

EXAMINING THE RELATIONSHIP BETWEEN SOCIAL MEDIA USAGE PATTERNS AND CHILDREN'S EDUCATIONAL ENGAGEMENT IN DISTRICT ATTOCK, PAKISTAN

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DOI: <https://doi.org/10.5281/zenodo.22687614>

Received	Accepted	Published
01 January 2026	17 March 2026	31 March 2026

ABSTRACT

Social media has become more prevalent in the lives of school-age children and has influenced the ways in which children communicate, access information and participate in learning activities. While social media can aid in generating opportunities for collaboration, knowledge sharing and access to learning resources, its excessive or inappropriate use may have negative impacts on students' academic participation and learning outcomes. This study aimed to explore the relationship between how social media is used and educational engagement and achievement of children in District Attock, Pakistan. To explore the correlation between the use of social media and the educational outcomes of students, a quantitative, descriptive correlational research design was used. The study was carried out on students of public & private schools of District Attock from 10-18 years age. The number of 200 students' data was obtained by purposive sampling technique. Structured questionnaire was used for collecting data. Responses were on a 5-point Likert scale. Descriptive statistical methods, Pearson correlation, and Multiple Linear Regression analysis were used in SPSS to analyze these data. The results show that social media tools can be used as learning facilitation if used appropriately to help the students' learning process. Social media tools can help students' learning process well by allowing them to communicate, collaborate, and access learning materials. The research findings suggest that the following factors could have a positive effect on students' educational engagement and performance: increasing the educational use of social media, parental supervision, digital illiteracy, and responsible use of the internet. These results have implications for educators, parents, school leaders, and policymakers looking to leverage the educational opportunities and mitigate the possible harms of social media.

Keywords:

Social Media Usage, Parental Supervision, Educational Engagement, School Students, District Attock

1. INTRODUCTION

1.1 Background of the Study

Digital technology has changed just about everything in life, especially communication, education, business, and entertainment. Of these, social media has emerged as one of the most impactful technological advancements of

the 21st century. The use of social media like Facebook, WhatsApp, YouTube, Instagram, TikTok, and Snapchat is a part of children's daily life. Users can interact immediately, share thoughts and ideas, access information and resources, connect with others, and join virtual

communities. Social media has become a form of recreation and a growing educational resource for school-aged children (Kuss & Griffiths, 2017; OECD, 2021).

Children have high access to social media due to the availability of smartphones, easily available internet, and digital devices. Recent estimates from around the world suggest that there are billions of people who are active on social networking sites, including one of the biggest groups – adolescents and young people. The internet infrastructure has been improving rapidly, and mobile connectivity has also been improving in Pakistan, which has further boosted social media use among school-going children. Students often access social media for discussion with fellow students, to find educational resources, view educational videos, submit work, and engage in online discussions. Hence, social media has become a part and parcel of children's learning (UNESCO, 2023).

It is well understood that engagement is one of the best predictors of educational outcomes such as academic achievement, student attendance, student motivation, and future educational outcomes. Educational engagement is the extent to which students are engaged with learning activities, are interested in classroom learning, are completing academic work, and are emotionally and cognitively invested in their learning. Three types of educational engagement are commonly identified: behavioural engagement, emotional engagement, and cognitive engagement. Behavioural engagement is made up of participation in academic activities and following of school expectations. Emotional engagement is the degree to which students are interested, enjoy, and feel at home in the learning environment. Cognitive engagement is defined as students' commitment to conceptual understanding, problem solving, and the use of higher-order thinking skills (Skinner et al., 2009). Over the last ten years, there has been a growing body of scholarship that has focused on social media use and engagement with education. Some existing works indicate that social media can have a positive and negative effect on children's learning experiences. The good news is that social media can support collaborative learning, provide quick access to educational resources, provide peer support, communicate

with teachers, and join virtual learning communities. Students can use the educational videos, online tutorials, digital classrooms, and discussion forums to improve their knowledge outside the classroom. In addition, social media sites have been crucial in facilitating remote and blended learning (Al-Rahmi et al., 2022; UNESCO, 2023).

During and after the COVID-19 pandemic. On the other hand, an overindulgence in social media can lead to short attention spans, academic procrastination, sleep disorders, cyberbullying, digital addiction, and poor participation in class. Regular distractions from notifications, entertainment media, and online gaming can detract from study, homework, revision, and reading. These conflicting influences emphasize the importance of examining the link between children's social media use and their educational involvement (Boer et al., 2021). With this objective, this study aims to investigate the relationship between the pattern of social media usage and the educational engagement of the children in District Attock, Pakistan. Specifically, it explores whether there is a relationship between the frequency and duration of social media use, educational use of social media, social media distraction, and parental supervision of social media and behavioural, emotional, and cognitive engagement in learning for children. The results will inform educational policies, school practices, parental guidance, and future research on the responsible and productive use of SNS by students at school-going age (UNESCO, 2023; Al-Rahmi et al., 2022).

1.3. Research Questions

Based on the review of the literature, the following research questions were formulated.

1. What is the relationship between the educational use of social media and children's educational engagement?
2. What is the connection between social media use frequency and the duration and children's educational engagement?

1.2. Research Objectives

Based on the research questions, the following research objectives were formulated.

- 1.To explore the relationship between the educational use of social media and children's educational involvement
- 2.To examine the relationship between frequency and duration of social media usage and levels of overall educational engagement among children.

1.4. Research Hypotheses

H1: There is a positive relationship between using social media for educational purposes and the educational engagement of children.

H2: There is a significant relationship between the frequency of social media use and children's engagement in education.

1.5. Problem Statement

The current social media landscape has changed the way children learn, offering unprecedented access to information, communication, and learning resources. But there's been some worry as well about overuse, digital distraction, lack of class participation, and lack of class engagement. Social media has become a part of children's lives in Pakistan, but there is limited empirical evidence that has been conducted on the effects that various social media usage has on children's educational engagement, especially among school-aged children. Most of the previous research studies in Pakistan have been conducted involving students from educational institutions, and most have examined social media use in isolation from the different dimensions involved in social media use, including educational use, social media distraction, frequency and duration of use, and parental supervision. Moreover, little evidence has been found in District Attock, where the provision of internet and children's use of smartphones have changed the way children learn. We have a deficit in district-level evidence that can help educate, engage, and empower educators, parents, and policymakers to design interventions that support positive social media usage and mitigate the negative educational impacts. This study aims to respond to this void in the literature, so it aims to explore the connection between social media use patterns and educational involvement of children in District Attock, Pakistan. The study offers empirical evidence that can inform evidence-

based educational policies, parental guidance strategies, and interventions in schools that can promote responsible digital behaviour and enhance children's learning engagement.

1. 6. Significance of the Study

The present study contributes to the growing body of knowledge on digital technology and education by examining how different social media usage patterns are associated with children's educational engagement. The study does not focus on social media use as one entity but rather on different aspects of social media use, such as frequency and duration of use, educational use, social media distraction, and parental supervision. This multi-dimensional approach offers a higher-level knowledge of children's online behaviours and learning implications. Research results will help educational policymakers to create digital education policies based on evidence and support children in their school learning to be responsible and productive users of social media. The findings can also assist curriculum developers in embedding digital literacy and responsible online behaviour content into the school curriculum. Teachers can gain some insight into the educational and non-educational uses of social media by students. This information can support teachers in using the right digital tools in teaching and coping with issues related to online distractions in the classroom. Parents will receive practical tips and strategies about the need to supervise children's online behaviour and to promote social networking for learning. The findings could enhance the processes of parents in balancing the digital engagement of children with academic work. The results can be used by school administrators to create awareness campaigns, digital citizenship initiatives, and school-based interventions that facilitate healthy social media use and boost engagement in school learning. Lastly, the study offers empirical evidence from District Attock, Pakistan, where the use of social media and educational involvement among children have not been studied together. The results will prove to be a great resource for future studies that could be conducted in relation to technology, education,

and child development in other settings in Pakistan and elsewhere.

2. Literature Review

UNESCO (2023). Reported that digital technology has evolved rapidly, drastically changing how children experience education throughout the world. Social media are now playing an ever-larger role in students' lives, including in communication, information transfer, collaboration, and learning. In addition, educational institutions have realized the significance of digital technologies by implementing online learning materials and virtual classrooms and adopting social networks in an educational context. Therefore, considerable attention has been placed on the understanding of the impact that children's social media usage has on their educational engagement and academic behaviours.

Al-Rahmi et al. (2022) highlighted that the importance of understanding the relationship between social media usage patterns and educational engagement of children has gradually gained increased attention in contemporary empirical studies. The previous literature reviews the major concepts, theories, and empirical results, laying the foundation for conceptual frameworks on the investigation of the influence of digital technologies on students' learning experiences. Valkenburg et al. (2022) defined social media usage patterns as the frequency of usage, duration of usage, platform preference, the kinds of content consumed, the educational activities, the entertainment activities, and parental monitoring. These dimensions deliver a holistic grasp of children's interactions with digital technologies.

Rideout and Robb (2021) suggested that mere screen time is not a single measure that can capture educational outcomes. One student could be spending time on social media for a comparable period to another student, but have very different consequences to their academic life, depending on the student's focus on education vs entertainment. For children of school-going age, social networking plays several educational and social roles in their lives, as mentioned by Tess (2013). Students interact with peers, find academic assistance, engage in online discussions, watch educational videos,

work on collaborative projects, and have social interactions. At the same time, these platforms offer games, music, and short-form videos. Thus, the use of social media has a far greater impact on children's educational outcomes than just the availability of the tool.

Fredricks et al. (2004) described educational engagement as the level of students' involvement in learning activities, emotional involvement, and cognitive investment. Educational engagement is the students' desire to attend school, do homework, join in classroom discussions, work academically, and stay focused on educational objectives. In addition, Fredricks et al. (2004) proposed that educational engagement had three related facets: behavioural, emotional, and cognitive.

Appleton et al. (2008) reported that emotional involvement is a measure of students' belonging, enjoyment, and positive attitudes toward school, classmates, and teachers. Fredricks et al. (2004) stated that there were five components of cognitive engagement, including investment in understanding, critical thinking, problem solving, SRL, and persevering when challenged. The link between social media and educational involvement is one of the most widely studied issues in current educational research, according to Greenhow and Lewin (2016). Their review showed that social media can be a helpful tool or hindrance for students' learning, depending on its use.

Al-Rahmi et al. (2022) showed that students achieved positive educational outcomes if social media is provided to access educational videos, discuss with classmates, communicate with teachers, access online discussions, search for academic information, and upload academic assignments. According to Twenge and Campbell (2019), some of the most researched metrics of online behaviour are the frequency and length of social media use. The extended social media consumption is linked to less homework completion, focus, and participation in class by numerous international studies.

3. Materials and Methods

The study adopted a quantitative descriptive correlational research design to explore the relationship between the use of social media and students' educational engagement and

performance in District Attock, Pakistan. Twenty students in each of the four age groups (10 to 11, 12 to 13, 14 to 15, and 16 to 18 years) were randomly selected from 200 students (ages 10-18) attending public and private schools using purposive sampling. The data were gathered by means of a structured questionnaire with a Likert scale of five points for the variables of Social Media Usage, Educational Use of Social Media, Social Media Distraction, Parental Supervision, and Educational Engagement and Performance. The instrument was constructed based on the literature and pre-tested before administration. The data collected were analysed in SPSS. Descriptive statistics summarised the characteristics of the respondents, Pearson Product-Moment Correlation and Multiple Linear Regression were used to explore relationships and to predict engagement and performance in education. Statistically significant was defined as a P value of < 0.05 and < 0.01 . The study was conducted in accordance with ethical principles such as informed consent, voluntary participation, confidentiality, and anonymity.

4. Results and Discussions

4.1 Correlation

Table 4.1 presents the results of the Pearson Product-Moment Correlation analysis conducted to examine the relationship between Social Media Usage and Educational Engagement and Performance among students in District Attock. The Pearson correlation coefficient between the two variables was $r = .296$, which is a positive correlation. Students who used social media more often had slightly higher levels of educational engagement and performance. The significance value ($p = .000$) is less than the conventional 0.01 value, which means that the relationship observed is very statistically significant. Thus, the odds of this correlation being due to chance are very small. The relationship was analysed on a sample of 200 respondents, giving this enough statistical

power to detect the relationship. The correlation coefficient is .296, meaning that there is a weak positive correlation between using social media and educational engagement and performance. Based on Cohen's (1988) guidelines, the correlation coefficient (r) values from 0.10 to 0.29 indicate a weak relationship, and 0.30 to 0.49 indicate a moderate relationship. The obtained coefficient is .296; therefore, the relationship is at the high end of the weak correlation and very close to a moderate positive association. A positive relationship indicates that using social media positively and constructively has the potential to support students' learning engagement and achievement. It has the potential to help students access learning resources, interact with other students and teachers, engage in academic discourse, and carry out learning tasks via social media. It does, however, suggest that the relationship between social media use and educational engagement/performance is not particularly strong, meaning that social media use is not a strong predictor of educational engagement and performance. A variety of other factors may also impact students' learning, including study habits, motivation, parental support, teaching effectiveness, socioeconomic factors, and school environment. The results show that Social Media Usage is positively and statistically significant with the Educational Engagement and Performance of students of the district Attock. The result is weak but indicates that, in general, students' educational engagement and performance are slightly higher if they use social media more constructively for learning. The results suggest that with proper use, social media can be a helpful educational resource. Given the relationship's low strength, however, teachers and parents should foster positive and responsible social media use and acknowledge that a variety of other educational and environmental factors play a role in students' success.

Table 4.1: The relationship between use of social media and educational engagement and performance.

Social Media Usage		Educational Engagement and Performance	
Social Media Usage	Pearson Correlation	1	.296**
	Sig. (2-tailed)		.000
	N	200	200
Educational Engagement and Performance	Pearson Correlation	.296**	1
	Sig. (2-tailed)	.000	
	N	200	200

** . Correlation is significant at the 0.01 level (2-tailed).

4. 2 Multiple Linear Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.296 ^a	.088	.083	6.01165
a. Predictors: (Constant), Social Media Usage				

ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1 Regression	687.852	1	687.852	19.033	.000 ^b	
Residual	7155.703	198	36.140			
Total	7843.555	199				
a. Dependent Variable: Educational Engagement and Performance						
b. Predictors: (Constant), Social Media Usage						

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	15.578	1.278		12.190	.000
Social Media Usage	.340	.078	.296	4.363	.000
a. Dependent Variable: Educational Engagement and Performance					

Table 4.2 presents the model summary of the simple linear regression analysis examining the effect of Social Media Usage on Educational Engagement and Performance. The correlation coefficient ($R = .296$) shows that there is a positive but low correlation between social media usage and educational engagement and performance. This indicates that there exists a slight increase in educational engagement and performance as the use of social media builds. The coefficient of determination ($R^2 = .088$) suggests that 8.8% of the educational engagement and performance of students is explained by social media use, and 91.2% is explained by other variables not included in the

model. There is a similar level of explanatory power (Adjusted $R^2 = .083$) after considering the number of predictors and sample size, which suggests that the regression model is stable. Additionally, the Standard Error of the Estimate (6.01165) is a good indication of how well the predicted values will match the observed values, with a value of 6.01165 being a reasonable level of accuracy. The ANOVA results show whether the regression model significantly predicts educational engagement and performance or not. The model obtained an F value of 19.033 and a significance level of $p < .001$, which shows that the model is statistically significant. The conclusion shown in this result indicated that

students' Educational Engagement and Performance are significantly predicted by their Social Media Usage. So, the regression equation makes a much stronger prediction of educational engagement and performance than a regression equation that has no predictor variables. The results support the conclusion that there is no random association between social media use and educational engagement. The regression coefficients show the nature and strength of the relationship between Social Media Usage and Educational Engagement and Performance. Social Media Usage has a statistically significant positive regression coefficient ($B = .340$, $\beta = .296$, $t = 4.363$, $p < .001$). The educational engagement and performance score, when the social media score is 1 unit higher, is expected to be 0.340 1 unit higher, conditional on the other factors remaining equal. The standardized regression coefficient ($\beta = .296$) indicates that the usage of social media has a positive but weak influence on educational engagement and performance. The p-value (.000) is smaller than the conventional level of significance (0.05), which makes the effect statistically significant. The regression equation obtained from the analysis is: There was a significant relationship between Educational Engagement and Social Media Usage ($r=0.340$, $p<0.01$). The correlation between a one-unit increases in social media use and increase in the predicted educational engagement and performance score is a positive 0.340. The result indicates that there is a positive correlation between the students' Educational Engagement and Performance and the usage of social media which can be inferred as statistically significant. Even though there was only a moderate correlation ($R = .296$), and only 8.8% of the variance was explained by the model, the regression coefficient was positive, which suggests that the more students use social media, the more they report being engaged and doing well in their education, particularly when they are using social media for learning. But there is still a high degree of variation not accounted for (91.2%) and other factors such as study habits, parental support, teaching quality, motivation and socioeconomic background are also likely to affect students' engagement and their learning performance.

4.3 Hypothesis Testing

H_1 : There is a significant relationship between Social Media Usage and Educational Engagement and Performance.

The Pearson correlation analysis showed that there was a significant positive correlation between Social Media Usage and Educational Engagement and Performance ($r = .296$, $p < .001$). Thus, H_1 was accepted.

H_2 : Social Media Usage is positively related to Educational Engagement and Performance; Educational Engagement and Performance are significantly higher when social media is used. Results of regression showed that the usage of social media was significant and positively predicted educational engagement and performance ($\beta = .296$, $t = 4.363$, $p < .001$).

5. Conclusion

The regression analysis revealed that Social Media Usage was a statistically significant positive predictor of Educational Engagement and Performance for students in District Attock. The results showed that there was a positive correlation between the two variables ($R = .296$, $p < .001$), meaning that there was a slight positive correlation between social media and educational engagement and performance. The regression model was statistically significant ($F = 19.033$, $p < .001$), which means that the social media usage had a meaningful effect on predicting the educational outcomes of the students. However, the model explained only 8.8% ($R^2 = .088$) of the variance in educational engagement and performance, indicating that although social media usage has a significant influence, it accounts for only a small proportion of students' educational engagement and performance. The other differences may be attributable to other academic, personal, family or school factors not included in the current model. In general, the study results indicated that social media can be effectively used as an educational tool if utilized correctly. The positive regression coefficient ($B = .340$) indicates that social media was found to be a factor that can facilitate educational engagement and educational performance and also facilitate communication and collaborative learning and access to educational resources. However, the relatively low level of explanatory power of the

model highlights that the use of social media is not enough to explain students' educational engagement and performance. Therefore, teachers, parents and policy makers should strive to use social media for educational purposes and reflect on and evaluate other factors which facilitate learning.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

- 1.Social media platforms should be used in schools to help students learn by accessing educational resources, engaging in academic debates, viewing instructional videos, and working on projects.
- 2.Teachers need to make effective use of social media applications and digital learning platforms to enhance student engagement and provide interactive learning opportunities.

3.Schools should conduct regular training sessions and workshops to enhance students' digital literacy, facilitating their responsible, critical, and effective use of social media for educational purposes.

4.Parents should be vigilant about the time children spend on social media, directing them to positive and educational material and restricting time spent on recreational content.

5.Schools should develop clear policies and guidelines that promote the responsible, ethical, and safe use of social media both inside and outside the classroom.

6.It is recommended that Students try to keep a balance between academic activities, recreational use of social media, physical activity, and rest to reduce the impact of too much screen time.

7.Schools and parents should collaborate to educate students about cyberbullying, online privacy, digital citizenship, misinformation, and responsible online behaviour.

