INFLUENCE OF FACEBOOK USAGE ON ACADEMIC PERFORMANCE AMONG STUDENTS IN PUBLIC SECTOR COLLEGES OF PESHAWAR DISTRICT

Original Article

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ABSTRACT

Background: Social media platforms, particularly Facebook, have become deeply integrated into the daily lives of students, influencing how they interact, learn, and manage their academic responsibilities. While Facebook offers opportunities for information sharing and academic collaboration, concerns have emerged regarding its potential to disrupt study routines, affect classroom attentiveness, and negatively influence academic performance. Understanding the relationship between Facebook usage and academic outcomes is essential to developing strategies for its constructive use in educational settings.

Objective: This study aimed to investigate the impact of Facebook usage on the academic performance of female students in public-sector colleges in District Peshawar, focusing on its influence on study hours, classroom attentiveness, and overall academic outcomes.

Methods: A quantitative, descriptive research design was employed, with data collected from 400 female Bachelor of Science (BS) students enrolled in Social Sciences and Natural Sciences programs. A simple random sampling technique was used to ensure representativeness across four public-sector colleges. Data collection was conducted through self-administered questionnaires using a 5-point Likert scale. Regression analysis and descriptive statistics were applied to assess the relationship between Facebook usage, study hours, classroom attentiveness, and academic performance.

Results: Findings revealed that 65% of students acknowledged disruptions in study routines due to excessive Facebook use, while 58% reported difficulty maintaining focus during lectures. Approximately 72% believed that Facebook negatively affected their academic performance. However, regression analysis showed a weak but statistically significant negative correlation between Facebook usage and academic performance ($r = -0.104$, $p = 0.038$), with only 1.1% of academic performance variability explained by Facebook usage. Late-night usage was associated with decreased study hours and lower classroom attentiveness.

Conclusion: While Facebook provides valuable academic resources, excessive usage disrupts study routines and reduces focus, indirectly impacting academic outcomes. Educational institutions should promote responsible social media use through seminars and structured academic engagement. Future research should explore broader populations and include qualitative analyses for deeper insights.

Keywords: Academic performance, classroom attentiveness, college students, Facebook, social media impact, study habits, time management.

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INTRODUCTION

Social media has become an integral part of modern life, reshaping how individuals communicate, share information, and build personal relationships. Among the various platforms available, Facebook stands out as one of the most popular, particularly among younger populations, including students. This widespread use of social networking platforms has brought about a profound influence on the daily lives of students, affecting their modes of interaction and the ways they spend their time. Despite its potential as a tool for fostering communication and facilitating academic collaboration, Facebook's actual impact on students' academic performance remains a topic of ongoing debate(1, 2). The surge in social media usage among students in Pakistan reflects a global trend, with Facebook playing a pivotal role in shaping interpersonal relationships and providing entertainment. However, concerns have been raised regarding its potential to disrupt study routines, reduce classroom attentiveness, and negatively influence academic outcomes. While some students utilize the platform for educational discussions and peer collaboration, the majority reportedly engage with Facebook for leisure, which can lead to a substantial diversion of time away from academic activities. Excessive use of Facebook during study hours has been linked to diminished focus, reduced productivity, and declining academic performance(3, 4).

Recent studies have highlighted the dual nature of Facebook's influence on students. On the one hand, it serves as a platform for academic engagement, allowing for the sharing of information, group discussions, and communication with educators. On the other hand, its role as a source of constant distraction cannot be overlooked. The tendency of students to spend prolonged hours scrolling through non-academic content raises concerns about the platform's detrimental impact on their academic focus and overall success. Research indicates that students who engage more frequently with Facebook tend to have lower academic achievement, often reflected in reduced study hours and lower grade point averages(5, 6). The psychological implications of Facebook usage among students also warrant attention. While some findings suggest that social media can foster a sense of community and emotional support, others indicate potential negative effects, such as increased stress and decreased mental well-being, which can indirectly hinder academic performance. The conflicting outcomes in existing research underscore the need for a more nuanced understanding of how social media engagement affects student achievement in varying contexts(7, 8).

In light of these concerns, this study seeks to explore the influence of Facebook usage on the academic performance of students in public sector colleges in Peshawar District. Specifically, the research will examine how Facebook affects study habits, concentration levels during classes, and overall academic outcomes. This investigation aims to fill the gap in understanding whether social media use poses a significant barrier to academic success or if it can be leveraged as a productive educational tool. The primary objectives are to assess the relationship between Facebook usage and academic performance, determine its impact on students' study hours, and evaluate how it influences attentiveness in the classroom(9, 10).

METHODS

This study employed a descriptive and quantitative research design to examine the influence of Facebook usage on the academic performance of female Bachelor of Science (B.S.) students enrolled in public sector colleges in the Peshawar District. The research focused on a sample of 400 female students, aged between 18 and 21 years, all of whom actively used Facebook in their daily lives. The selection of participants followed a simple random sampling technique to ensure equal representation across four government degree colleges. The institutions included Government City Girls College, Government Girls Degree College Bacha Khan, Government Girls Degree College Hayatabad, and Government Frontier College for Women, with 100 participants drawn from each college. The sample size was determined using Krejcie and Morgan's sample size table, ensuring a statistically valid representation of the student population(11). A structured questionnaire was developed as the primary data collection tool, incorporating a 5-point Likert scale to capture the respondents' perceptions and experiences related to Facebook usage and academic performance. The questionnaire underwent rigorous validation by four university professors, including the study supervisor, all of whom held academic ranks of assistant professor or higher. Their expert feedback led to the removal of certain items deemed unnecessary, thus refining the questionnaire to enhance clarity and relevance. A pilot study involving 30 female students from public sector colleges was conducted to assess the reliability of the instrument. These participants were excluded from the final study. Cronbach's Alpha coefficient was calculated to assess internal consistency, yielding a value of 0.87, indicating a high level of reliability(12).

Data collection involved administering the validated questionnaire directly to students in the selected colleges. In addition to primary data, secondary data sources were consulted, including academic books, peer-reviewed journal articles, research papers, and reputable websites, to inform the literature review and conceptual framework development. Ethical considerations were thoroughly addressed,

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with approval sought from the institutional review board (IRB) overseeing research involving human participants. Informed consent was obtained from all participants, ensuring they were fully aware of the study's purpose, procedures, and their right to withdraw at any stage without penalty(13). Data analysis was conducted using descriptive statistics to summarize the demographic characteristics and Facebook usage patterns among the participants. Regression analysis was applied to investigate the relationship between Facebook usage and academic performance, particularly focusing on variables such as study hours, classroom attentiveness, and overall academic achievement. This methodological framework ensured that the findings were both statistically valid and reflective of the broader population of female students in public sector colleges in the Peshawar District(14).

RESULTS

The analysis revealed that a significant proportion of students acknowledged the influence of Facebook on their academic activities. A total of 56.5% agreed that Facebook enhances their learning experience, while 71.1% viewed it as a valuable platform for sharing academic information. Additionally, 69.8% believed that it aids in acquiring knowledge from online resource persons. However, a lower percentage, 41.5%, perceived Facebook as having a direct positive impact on their academic performance, and 31.6% believed it improved their grades, whereas 50.3% disagreed. Regarding the relationship between Facebook usage and study habits, 53.1% of students agreed that using Facebook disrupts their study routines, and 53.3% indicated they spent more time on the platform than engaging in study activities. Furthermore, 50.8% believed that frequent Facebook use results in poor academic performance. A notable 43.1% felt that Facebook usage leads to ineffective study habits, while 55% believed it wastes valuable study time.

In the classroom context, Facebook usage was found to have a detrimental effect on students' attention and engagement. A total of 57.3% reported that Facebook usage disrupts their concentration, and 59.6% believed excessive usage hampers focus during lectures. An even higher percentage, 68.3%, indicated that it leads to ineffective learning, while 65.8% identified it as a cause of classroom management issues. Furthermore, 69.8% agreed that Facebook disrupts the teaching-learning process, and 73.8% believed it negatively affects instructional planning. Demographic data showed that male students, constituting 60% of the participants, had a slightly higher mean academic performance score (62.78) compared to female students (60.92). Age-wise, students aged 28 years and above demonstrated the highest academic performance (63.1), while those aged 18–22 years recorded the lowest (61.7). The frequency of Facebook usage also played a role, with daily users comprising 75% of the sample and recording a mean academic performance of 62.5, whereas weekly and occasional users had lower performance scores of 59.3 and 56.8, respectively.

Descriptive statistics highlighted that students, on average, spent 2.5 hours per day on Facebook, with a standard deviation of 1.02 hours. Their study hours averaged 4.5 per day, ranging from 2 to 8 hours. Classroom attention scores ranged from 1 to 5, with a mean score of 3.25, while academic performance averaged 62.5 marks, ranging between 50 and 75. Correlation analysis indicated a weak negative relationship between Facebook usage and academic performance (-0.104), study hours (-0.120), and classroom attention (-0.170). Regression analysis yielded an R-value of 0.104 and an R-square of 0.011, suggesting that Facebook usage explained only 1.1% of the variation in academic performance. The statistically significant p-value (0.038) indicated a minor but meaningful association. Time spent on Facebook showed a positive correlation with usage frequency (0.217) but remained negatively associated with academic performance (-0.120). Further analysis through ANOVA revealed that Facebook usage significantly impacted academic performance, with an F-value of 4.327 and a p-value of 0.038. However, the influence of study hours (F = 2.793, p = 0.095) and classroom attention (F = 0.118, p = 0.732) was not statistically significant. The low R-square values across all analyses suggest that factors beyond Facebook usage, such as motivation, teaching quality, and personal study strategies, likely play more substantial roles in determining academic success.

Table 1: Facebook's Influence on Academic Performance

Statement	Percentage Agreeing (%)
Enhances Learning	56.5
Valuable for Academic Information Sharing	71.1
Aids Knowledge Acquisition	69.8
Positively Impacts Academic Performance	41.5
Improves Grades	31.6

Table 2: Impact on Study Hours

Statement	Percentage Agreeing (%)
Disrupts Study Routine	53.1
More Time on Facebook than Studying	53.3
Leads to Poor Academic Performance	50.8
Reduces Study Effectiveness	43.1

Table 3: Impact on Classroom Attention

Statement	Percentage Agreeing (%)
Disrupts Concentration	57.3
Reduces Focus During Lectures	59.6
Leads to Ineffective Learning	68.3
Causes Classroom Management Problems	65.8

Table 4: Correlation Analysis

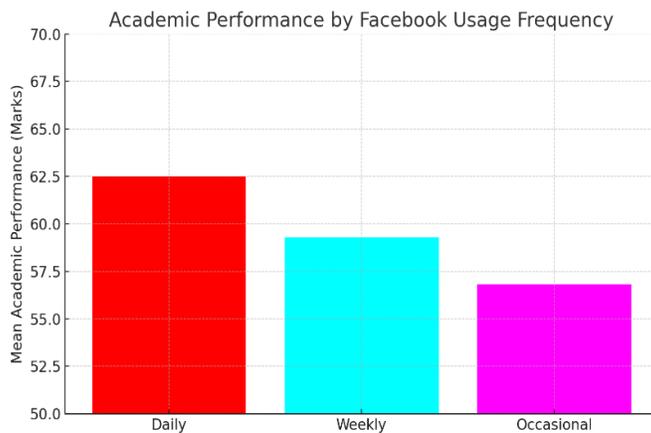| Variable	Correlation with Academic Performance
Facebook Usage	-0.104
Study Hours	-0.12
Classroom Attention	-0.17

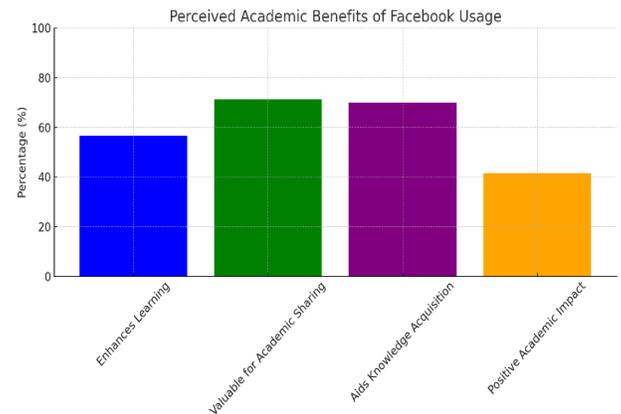*Figure 1 Academic Performance by Facebook Usage Frequency*

Figure 2 Perceived Academic Benefits of Facebook Usage

DISCUSSION

The findings of this study reveal a nuanced relationship between Facebook usage and academic performance among students. While the platform is recognized as a valuable academic resource, its overall influence on academic outcomes presents a mixed picture. A considerable proportion of students acknowledged Facebook's role in enhancing learning and facilitating the sharing of academic information, which aligns with earlier research that emphasized the platform's potential for fostering collaborative learning and knowledge exchange. The ability to engage with resource persons and access academic content suggests that Facebook can serve as a tool for academic networking and professional development, particularly when utilized in a structured and goal-oriented manner(15). Despite these potential benefits, the effectiveness of Facebook as a tool for improving academic performance remains inconclusive. The observation that only a minority of students perceived a direct positive impact on their academic outcomes highlights the platform's limited influence on measurable academic achievements such as grades or GPA. This aligns with prior research indicating that, while

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social media can facilitate informal learning, it is often accompanied by distractions that diminish its academic value. The platform's dual nature—serving both educational and non-educational purposes—makes it difficult for students to maintain a balance between productive use and recreational engagement(16, 17).

The study also highlights the disruptive role of Facebook in students' study routines and classroom engagement. A significant proportion of participants reported that excessive Facebook use negatively affected their ability to maintain consistent study habits and focus during learning sessions. This observation is consistent with earlier findings that social media serves as a major distractor, often contributing to procrastination and reduced academic efficiency. The perception that frequent Facebook usage leads to poor academic performance underscores the platform's potential to interfere with effective study practices when used without self-regulation. Notably, a considerable number of students believed that their study hours were compromised due to time spent on the platform, reinforcing concerns regarding time management and academic discipline(18, 19). In the classroom context, Facebook usage was found to significantly disrupt attention and learning outcomes. Many students reported a decline in their ability to concentrate during lectures, with excessive engagement on the platform diminishing their focus and participation in academic discussions. This diminished focus not only affects individual performance but also contributes to broader classroom management challenges, as highlighted by the high percentage of students who believed that Facebook use disrupts the teaching-learning process. These findings raise concerns for educators, suggesting the need for policies that limit social media distractions during class sessions to maintain a conducive learning environment(20, 21).

The correlation and regression analyses revealed a weak but statistically significant negative relationship between Facebook usage and academic performance, suggesting that while the platform does exert some influence, it is not the primary determinant of academic success. The weak association implies that other variables, such as intrinsic motivation, teaching quality, personal study habits, and institutional support, play a more substantial role in shaping students' academic outcomes. Furthermore, the study highlights that Facebook usage also negatively correlates with study hours and classroom attention, reinforcing the idea that excessive engagement with the platform can detract from essential academic activities(22). One of the strengths of this study lies in its focus on a specific demographic—female students from public sector colleges—which provides valuable insights into a relatively underexplored segment of the student population. The use of validated questionnaires and rigorous statistical analyses adds credibility to the findings. However, limitations should be acknowledged. The study's cross-sectional design limits the ability to establish causality between Facebook usage and academic performance. Additionally, the exclusive focus on female students from a single district restricts the generalizability of the findings to broader populations. Another limitation stems from the reliance on self-reported data, which may be influenced by social desirability bias or inaccurate recall.

Future research should consider longitudinal designs to better assess causal relationships between social media usage and academic outcomes. Expanding the sample to include diverse age groups, genders, and academic disciplines would enhance the generalizability of results. Additionally, future studies should explore the specific purposes for which students use Facebook—whether for academic collaboration, entertainment, or socializing—to better understand how distinct usage patterns influence academic performance. Incorporating qualitative methods, such as interviews or focus groups, could provide deeper insights into students' motivations for using social media and their perceived effects on academic life. While Facebook has the potential to support academic engagement through information sharing and networking, its excessive use presents challenges that can undermine academic success. Educational institutions could harness the platform's benefits by creating structured Facebook groups for academic discussions, announcements, and knowledge-sharing while implementing guidelines to minimize distractions. Seminars aimed at educating students on responsible social media usage, time management, and balancing academic and online activities could further mitigate the negative effects observed in this study.

CONCLUSION

This study concludes that while Facebook offers valuable opportunities for academic information sharing and learning enhancement, its overall influence on academic performance is multifaceted. Although many students acknowledge its educational benefits, the findings reveal that excessive use can disrupt study routines, diminish focus, and hinder classroom engagement. The weak yet statistically significant negative association between Facebook usage and academic outcomes highlights the need for balanced and mindful use of social media in academic contexts. To maximize its potential benefits while minimizing distractions, educational institutions should develop strategies that integrate social media effectively into learning environments. Future research should focus on establishing practical guidelines for responsible usage to ensure that academic performance is not compromised by the platform's potential distractions.

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Author Contribution

Author	Contribution
Kalsoom Malik*	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Muhammad Tofail	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published

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