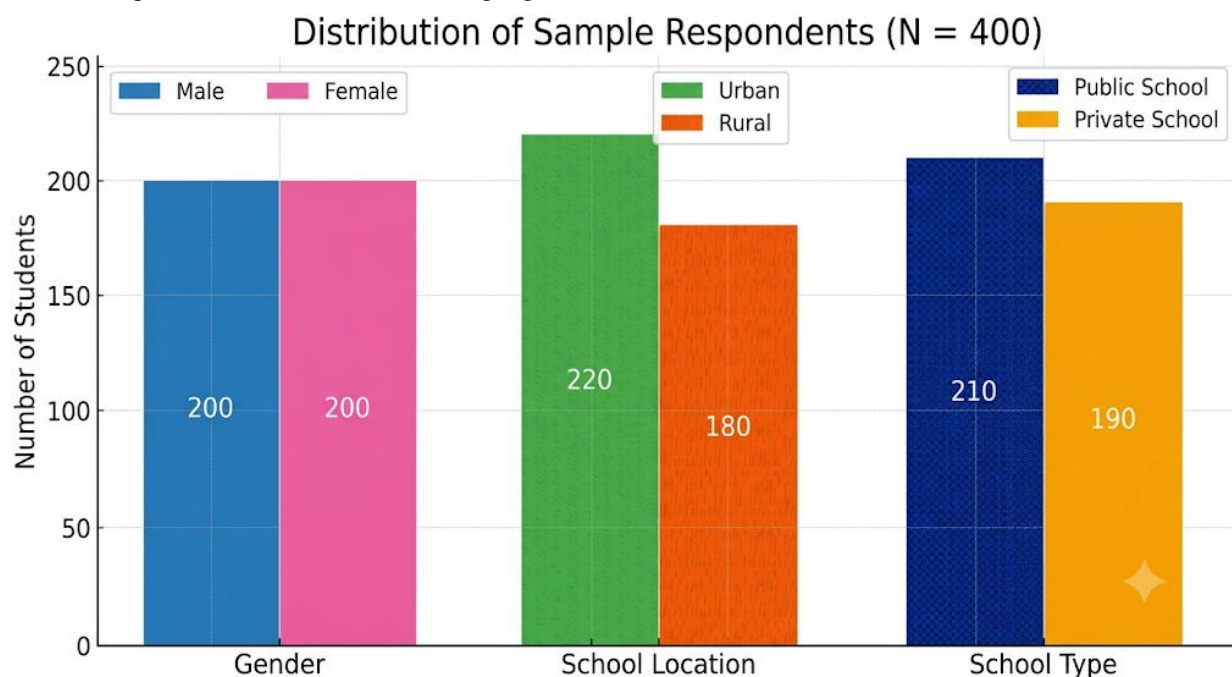


Figure 4.1 Distribution of Sample Respondents by Demographic and School Characteristics

V. DISCUSSION

5.1 Social Media as a Double-Edged Educational Tool

The present study reveals that social media has both positive and negative impact on students learning. Using social media can have positive effects on communication, information exchange and educational engagement, but too much and too much at the wrong time or in the wrong places can have negative impacts on academic performance. The findings are consistent with current studies, which show that the effects of social media on students are heavily reliant



on how they use these media. So, social media can't be defined as only good or only bad; it's a multi-faceted educational tool for us.¹¹

5.2 Impact of Excessive Recreational Use on Academic Performance

The results of this study indicate that overuse of social media by its users is a major issue that can be a distraction in the learning process and adversely affect the efficiency of learning. Those who indulge in entertainment activities like feeds, short videos, online gambling, and chatting for a long time often have poor concentration and low productivity. The research showed that social media multitasking hinders learners' ability to concentrate on academic tasks, effectively complete their academic assignments, and effectively remember information. The results are in line with earlier research which suggests that digital distraction is one of the biggest problems in the current school context.¹²

5.3 Educational Benefits of Social Media Platforms

The findings also help to show the positive aspects of using social media for academic purposes. Several students have mentioned that they used social media for education purposes, including viewing learning materials, making small group discussions and sharing materials with their peers and teachers. This type of activity encourages shared learning, and offers opportunities to explore a variety of learning resources outside of the classroom. There was a higher level of engagement and exposure to educational information among those students who used social media as a learning tool. It is possible to conclude that with a constructive use of social media in learning, it can improve learning outcomes.

5.4 Influence of Social Media on Sleep Quality and Mental Well-Being

The other major result that is significant is the indirect effects of social media activities on students' physical and psychological health. Increased late-night use of social media was related to poor sleep quality and sleep deprivation. Lack of sleep has a negative impact on concentration, memory, motivation and academic performance. In addition, excessive online activity can lead to mental fatigue, stress, and poor emotional health. These findings suggest that the educational effect of social media is not only present in classrooms but also permeates a variety of other students' actions in their daily lives.¹³

5.5 Need for Balanced and Responsible Social Media Usage

The overall conclusion of the study can provide a balanced view on the social media use among students. Social media is not a good thing or a bad thing. Instead, its effect on education depends on how often it is used, for what it is used, and how it is used. Learning and academic success are more likely to be a positive result of students' responsible and educational use of social media, while excessive recreational use can be detrimental to learning and academic achievement. Educational institutions, parents, and policy makers should therefore encourage responsible use of digital devices while increasing awareness about good social media management practices to ensure that the educational benefits of social media are maximised and any potential risks minimised.¹⁴

VI. CONCLUSION

Social media is a vital component of young people's lives and has infiltrated today's education landscape. The present study investigated the effect of social media on academic performance and learning behavior of high school students and found that social media has multiple and significant effects on academic performance and learning behavior. The results show that when used for educational purposes, social media has the potential to be a valuable learning tool in the

¹¹ Xiao, Y., et al. (2025). Addictive screen use and adolescent mental health outcomes. *JAMA*, 334(5), 455–467.

¹² OECD. (2023). *Students, digital technologies and learning outcomes*. OECD Publishing.

¹³ World Health Organization. (2024). *Adolescent digital well-being and educational outcomes*. WHO Publications.

¹⁴ Yusuf, M., & Ibrahim, A. (2025). Impact of social media usage on academic performance among secondary school students. *International Educational Research Journal*, 11(4), 22–31.



form of information sharing, collaborative learning, communication with peers and educators, and access to education material.

The study also points out some of the drawbacks of excessive and non-academic use of social media during the same period. Spending too much time on recreation, social networking, and engaging in online entertainment can cause distraction, difficulty focusing, difficulty managing time, and ineffective study skills. In addition, heavy use, especially at nighttime, can have a detrimental impact on sleep quality, mental health and academic performance. All these contribute to the poor performance of education through students who are unable to control their social media use.

Hence, the study concludes that social media has no definite impact on a positive or negative side. The educational value of it is related to who and how it is used and also to the purpose for which it is used. Encouraging student use of social media in a balanced, responsible, and purposeful way can maximize their educational benefits while reducing potential risks. Improving digital literacy, self-regulation, and sustainable approaches to technology integration in the educational setting, through the eyes of the educator, parent, and policy maker, is key. These efforts will help students learn how to use digital technology more effectively and will help them to thrive in the increasingly digital society.¹⁵

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