

**Impact of Excessive Usage of YouTube on Students Academic Performance: A Case
Study of Mirpur University of Science and Technology (MUST)**

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Abstract



This study investigates the impact of excessive YouTube usage on the academic performance of students at Mirpur University of Science and Technology (MUST). A quantitative research design was employed, using a structured questionnaire as the data collection instrument. The sample consisted of 486 students selected through random sampling from various faculties. Data analysis was conducted using SPSS, including descriptive statistics and Pearson correlation analysis. Results revealed a statistically significant negative correlation between excessive YouTube usage and academic performance. Specifically, variables such as self-regulation, behaviour, purpose of use, and distraction showed moderate to strong associations with students' grades. Self-regulation and behavioural factors were especially critical, with correlations of $r = 0.63$ and $r = 0.75$ respectively, indicating that students who exhibited poor time management and higher distraction levels reported lower academic performance. These findings underscore the importance of digital self-discipline and suggest that while YouTube can serve educational purposes, unregulated use significantly undermines academic success. The study recommends the integration of digital literacy training and time management strategies within university programs to mitigate these effects.

Keywords: YouTube, Academic Performance, University Students, Self-Regulation, Digital Distraction, Time Management, Educational Technology, SPSS, Correlation Analysis

Introduction

YouTube, launched in 2005, has become the most widely used video-sharing platform globally, with billions of hours of content consumed daily. Among its most active user segments are university students, who use the platform for a variety of purposes ranging from educational tutorials and lecture recordings to entertainment, vlogging, and gaming content. In Pakistan, the rise of mobile internet access and affordable smartphones has further accelerated YouTube consumption among youth, including students at Mirpur University of Science and Technology (MUST).

While the educational value of YouTube is well-documented particularly for visual and self-paced learners it is also associated with excessive screen time, procrastination, and distraction. With features such as autoplay, personalized recommendations, and real-time engagement, YouTube's algorithm is designed to keep users engaged, which can easily shift focus away from academic priorities. As a result, students may experience reduced concentration, disrupted sleep, and compromised academic performance.

Despite YouTube's potential as a learning tool, its unregulated and habitual usage has raised concerns about its impact on students' academic outcomes. Many students at MUST report spending several hours a day on YouTube, often with little to no academic value derived from that engagement.

There is a growing need to investigate whether this excessive use is affecting academic performance in measurable ways. While numerous studies have explored the impact of social media broadly, limited empirical research has focused specifically on YouTube usage in the context of Pakistani higher education.

The primary objective of this study is to explore the relationship between excessive YouTube usage and the academic performance of students at MUST. The specific objectives are:

- To assess the frequency and purpose of YouTube usage among university students.
- To examine the relationship between time spent on YouTube and students' GPA.
- To determine how behavioural factors such as self-regulation and procrastination mediate the impact of YouTube use.
- To explore whether YouTube usage for educational purposes has a positive influence on academic performance.

The study seeks to answer the following research questions:

1. What is the pattern of YouTube usage among MUST students?
2. Is there a statistically significant relationship between the amount of time spent on YouTube and academic performance?
3. Do behavioural factors like procrastination and self-regulation affect how YouTube usage influences academic achievement?
4. Does educational use of YouTube positively impact students' academic performance?

This study is important for educators, policymakers, and students alike. For students, it offers insights into how their digital habits may be impacting their academic outcomes. For faculty and university administrators, the research provides evidence-based recommendations on guiding students toward responsible use of online platforms. Moreover, the study contributes to the growing body of knowledge on digital behaviour in the context of higher education in Pakistan, especially focusing on YouTube a platform often overlooked in academic discourse compared to social media like Facebook or Instagram.

Based on the literature and objectives, the following hypotheses were formulated:

- **H₁**: There is a statistically significant relationship between YouTube usage and students' academic performance.
- **H₂**: The purpose of YouTube usage (educational vs. entertainment) significantly affects academic performance.
- **H₃**: Behavioural factors such as self-regulation and procrastination mediate the relationship between YouTube usage and academic performance.

Literature Review

This study is underpinned by two key theories: the **Uses and Gratifications Theory (UGT)** and the **Time Displacement Theory**. UGT suggests that users actively select media to fulfil specific psychological and social needs. In the context of YouTube, students may use the platform for academic enrichment or entertainment, depending on their personal motivations. Time Displacement Theory posits that time spent on leisure activities displaces time that could be used productively suggesting that excessive time spent on YouTube may detract from study and revision.

Numerous studies have explored the effects of social media on academic performance, though relatively few isolate YouTube as the focal platform.

- **Junco (2012)** and **Kirschner & Karpinski (2010)** found that excessive use of digital platforms, including YouTube, is associated with lower academic achievement due to procrastination and attention deficits.
- **Adzovie et al. (2021)** and **Ahmed & Qazi (2011)** reported that while some students benefit from YouTube's educational content, many use it primarily for entertainment, contributing to lower GPA scores.

- **Raikos & Waidyasekara (2014)** highlighted that YouTube can be an effective tool for learning complex concepts through visual content, particularly when used in moderation and for academic purposes. Studies consistently show that **procrastination, reduced concentration, and poor time management** are common side effects of excessive YouTube use:
- **Distraction:** Continuous autoplay and algorithm-driven recommendations often pull students away from intended content (Goradia, 2018).
- **Sleep Disruption:** Late-night viewing habits linked to cognitive fatigue and poor academic performance (Gaultney, 2010).
- **Reduced Academic Engagement:** Students engrossed in passive media consumption report diminished classroom participation and study discipline (Hsu & Lin, 2018).

While global studies have examined social media broadly, fewer have focused on YouTube specifically within the context of Pakistani universities. Even fewer studies use statistical models to examine how various psychological and behavioural factors such as **self-regulation, mental health, and purpose of use** mediate the relationship between YouTube usage and academic success. This study aims to fill that gap by providing empirical evidence from a localized context using structured quantitative analysis.

Methodology

This study employed a **quantitative, correlational research design** to examine the relationship between YouTube usage and students' academic performance at Mirpur University of Science and Technology (MUST). The design was chosen to identify trends and test hypotheses through statistical analysis of measurable data.

The total population consisted of approximately **10,000 students** enrolled at MUST. Using **L.R. Gay’s formula for sample size determination**, a sample of **486 students** was selected through **simple random sampling** to ensure fair representation across departments and academic years.

Sample Size	Total Population	Sampling Method
486	10,000	Simple Random Sampling

Data were collected using a **self-constructed questionnaire**, comprising two parts:

- **Demographic Information:** Gender, department, academic year, GPA.
- **YouTube Usage Scale:** Measured aspects such as time spent, purpose of use (educational vs. entertainment), and self-regulation, using a **5-point Likert scale**.

The instrument was **pilot tested** on 20 students, and expert validation was conducted to ensure content relevance. **Cronbach’s Alpha** was calculated for internal consistency, yielding a reliability score of **0.83**, indicating strong reliability.

Dimension	Number of Items	Cronbach’s Alpha
YouTube Usage Scale	15	0.83
Academic Performance Scale	10	0.80
Self-Regulation Scale	8	0.85

Participants were informed of the study’s purpose and assured of confidentiality. **Informed consent** was obtained, and participation was voluntary. The research adhered to ethical guidelines by ensuring:

- Anonymity of responses,
- Right to withdraw at any time,
- No deception or harm to participants.

Data Analysis

Data were analysed using **SPSS** (Statistical Package for the Social Sciences). The following techniques were applied:

- **Descriptive statistics** to summarize frequencies and distributions,

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- **Pearson correlation** to test relationships between YouTube usage variables and academic performance,
- **Regression analysis** to examine the predictive power of YouTube usage patterns on GPA.

Analysis Method	Test Applied	Purpose
Descriptive Statistics	Mean, Standard Deviation	To describe basic characteristics of the data
Pearson Correlation	$r = -0.49$	To assess the relationship between YouTube usage and GPA
Regression Analysis	$R^2 = 0.24$	To predict GPA based on YouTube usage

Results and Findings

A total of **386 students** participated in the study. The following table summarizes the demographic characteristics of the sample:

Demographic Characteristic	Frequency	Percentage (%)
Gender		
Male	220	57.1
Female	166	42.9
Department		
Engineering	150	38.9
Computer Science	120	31.1
Social Sciences	60	15.5
Other	56	14.5

Table 2 shows the average hours spent on YouTube by students each day:

Time Spent on YouTube (per day)	Frequency	Percentage (%)
Less than 1 hour	50	12.9
1-2 hours	110	28.5
3-4 hours	140	36.3
5 or more hours	86	22.3

The primary purpose of YouTube usage is divided between academic and entertainment purposes. The data reveals that while students use YouTube for educational content, a significant portion also uses it for non-academic purposes, as shown in the following table:

Purpose of YouTube Usage	Frequency	Percentage (%)
Educational Content	250	64.8
Entertainment Content	270	70.0
Both	134	34.7

Pearson correlation was used to test the relationship between YouTube usage and academic performance (GPA). The following table presents the correlation coefficients:

Variable	Academic Performance (GPA)
YouTube Usage (Total Hours)	$r = -0.49$
Self-Regulation	$r = 0.63$
Behavior (Procrastination)	$r = -0.75$
Entertainment Usage	$r = -0.32$
Educational Usage	$r = 0.18$ (NS)

Note: NS indicates **Not Significant**.

A linear regression analysis was conducted to predict academic performance based on YouTube usage. The results showed that YouTube usage, especially non-academic use, significantly predicted lower GPA scores.

Variable	β (Beta)	Standard Error	t-value	p-value
YouTube Usage (Total Hours)	-0.38	0.12	-3.17	0.002
Self-Regulation	0.21	0.15	1.40	0.16
Procrastination (Behavior)	-0.40	0.13	-3.08	0.003

$R^2 = 0.24$, indicating that **24%** of the variation in academic performance (GPA) can be explained by YouTube usage.

- A **moderate negative correlation** was found between the total hours spent on YouTube and GPA ($r = -0.49$), suggesting that students who spend more time on YouTube tend to have lower academic performance.
- **Self-regulation** showed a **strong positive correlation** with GPA ($r = 0.63$), indicating that students with better self-control tend to perform better academically.
- **Behavioural factors**, such as procrastination, had a **strong negative correlation** ($r = -0.75$) with academic performance, suggesting that students who procrastinate more due to distractions from YouTube have lower GPAs.
- **Entertainment usage** of YouTube was significantly negatively correlated with GPA ($r = -0.32$), while **educational usage** had a slight positive relationship ($r = 0.18$) that was not statistically significant.

Discussion

This study set out to explore the impact of excessive YouTube usage on the academic performance of students at Mirpur University of Science and Technology (MUST). The findings offer strong support for the hypothesis that unregulated use of YouTube, especially for non-academic purposes, negatively affects students' GPA and academic engagement.

The Pearson correlation results revealed a **moderate to strong negative relationship** between total hours spent on YouTube and academic performance ($r = -0.49$), confirming that as time spent on YouTube increases, GPA tends to decrease. These findings align with previous studies such as **Junco (2012)** and **Ahmed & Qazi (2011)**, which also concluded that excessive digital media consumption negatively correlates with academic success.

Additionally, **behavioural factors like procrastination** demonstrated a **very strong negative correlation** ($r = -0.75$) with GPA. This suggests that the problem is not simply the time spent on YouTube, but also the behavioural patterns it promotes such as distraction and delay in task completion. The **regression analysis** further substantiated this, showing that procrastination and unstructured usage were significant predictors of lower academic performance.

Interestingly, **self-regulation** showed a **strong positive correlation** with GPA ($r = 0.63$), which supports the idea that students who manage their time effectively are better able to balance academic responsibilities and YouTube use. This finding is supported by **Rouis et al. (2011)**, who emphasized the mediating role of self-regulation in online environments.

While YouTube is often viewed as an educational resource, this study found that **academic use** of the platform had only a **slight, non-significant positive correlation** with GPA ($r = 0.18$). This contrasts with studies like **Raikos & Waidyasekara (2014)** and **Moghavvemi et al. (2018)**, which suggested that academic video content on YouTube can enhance conceptual understanding and improve performance. The contrast in findings may be due to differences in student intent, motivation, or how "educational" content is defined and consumed.

In contrast, **entertainment-driven use** showed a **statistically significant negative relationship** with GPA ($r = -0.32$), reinforcing the idea that time on YouTube not aligned with academic goals is more likely to hinder than help.

The results highlight a critical need for **digital self-discipline among students**. The growing reliance on YouTube, particularly during evening and nighttime hours, may be disrupting students' academic routines and sleep cycles. Therefore, institutions should consider integrating **digital literacy** and **time management training** into orientation programs or academic support services.

Furthermore, educators could **leverage the platform constructively** by curating reliable educational content and recommending it within the course syllabus. This could reframe students' perception of YouTube as not just a source of entertainment, but a valid learning companion.

The findings are consistent with both the **Uses and Gratifications Theory** and the **Time Displacement Theory**. Students who turn to YouTube for gratification (entertainment or distraction) are more likely to displace time that would otherwise be dedicated to academic tasks. Those with better self-regulation are more intentional in their use and are able to limit distractions, which supports the mediating role of self-regulation proposed in the conceptual framework.

Conclusion

This study examined the impact of excessive YouTube usage on the academic performance of students at Mirpur University of Science and Technology (MUST). Through quantitative analysis involving 386 students, the research revealed a **statistically significant negative correlation** between time spent on YouTube particularly for entertainment and students' academic performance.

Key variables such as **self-regulation**, **behavioural distraction**, and **purpose of use** were strongly linked to variations in GPA. Students who lacked self-discipline or used YouTube for non-academic purposes tended to perform worse academically. Conversely, while educational usage showed a slight positive trend, it was not statistically strong enough to offset the negative impact of general overuse.

The results validate concerns raised by educators and researchers regarding digital media's role in student life. They also support theories that excessive gratification-seeking behaviour (Uses and Gratifications Theory) and poor time substitution (Time Displacement Theory) can undermine academic performance in higher education.

Recommendations

For Students:

- Adopt **time management tools** (like screen timers or productivity apps) to monitor and limit unproductive time on YouTube.
- Set **clear goals** when using YouTube for academic purposes to avoid falling into distraction cycles.
- Prioritize academic commitments and treat YouTube as a supplementary not primary learning tool.

For Educators:

- Integrate curated **educational YouTube content** into teaching strategies to redirect student attention toward academic resources.
- Conduct **workshops on digital well-being**, helping students recognize and regulate problematic usage patterns.
- Provide **assignments or assessments** that encourage critical evaluation of digital content to promote media literacy.

For University Administration:

- Include **digital literacy and self-regulation training** in student orientation or advising programs.
- Encourage departments to identify and share **subject-specific YouTube channels** that align with their syllabi.

- Consider implementing **institutional campaigns** around digital mindfulness and academic focus.

For Future Researchers:

- Explore qualitative insights through interviews or focus groups to better understand student motivations and behaviors.
- Compare the impact of YouTube with other platforms like TikTok, Instagram, or MOOCs (Massive Open Online Courses).
- Investigate **longitudinal effects** of YouTube usage habits across semesters or academic years.

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