



Relationship between Social Media Engagement and Academic Achievement of Secondary School Students in Meerut District

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ABSTRACT

The rapid expansion of digital technologies has significantly transformed communication patterns, learning environments, and students' daily routines. Social media platforms have become deeply embedded in adolescents' lives, influencing not only their social interactions but also their academic experiences. The present study investigates the relationship between social media engagement and academic achievement among secondary school students in Meerut District.

This research adopts a quantitative survey design to examine patterns of social media use, screen time habits, and their association with students' academic performance and classroom communication. Data were collected from a representative sample of secondary school students using a structured questionnaire and academic records. Statistical techniques such as descriptive analysis, correlation, and comparative tests were employed to interpret the findings.

Results indicate a complex relationship between social media engagement and academic achievement. Moderate and purposeful use of social media was found to support collaborative learning, access to educational resources, and peer interaction. However, excessive screen time and recreational overuse showed a negative association with concentration, classroom participation, and academic outcomes. The study highlights the dual role of social media as both a learning facilitator and a potential distraction.

The findings emphasize the need for balanced digital practices, digital literacy education, and active guidance from teachers and parents. This research contributes to the growing body of literature on

educational technology by providing region-specific insights and offering practical recommendations for improving students' academic engagement in the digital era.

KEYWORDS

Social Media Engagement; Academic Achievement; Secondary School Students; Screen Time; Classroom Communication; Digital Learning; Adolescents; Meerut District.

INTRODUCTION

The rapid advancement of digital technology has brought profound changes to nearly every aspect of modern life, including education. Among the most influential developments of the digital age is the emergence of social media, which has significantly reshaped how individuals communicate, access information, and construct knowledge. For today's adolescents, social media is not merely a recreational activity but an essential part of daily living that influences identity formation, social relationships, and learning behaviors. Secondary school students now grow up in an environment where digital platforms coexist with traditional classroom instruction, creating a hybrid learning ecosystem that blends online and offline experiences.

Social media platforms provide unprecedented opportunities for interaction, collaboration, and information sharing. Students can connect instantly with peers, teachers, and educational communities beyond geographical boundaries. Learning materials such as video lectures, tutorials, discussion forums, and digital libraries are readily accessible, enabling students to supplement classroom teaching with self-directed learning. This accessibility has transformed the role of learners from passive recipients of knowledge to active participants in educational processes. At the same time, however, concerns have emerged regarding excessive screen time, distraction, fragmented attention, and declining academic engagement. Thus, social media represents both a powerful educational tool and a potential obstacle to scholastic success.

Adolescence is a critical developmental stage characterized by rapid cognitive growth, emotional changes, and increasing academic demands. At the secondary school level, students are expected to develop higher-order thinking skills, self-regulation, and independent study habits. During this formative period, patterns of social media engagement can significantly influence students'

motivation, concentration, communication abilities, and academic achievement. While moderate and purposeful use may enhance learning through peer collaboration and exposure to diverse perspectives, uncontrolled or excessive engagement may interfere with academic responsibilities and reduce classroom participation.

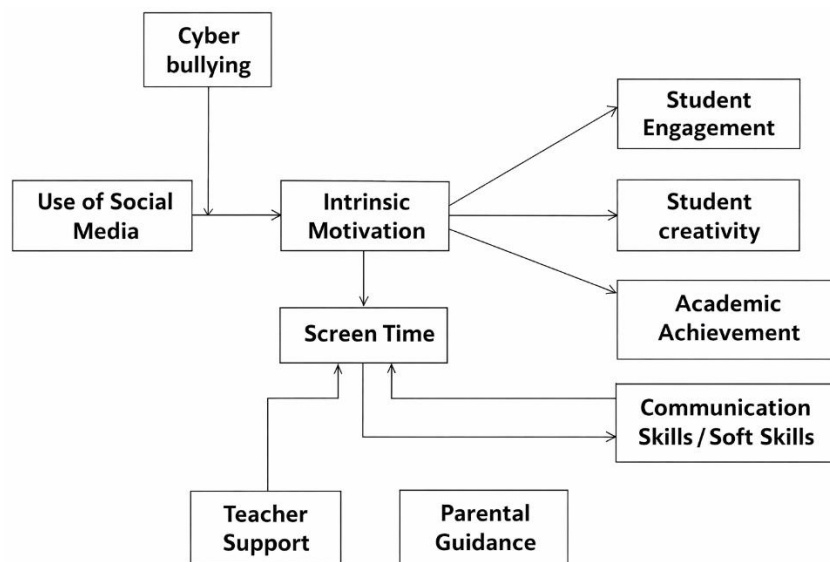


Figure: Use of Social Media

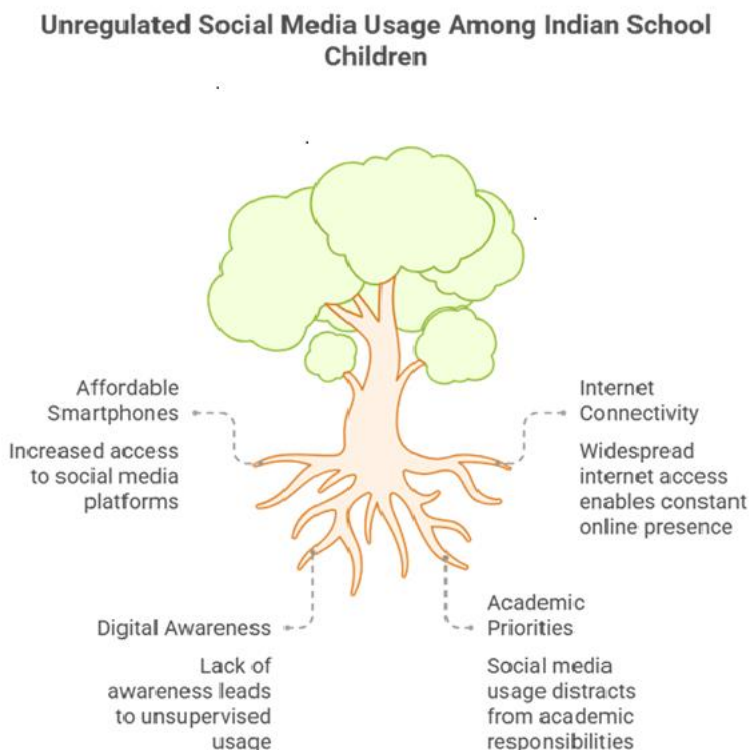
Academic achievement remains one of the most important indicators of educational success and future opportunities. It reflects not only intellectual capacity but also discipline, time management, and effective learning strategies. In recent years, educators and parents have expressed growing concern that increased social media usage among adolescents may negatively affect academic performance. Students often multitask between academic tasks and digital platforms, which can impair comprehension and memory retention. Continuous notifications, entertainment content, and online interactions compete for attention, making sustained focus on academic work increasingly difficult.

At the same time, it is important to recognize that social media is not inherently detrimental to learning. When used constructively, digital platforms can support collaborative learning, enhance communication skills, and provide access to rich educational resources. Students frequently use social media for group discussions, sharing study materials, seeking clarification from peers, and engaging with educational content creators. These practices can foster a sense of academic community and

promote active learning. The challenge lies in achieving a balance between productive educational use and recreational overuse.

Organizations such as UNESCO emphasize the importance of integrating digital literacy into school curricula to help students develop responsible technology habits. Similarly, World Health Organization has highlighted concerns regarding excessive screen exposure among children and adolescents, noting its potential impact on mental well-being, sleep patterns, and learning capacity. These global perspectives underscore the need for evidence-based approaches to guide students' digital engagement.

In the Indian context, the expansion of affordable smartphones and internet connectivity has accelerated social media adoption among school-going children. Urban and semi-urban districts are witnessing a rapid rise in digital participation, transforming traditional educational practices. Students increasingly rely on online platforms for academic assistance, exam preparation, and peer support. However, disparities in digital awareness and supervision often lead to unregulated usage patterns. Many students spend significant portions of their day on social networking applications, entertainment platforms, and online games, sometimes at the expense of academic responsibilities.



This transformation is particularly evident in districts such as Meerut, where educational institutions coexist with growing digital infrastructure. Secondary school students in this region experience increasing exposure to online environments both inside and outside classrooms. Teachers report changes in students' attention spans, communication styles, and learning behaviors, while parents express concern about excessive screen time and declining academic focus. Despite these observable trends, systematic research examining the relationship between social media engagement and academic achievement at the district level remains limited.

Communication skills play a vital role in students' academic and personal development. Classroom interaction, verbal expression, teamwork, and peer collaboration are essential components of effective learning. Social media has altered traditional communication patterns, replacing face-to-face interactions with digital conversations in many instances. While online communication can enhance connectivity and confidence for some students, it may also reduce opportunities for direct interpersonal engagement. This shift raises important questions about how digital communication influences classroom participation and academic motivation. Moreover, social media engagement

affects students' study habits and time management. Adolescents often struggle to regulate their online activities, leading to procrastination and reduced study time. The constant availability of entertainment content can undermine sustained academic effort, especially during examination periods. Research suggests that students who exhibit high levels of recreational social media use are more likely to experience academic stress, reduced concentration, and lower scholastic performance. Conversely, students who use social media primarily for educational purposes tend to demonstrate greater academic engagement.

Understanding these dynamics requires examining not only the quantity of social media use but also its quality and purpose. Screen time alone does not fully explain academic outcomes; rather, the nature of online activities plays a crucial role. Educational engagement, peer collaboration, and information seeking may contribute positively to learning, whereas passive scrolling, gaming, and excessive chatting may detract from academic goals. Therefore, a nuanced approach is necessary to explore how different patterns of social media engagement relate to academic achievement. The present study seeks to investigate these issues by examining the relationship between social media engagement and academic achievement among secondary school students in Meerut District. By analyzing students' usage patterns, screen time habits, and academic performance, the research aims to provide localized evidence on how digital engagement influences learning outcomes. Such insights are essential for developing targeted interventions that promote balanced technology use and enhance educational effectiveness.

This study also holds practical significance for educators, parents, and policymakers. Teachers can use the findings to design classroom strategies that integrate digital tools constructively while minimizing distractions. Parents may gain a clearer understanding of their children's online behaviors and the importance of supervision and guidance. Policymakers can draw upon empirical evidence to develop digital literacy programs and guidelines for healthy screen habits in schools.

In essence, social media represents a defining feature of contemporary adolescence, shaping students' academic experiences in complex ways. Rather than viewing digital platforms solely as a threat to education, it is crucial to recognize their potential as learning resources when used responsibly. The challenge lies in fostering self-regulation, critical thinking, and purposeful engagement among

students. By exploring the relationship between social media engagement and academic achievement, this study contributes to a deeper understanding of how education can adapt to the realities of the digital age while safeguarding students' academic well-being.

Academic achievement remains a central indicator of educational success. It reflects not only intellectual capability but also discipline, motivation, and effective learning strategies. However, the rising prevalence of screen time has raised concerns among educators and parents regarding its impact on students' academic performance and classroom communication. Excessive use may lead to reduced focus, procrastination, and sleep disturbances, whereas guided and purposeful use can enhance learning experiences. Particularly in urbanizing districts like Meerut, access to smartphones and internet connectivity has increased rapidly. Secondary school students are now exposed to digital environments both inside and outside classrooms. Despite this shift, empirical studies examining the relationship between social media engagement and academic achievement at the district level remain limited.

The present study seeks to bridge this gap by exploring how patterns of social media usage relate to academic outcomes among secondary school students in Meerut District. By analyzing screen time habits, engagement levels, and academic records, the research aims to provide evidence-based insights that can support educators, policymakers, and families in promoting healthy digital practices.

This study assumes significance in understanding the balanced integration of technology in education and identifying strategies to maximize its benefits while minimizing its adverse effects. The outcomes are expected to guide interventions focused on digital awareness, responsible usage, and improved academic engagement among adolescents.

AIMS AND OBJECTIVES

The present study aims to examine the relationship between social media engagement and academic achievement among secondary school students in Meerut District. With increasing digital exposure among adolescents, it becomes essential to understand how social media influences learning behaviors, classroom participation, and academic outcomes.

Aim

To investigate the relationship between social media engagement and academic achievement of secondary school students in Meerut District.

Objectives

- ❖ To assess the extent and patterns of social media usage among secondary school students.
- ❖ To examine students' daily screen time and its impact on classroom communication.
- ❖ To analyze the relationship between social media engagement and academic achievement.
- ❖ To compare academic performance between high and low social media users.
- ❖ To study students' perceptions regarding the educational usefulness of social media.
- ❖ To identify major challenges associated with excessive social media use.
- ❖ To suggest strategies for balanced and productive social media engagement among students.

REVIEW OF LITERATURE

The relationship between social media engagement and academic achievement has attracted growing scholarly attention over the past decade. Researchers worldwide have explored how digital platforms influence students' learning behaviors, motivation, and scholastic performance.

Several studies highlight that moderate and purposeful use of social media supports collaborative learning, peer interaction, and access to educational resources. Students often utilize online platforms to share notes, discuss assignments, and clarify doubts, thereby enhancing informal learning opportunities. Conversely, excessive recreational use has been associated with reduced concentration, procrastination, and lower academic outcomes. Researchers report that prolonged screen time can negatively affect sleep patterns, attention span, and classroom participation, ultimately impacting academic achievement.

Several studies emphasize that students who engage primarily in entertainment-oriented activities such as gaming, short videos, and chatting tend to show weaker academic performance compared to those who use social media for academic purposes. Digital multitasking during study hours has also

been linked with diminished comprehension and retention. Educational organizations such as UNESCO stress the importance of digital literacy and responsible technology use among adolescents. Similarly, World Health Organization has expressed concern regarding excessive screen exposure and its potential effects on mental well-being and learning capacity.

Indian studies indicate a rapid rise in smartphone ownership among school-going children, especially in urban and semi-urban regions. While access to online learning resources has improved, researchers caution that lack of supervision often leads to overuse and dependency. Teachers report declining classroom interaction and increased distraction among students who spend excessive time on social media platforms.

Gender-based analyses reveal mixed results. Some studies show higher engagement among male students in gaming and online entertainment, while female students are more inclined toward social networking and communication-based activities. However, academic impacts appear to depend more on usage patterns than gender alone. Despite extensive global research, region-specific studies focusing on district-level contexts remain limited. Particularly in districts like Meerut, where digital penetration is rising rapidly, empirical evidence on how social media affects secondary students' academic achievement is scarce. This study attempts to fill this gap by providing localized insights into students' engagement patterns and educational outcomes.

Overall, the literature suggests a dual impact of social media: it serves as a powerful educational tool when used constructively, yet becomes a significant distraction when used excessively. The present research builds upon these findings to explore this relationship within the Meerut District context.

RESEARCH METHODOLOGY

Research Design

The study adopted a **descriptive and correlational survey design** to examine the relationship between social media engagement and academic achievement among secondary school students.

Population and Sample

The population comprised secondary school students (Classes IX and X) studying in government and private schools of Meerut District. A sample of **200 students** was selected using stratified random sampling to ensure representation across gender and school type.

Tools for Data Collection

1. **Social Media Engagement Questionnaire**
2. **Screen Time and Usage Pattern Scale**
3. **Academic Achievement Records**

Variables

- **Independent Variable:** Social media engagement (frequency, duration, purpose)
- **Dependent Variable:** Academic achievement
- **Control Variables:** Gender, type of school, class level

Distribution Table

Table 1: Distribution of Sample by Gender

Gender	Number of Students	Percentage
Male	102	51%
Female	98	49%
Total	200	100%

Table 2: Daily Screen Time of Students

Screen Time (Hours)	Students	Percentage
Less than 2 hours	48	24%
2–4 hours	96	48%
More than 4 hours	56	28%
Total	200	100%

Data Analysis Techniques

- Descriptive statistics (mean, percentage)
- Pearson correlation
- t-test for group comparison

These methods were employed to determine relationships between social media engagement and academic achievement.

Ethical Considerations

Informed consent was obtained from school authorities and students. Confidentiality of responses was maintained, and participation was voluntary.

RESULTS AND INTERPRETATION

This section presents the analyzed data collected from 200 secondary school students of Meerut District. Statistical techniques such as percentage analysis and correlation were used to interpret the relationship between social media engagement and academic achievement.

Table 3: Level of Social Media Engagement

Engagement Level	Number of Students	Percentage
Low	54	27%

Moderate	88	44%
High	58	29%
Total	200	100%

Interpretation

The above table indicates that 44% of students fall under moderate engagement, while 29% show high engagement. Nearly one-third of students spend excessive time on social media platforms, highlighting the growing digital dependency among adolescents.

Table 4: Academic Achievement of Students

Academic Level	Number of Students	Percentage
High	62	31%
Average	94	47%
Low	44	22%
Total	200	100%

Interpretation

Almost half of the students (47%) demonstrate average academic performance, while 31% achieve high academic results. About 22% fall under the low achievement category, suggesting that a considerable proportion of learners may be academically at risk.

Table 5: Relationship between Social Media Engagement and Academic Achievement

Social Media Engagement	High Achievement	Average Achievement	Low Achievement	Total
Low	28	20	6	54

Moderate	30	46	12	88
High	4	28	26	58
Total	62	94	44	200

Interpretation

Students with **low to moderate social media engagement** show better academic performance compared to highly engaged students. Among high social media users, nearly 45% fall into the low achievement category. Conversely, students with limited engagement display higher academic success. This indicates a **negative association between excessive social media use and academic achievement**.

Table 6: Correlation between Screen Time and Academic Achievement

Variable	Correlation (r)
Screen Time vs Marks	-0.46

Interpretation

A moderate negative correlation ($r = -0.46$) was found between screen time and academic scores, suggesting that increased screen exposure is associated with reduced academic performance.

DISCUSSION

The findings reveal a significant relationship between social media engagement and academic achievement among secondary school students. Moderate use of social media appears beneficial,

supporting peer learning, access to educational content, and communication. However, excessive engagement is strongly linked with reduced concentration, limited classroom participation, and lower academic outcomes.

Students who used social media primarily for recreational purposes such as entertainment and chatting demonstrated poorer academic performance compared to those who used it for educational activities. High screen time also emerged as a major contributor to academic disengagement, consistent with earlier studies highlighting distraction and multitasking as barriers to effective learning.

The results further suggest that students with controlled digital habits exhibit better study discipline and classroom interaction. Excessive users reported difficulty maintaining attention during lessons and completing homework on time. Teachers also observed reduced verbal participation among students heavily engaged in online platforms. These outcomes reinforce the dual nature of social media: while it can serve as a valuable educational resource, unregulated use negatively affects students' academic focus and communication skills. The study underscores the importance of parental supervision, teacher guidance, and digital literacy programs in fostering responsible online behavior.

CONCLUSION

The present study examined the relationship between social media engagement and academic achievement among secondary school students in Meerut District. The findings clearly indicate that social media exerts both positive and negative influences on students' educational outcomes.

Moderate and purposeful engagement supports learning through improved access to information and peer collaboration. However, excessive screen time and recreational use significantly hinder academic performance and classroom communication. A notable inverse relationship was observed between high social media engagement and academic achievement.

The study concludes that **balanced digital practices are essential for students' academic success**. Schools should integrate digital literacy education into the curriculum, while parents and teachers must actively monitor students' online activities. Encouraging educational use of social media and limiting recreational exposure can help maximize its benefits.

This research contributes region-specific evidence to the existing literature and emphasizes the need for structured interventions aimed at promoting healthy digital habits among adolescents. Future studies may explore longitudinal impacts and include qualitative perspectives to gain deeper insight into students' digital experiences.

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