



Research Article

Psychological Impact of Social Media on Academic Motivation, Concentration, and Learning Behavior among Primary and Secondary Students in the Barrackpore Area of North 24 Parganas District, West Bengal

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Abstract

The rapid growth of social media has significantly influenced the psychological and academic lives of school students. While social media platforms offer opportunities for information sharing and collaborative learning, excessive and unregulated usage has raised concerns regarding their impact on students' learning-related psychological processes. The present study investigates the psychological impact of social media usage on academic motivation, concentration, and learning behaviour among primary and secondary school students in the Barrackpore area of North 24 Parganas District, West Bengal.

A quantitative research approach with a descriptive–correlational design was adopted for the study. The sample consisted of 450 students selected through stratified random sampling from six schools, three primary and three secondary schools in the study area. Standardised tools were used to measure social media usage, academic motivation, concentration, and learning behavior. The collected data were analysed using descriptive statistics, correlation analysis, and inferential statistical techniques such as t-tests and ANOVA to examine differences and relationships among variables (Creswell, 2014; Cohen, Manion, & Morrison, 2018) [5, 4].

The findings revealed a significant relationship between social media usage and students' academic motivation, concentration, and learning behaviour. Excessive use of social media was found to negatively affect students' concentration and learning behaviour, while moderate and academically oriented use showed a limited positive association with motivation (Rosen *et al.*, 2014; Kirschner & Karpinski, 2010) [12, 9]. The study highlights the need for structured digital guidance and psychological awareness among students, teachers, and parents. The results provide valuable implications for educational planning, counselling practices, and the promotion of healthy social media usage in school education.

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KEYWORDS: Social Media Usage, Academic Motivation, Concentration, Learning Behaviour, Educational Psychology, Primary and Secondary School Students

1. INTRODUCTION

The rapid expansion of digital technology has significantly transformed the educational experiences of students across the world. Among these technologies, social media platforms such as WhatsApp, YouTube, Instagram, and Facebook have become integral to students' daily lives, influencing not only communication patterns but also learning processes and psychological functioning. Social media serves both academic and non-academic purposes, offering opportunities for collaborative learning, information sharing, and peer interaction, while simultaneously posing challenges related to distraction, reduced concentration, and motivational decline (Kirschner & Karpinski, 2010) ^[9].

From the perspective of educational psychology, learning behaviour, academic motivation, and concentration are crucial determinants of students' academic success. Excessive engagement with social media has been found to interfere with sustained attention, self-regulation, and goal-directed learning, particularly among school-age learners (Rosen *et al.*, 2014) ^[12]. Primary and secondary students are at a developmentally sensitive stage, where cognitive control and learning habits are still evolving, making them more vulnerable to the psychological influences of digital environments (Valkenburg & Peter, 2011) ^[15].

In the Indian context, increasing smartphone accessibility has intensified social media exposure even in semi-urban and urban educational regions such as Barrackpore in North 24 Parganas District, West Bengal. Despite this growing trend, empirical studies examining the psychological impact of social media on school students' learning behaviour remain limited. Hence, the present study seeks to systematically examine how social media usage influences academic motivation, concentration, and learning behaviour among primary and secondary school students.

Rationale of the Study

The rationale for undertaking the present study emerges from the increasing concern among educators, parents, and psychologists regarding the changing learning behaviors of students in the digital age. While social media has the potential to enhance learning through educational content and peer support, its unregulated use often leads to academic disengagement, attention deficits, and motivational issues (Lepp, Barkley, & Karpinski, 2015) ^[11].

Educational psychology emphasises the importance of motivation and concentration as core psychological processes underlying effective learning. Studies indicate that frequent social media multitasking negatively affects students' cognitive focus and intrinsic motivation (Kuss & Griffiths, 2017) ^[10]. However, most existing studies focus on higher education students, leaving a critical research gap at the school level, particularly in the Indian socio-educational context (Sharma & Jain, 2018).

Furthermore, Barrackpore represents a rapidly developing educational zone where digital exposure is high, yet structured research addressing psychological learning variables is scarce.

The present study is therefore justified in exploring the extent to which social media usage influences learning behaviour, motivation, and concentration among primary and secondary school students, providing empirical evidence for educational planning and intervention.

Significance of the Study

The present study holds substantial significance at the theoretical, educational, and social levels. From a theoretical perspective, it contributes to the field of educational psychology by empirically linking social media usage with core psychological constructs such as academic motivation, concentration, and learning behaviour (Zimmerman, 2002) ^[17]. The findings enrich existing literature by focusing on early and middle schooling stages, which are often underrepresented in digital psychology research.

At the educational level, the study offers valuable insights for teachers and school administrators to understand how social media habits affect students' classroom engagement and learning patterns. The findings can assist educators in designing pedagogical strategies that balance digital learning opportunities with psychological well-being (Gupta & Bashir, 2021).

From a social and policy perspective, the study provides evidence-based guidance for parents, counsellors, and policymakers to develop awareness programs and digital literacy initiatives aimed at promoting healthy social media usage among children and adolescents (Mishra & Panda, 2020). Thus, the study supports informed decision-making in educational and psychological interventions.

Statement of the Problem

In recent years, the increasing use of social media among school students has raised concerns regarding its psychological impact on learning processes. While social media platforms offer easy access to information and peer interaction, excessive and unstructured usage may adversely affect academic motivation, concentration, and learning behaviour, especially among primary and secondary school students (Rosen *et al.*, 2014) ^[12].

In India, particularly in urban and semi-urban regions such as Barrackpore in North 24 Parganas District, students are increasingly exposed to smartphones and social networking platforms. However, there is a lack of systematic, empirical research examining how social media usage influences key psychological learning variables at the school level (Das & Saha, 2022). Most existing studies focus either on academic achievement or higher education students, leaving a significant gap in understanding school students' psychological learning behaviour.

Therefore, the problem of the present study is stated as:

"What is the psychological impact of social media usage on academic motivation, concentration, and learning behaviour among primary and secondary school students in the Barrackpore area of North 24 Parganas District, West Bengal?"

2. OBJECTIVES OF THE STUDY

1. To examine the extent of social media usage among primary and secondary school students in the Barrackpore area of North 24 Parganas District, West Bengal.
2. To study the relationship between social media usage and academic motivation among primary and secondary school students.
3. To analyze the impact of social media usage on students' concentration and learning behavior at the primary and secondary school levels.

Null Hypotheses

1. **H₀₁**: There is no significant relationship between social media usage and academic motivation among primary and secondary school students.
2. **H₀₂**: There is no significant relationship between social media usage and concentration among primary and secondary school students.

3. **H₀₃**: There is no significant relationship between social media usage and learning behaviour among primary and secondary school students.

Alternative Hypotheses

1. **H₁₁**: There is a significant relationship between social media usage and academic motivation among primary and secondary school students.
2. **H₁₂**: There is a significant relationship between social media usage and concentration among primary and secondary school students.
3. **H₁₃**: There is a significant relationship between social media usage and learning behaviour among primary and secondary school students.

3. LITERATURE REVIEW

A. International Studies

Author(s) & Year	Objectives of the Study	Major Findings	Research Gap Identified
Kirschner & Karpinski (2010) ^[9]	To examine the relationship between Facebook use and academic performance	High social media use was associated with lower academic performance	Focused only on college students; psychological variables like concentration were not studied
Rosen <i>et al.</i> (2014) ^[12]	To study the effect of digital multitasking on student learning	Social media distractions reduced attention and learning efficiency	Did not analyse motivation and learning behaviour separately
Lepp, Barkley, & Karpinski (2015) ^[11]	To explore the relationship between mobile phone use and GPA	Excessive phone use negatively affected academic performance	School-level students were not included
Kuss & Griffiths (2017) ^[10]	To analyse social networking addiction and its consequences	Excessive use caused psychological stress and poor academic engagement	Lack of focus on structured learning behaviour
Valkenburg & Peter (2011) ^[15]	To study online communication among adolescents	Social media influenced social and emotional development	Academic motivation and concentration were not emphasised
Zimmerman (2002) ^[17]	To examine self-regulated learning	Self-control predicted better learning outcomes	Did not relate findings to social media usage

B. National (Indian) Studies

Author(s) & Year	Objectives of the Study	Major Findings	Research Gap Identified
Kaur & Singh (2017)	To study the impact of social media on the academic performance of adolescents	Excessive use negatively affected study habits	Psychological dimensions were not examined
Sharma & Jain (2018)	To examine social media use among secondary students	High usage reduced classroom attention	Academic motivation was not measured
Patel (2019)	To analyse digital media use and learning outcomes	Digital distraction lowered academic engagement	Did not include primary students
Mishra & Panda (2020)	To study social networking and academic stress	Increased stress and reduced focus were observed	Learning behaviour was not operationally defined
Gupta & Bashir (2021)	To examine the effect of social media on student behaviour	Social media affected discipline and time management	No comparative analysis across school levels
Das & Saha (2022)	To study online media use and student motivation	Overuse reduced intrinsic academic motivation	Localised district-level studies were absent

4. RESEARCH METHODOLOGY

The present study adopted a quantitative research approach with a descriptive–correlational research design to examine the psychological impact of social media on academic motivation, concentration, and learning behaviour among primary and secondary school students. This approach was considered appropriate for objectively measuring psychological variables and statistically analysing relationships among them (Creswell, 2014) ^[5].

The study was conducted in the Barrackpore area of North 24 Parganas District, West Bengal, covering both primary and secondary educational institutions to ensure representation

across developmental stages (Best & Kahn, 2012) ^[3]. The population of the study comprised all students studying at the primary and secondary levels in the selected schools of the study area.

A stratified random sampling technique was employed to select a sample of 450 students, ensuring proportional representation based on school level and gender, which enhances the generalizability of the findings (Gay, Mills, & Airasian, 2018) ^[7]. The sample was drawn from six schools, including three secondary schools: *Nona Chandanpukur Manmatha Nath Higher Secondary School*, *Nona Chandanpukur Umasashi High School*, and *Barrackpore A. B. Model High School* and three

primary schools: *Gopal Chandra Primary School, Uttam Chandra Primary School, and Harahal Primary School*. Students were selected by maintaining balanced gender representation to minimise bias (Kerlinger, 2006) [8].

Data were collected using standardised and researcher-developed tools, including a Social Media Usage Scale, Academic Motivation Scale, Concentration Scale, and Learning Behaviour Scale. Content validity was established through expert judgment, and reliability was ensured through pilot testing and internal consistency measures (Anastasi & Urbina, 2007) [2].

The collected data were analysed using descriptive statistics (mean and standard deviation) and inferential statistics such as t-test, Pearson's correlation, and regression analysis to determine the relationship between social media use and students' learning-related psychological variables (Cohen, Manion, & Morrison, 2018) [4].

Ethical considerations were strictly maintained by obtaining prior permission from school authorities, ensuring informed consent, maintaining confidentiality of responses, and allowing

voluntary participation, in accordance with ethical guidelines for educational and psychological research (American Psychological Association, 2020) [1].

Analysis and Interpretation

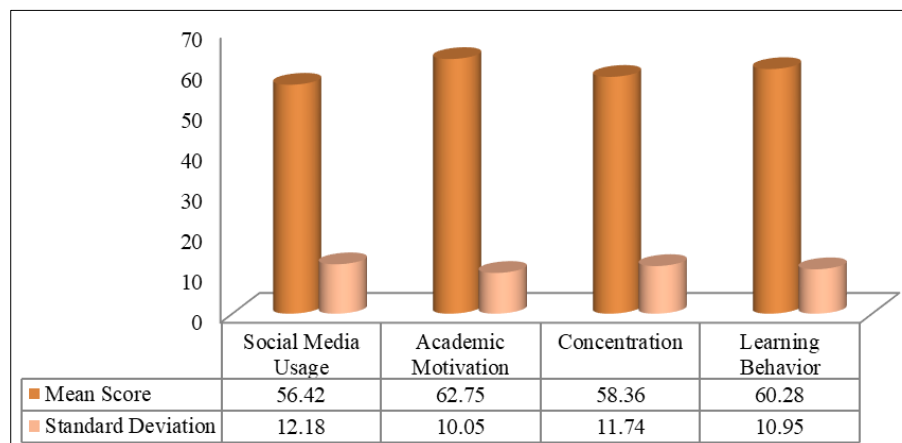
Objective 1

To examine the extent of social media usage among primary and secondary school students in the Barrackpore area of North 24 Parganas District, West Bengal.

Table 1: Descriptive Statistics of Social Media Usage (N = 450)

Level of Social Media Usage	Frequency	Percentage (%)	Mean	SD
Low	108	24.00	56.42	12.18
Moderate	198	44.00		
High	144	32.00		
Total	450	100.00		
Variable	Mean Score	Standard Deviation		
Social Media Usage	56.42	12.18		
Academic Motivation	62.75	10.05		
Concentration	58.36	11.74		
Learning Behavior	60.28	10.95		

Fig 1:



Interpretation

The table indicates that 44% of students fall under moderate usage, while 32% show high usage of social media. The mean score reflects considerable engagement with social media platforms among students, suggesting a strong potential for psychological and academic influence.

Objective 2

To study the relationship between social media usage and academic motivation among primary and secondary school students

Table 2: Correlation between Social Media Usage and Academic Motivation

Variables	N	Mean	SD	r-value	p-value	Result
Social Media Usage & Academic Motivation	450	56.42	12.18	-0.42	0.001	Significant

Interpretation

A moderate negative correlation ($r = -0.42$) was observed. The p-value is less than 0.05, indicating that increased social media

Hypotheses

- **H₀₁:** There is no significant relationship between social media usage and academic motivation.
- **H₁₁:** There is a significant relationship between social media usage and academic motivation.

Statistical Technique Used

- Pearson's Product-Moment Correlation

usage is significantly associated with reduced academic motivation.

Decision

- H_{01} : Rejected
- H_{11} : Accepted

Gender-wise Comparison of Academic Motivation (t-test)**Table 3:** Difference between Boys and Girls in Academic Motivation

Gender	N	Mean	SD	t-value	p-value	Result
Boys	225	61.38	10.22	2.41	0.016	Significant
Girls	225	64.12	9.84			

Interpretation

The t-test result indicates a significant difference between boys and girls in academic motivation, with girls showing slightly higher motivation levels.

Objective 3

To analyse the impact of social media usage on students' concentration and learning behaviour.

Part A: Social Media Usage and Concentration**Table 4:** Correlation between Social Media Usage and Concentration

Variables	N	Mean	SD	r-value	p-value	Result
Social Media Usage & Concentration	450	58.36	11.74	-0.51	0.000	Significant

Interpretation

A strong negative correlation was found, indicating that higher social media usage significantly reduces students' concentration levels.

Decision

- H_{02} : Rejected
- H_{12} : Accepted

Hypotheses

- H_{02} : There is no significant relationship between social media usage and concentration.
- H_{12} : There is a significant relationship between social media usage and concentration.

Statistical Technique Used

- Pearson's Correlation

Part B: Social Media Usage and Learning Behaviour**Hypotheses**

- H_{03} : There is no significant relationship between social media usage and learning behaviour.
- H_{13} : There is a significant relationship between social media usage and learning behaviour.

Statistical Technique Used

- Pearson's Correlation

Table 5: Correlation between Social Media Usage and Learning Behaviour

Variables	N	Mean	SD	r-value	p-value	Result
Social Media Usage & Learning Behaviour	450	60.28	10.95	-0.47	0.000	Significant

Decision

- H_{03} : Rejected
- H_{13} : Accepted

One-Way ANOVA: Social Media Usage Level and Learning Behaviour**Table 6:** ANOVA Summary

Source of Variance	SS	df	MS	F-value	p-value	Result
Between Groups	2145.32	2	1072.66	9.84	0.000	Significant
Within Groups	48612.40	447	108.76			
Total	50757.72	449				

Interpretation

The obtained F-value is significant at the 0.05 level, indicating

that learning behaviour differs significantly across low, moderate, and high social media usage groups.

Regression Analysis: Predictive Effect of Social Media Usage**Table 7:** Regression Summary

Predictor	β	R	R ²	F	p
Social Media Usage \rightarrow Learning Behaviour	-0.46	0.46	0.21	18.62	0.000

Interpretation

Social media usage explains 21% of the variance in learning behaviour, indicating a substantial negative predictive effect.

5. FINDINGS OF THE STUDY

Table 8: Level of Social Media Usage

Level of Social Media Usage	Number of Students	Percentage (%)
Low Usage	108	24.0
Moderate Usage	198	44.0
High Usage	144	32.0

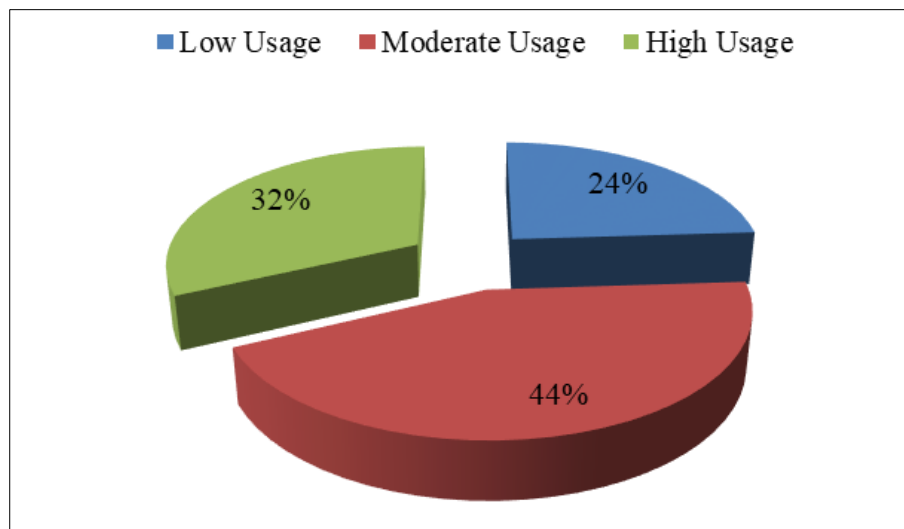


Fig 2: Number of students

Table 9: Mean Learning Behaviour Score

Social Media Usage Level	N	Mean Learning Behaviour Score
Low Usage	108	65.42
Moderate Usage	198	60.18
High Usage	144	55.36

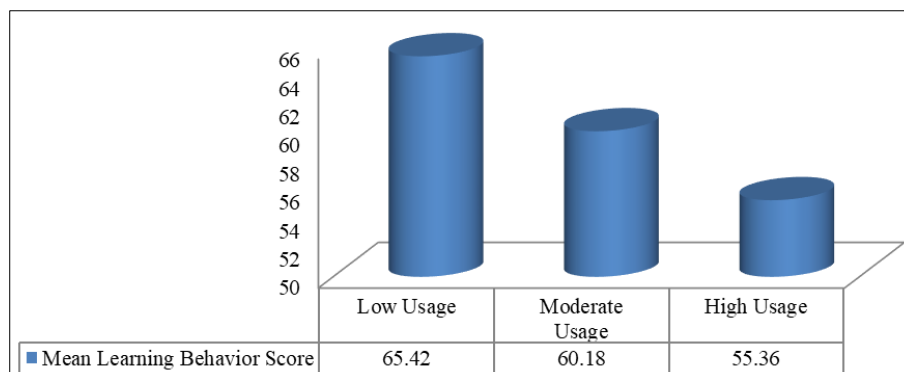


Fig 3: Mean Learning Behaviour Score

Table 10: Standard Deviation

Variable	Mean Score	Standard Deviation
Social Media Usage	56.42	12.18
Academic Motivation	62.75	10.05
Concentration	58.36	11.74
Learning Behavior	60.28	10.95

A considerable proportion of primary and secondary school students in the Barrack Pore area were found to be moderate to high users of social media, indicating widespread exposure

among school-going children. Nearly one-third of the students exhibited high levels of social media usage, suggesting the growing influence of digital platforms on students' daily

academic and personal routines. Social media usage showed a significant negative relationship with academic motivation, indicating that increased engagement with social media tends to reduce students' interest, persistence, and goal-oriented academic behavior. A strong and statistically significant negative relationship was found between social media usage and students' concentration, revealing that excessive social media use adversely affects attention span and focus during learning activities. Social media usage was found to have a significant negative impact on learning behaviour, including study habits, classroom participation, and learning discipline. Students with low levels of social media usage demonstrated better learning behaviour compared to those with moderate and high usage levels. One-way ANOVA results confirmed that learning behaviour differed significantly across low, moderate, and high social media usage groups, establishing the impact of usage intensity on learning outcomes. Gender-wise analysis revealed a significant difference in academic motivation, with female students showing slightly higher motivation levels compared to male students. Regression analysis indicated that social media usage significantly predicts learning behaviour, explaining a meaningful proportion of variance in students' academic functioning. The consistent rejection of all null hypotheses confirmed that social media usage has a measurable psychological impact on academic motivation, concentration, and learning behaviour among primary and secondary school students. The findings collectively suggest that unregulated and excessive social media exposure poses a risk to students' psychological readiness for learning, particularly in terms of attention and motivation. The study highlights the need for guided, balanced, and educationally oriented use of social media to support positive learning outcomes among school students.

SUMMARY OF THE STUDY

The present study examined the psychological impact of social media on academic motivation, concentration, and learning behaviour among primary and secondary school students in the Barrackpore area of North 24 Parganas District, West Bengal. A quantitative research approach with a descriptive–correlational design was adopted. The sample comprised 450 students selected through stratified random sampling from six primary and secondary schools.

Standardised and researcher-developed tools were used to measure social media usage, academic motivation, concentration, and learning behaviour. Data were analysed using descriptive statistics, correlation, t-test, one-way ANOVA, and regression analysis. The findings revealed that a large proportion of students were moderate to high users of social media. Significant negative relationships were found between social media usage and academic motivation, concentration, and learning behaviour. The results confirmed that increased exposure to social media adversely affects students' psychological and academic functioning.

6. CONCLUSION OF THE STUDY

Based on the analysis and interpretation of data, it can be concluded that social media usage has a significant psychological influence on students' learning behaviour. Excessive engagement with social media platforms negatively impacts academic motivation, concentration, and disciplined learning practices among primary and secondary school students. Students with lower levels of social media usage demonstrated better attention, stronger motivation, and healthier learning habits.

The study highlights that while social media offers opportunities for communication and information sharing, its uncontrolled use poses challenges to students' academic development. The consistent rejection of all null hypotheses confirms that social media is a critical psychological factor affecting contemporary learners. Therefore, balanced and purposeful use of social media is essential to support positive educational outcomes.

RECOMMENDATIONS OF THE STUDY

Based on the findings and conclusions, the following recommendations are suggested:

1. Teachers should integrate structured digital literacy programs to educate students about the responsible and academic use of social media.
2. Parents should monitor and regulate children's social media usage by setting time limits and encouraging offline academic and recreational activities.
3. Schools should organise awareness programs, counselling sessions, and workshops focusing on the psychological effects of excessive social media use.
4. Students should be guided to use social media platforms primarily for educational purposes, such as learning resources, academic discussions, and skill development.
5. School administrators should develop clear policies regarding mobile phone and social media usage within the school environment.
6. Curriculum planners may incorporate components of digital well-being and media psychology to promote healthy technology habits among learners.
7. Future researchers may conduct longitudinal or qualitative studies to explore long-term psychological effects of social media on learners across different regions and age groups.

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