

## Facebook Usage Patterns and its Impact on the Academic Performance of University Students

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### Abstract

The study focused on understanding the different patterns of Facebook usage among university students and its impact on their academic performance. It was examined that to what extent Facebook consumption influenced the students' educational performance. "Uses and Gratifications" a theoretical framework was used to analyze consumption patterns. It was a quantitative research design employed, and the data was collected from 250 university students by using a purposive sampling technique. The results showed that heavy uses of Facebook was related to addictive behavior among university students, negatively affecting their educational performance. These impacts led to different negative effects such as poor time management, procrastination, and a decrease in productive academic activities. It was supported by the p-value 0.00, confirming that increased Facebook consumption significantly correlated with decreased academic performance. Parents, teachers, and authorities must put concerted efforts to regulate social media use through healthy boundaries, digital literacy, and time management skills. Parents can monitor and guide children's digital habits; teachers can incorporate lessons on balanced usage and even make social media an educational tool.

**Keywords:** *Social Media, Education Performance, Impact, Gratification, Education*

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## **Introduction**

Social media in the 21st century is the quintessential platform of public communication. No organization, whatsoever be its size or products and services offered, can afford to miss the power of social media in reaching out to customers. Traditionally, most of the marketing strategies were restricted to conventional methods.

In today's digital era, different campaigns rely significantly on online communication platforms to build support. The digitalization of modern media has significantly transformed the lifestyles of young students, who have become prominent consumers of new media applications. Laborde (2023) reported that approximately 97% of young individuals actively use social media, highlighting its prevalence among youth. Baran (2010) acknowledged that these digital platforms, particularly social networking sites, can offer benefits such as promoting e-learning and advancing digital educational programs. It has transformed the way young people relate to information, social engagement, and education with digital media. The most important users of the platforms are younger students; they do it actively in their daily lives.

Facebook is sometimes popularly known as "The King of Social Media," with a population base of more than 3 billion users worldwide (Bernhardt, 2023). It is the most widely used social network. Users spend, on average, 18 hours per month on this website (Bernhardt, 2023). It is worth mentioning that social media use in Pakistan is also considerable 71 million active users were reported as of January 2023 according to Data Reports in 2023. The country has active users with 37 million on Facebook, accounting for 84% of Pakistan's social media users actively engaging with the platform. In fact, this popularity shows itself among young university students, who are the major Facebook users across Pakistan.

The extensive use of Facebook among university students becomes an important question as it touches upon both the personal life and academic performance of a student. Research has shown that increasing trends in social media usage detract a student's capability for concentration, time scheduling, and studying effectively (Miguel, 2009; Choney, 2010). Therefore, this study attempts to examine the usage pattern of Facebook by university students in Pakistan.

Applying the theoretical model of Uses and Gratifications (Katz & Blumler, 1974), this study tries to understand why students use Facebook, what motivates them to consume Facebook, and what types of gratification they seek. The findings are then extended to understand the depth, frequency, and timing of Facebook consumption and connect them with

the educational outcomes of students. In essence, the general objective aims at raising awareness about the challenges that result from Facebook addiction and proposing strategies that can lower its effects on scholarly performances while fostering healthier digital engagement.

In the recent past, excessive usage of Facebook among university students has been an area of grave concern since it affects their performance in education. Facebook has become a program dominating the young user's daily life. More than 50% of its active users are students who in turn abuse the site with heavy, frequent, and continuous usage. Such a high rate of overuse has sparked serious fears of addiction, poor time management, and a decline in students' academic performance.

Students who are heavy abusers of Facebook do experience difficulties in managing their behaviors as they always spend much time in unproductive scrolling and aimless activities. This affects them drastically such as procrastination, disturbance of sleep cycles, and inability to concentrate on any academic activities. The addictive tendencies of Facebook make things worse since more students could not log off when they experience interference with the achievement of educational goals.

Although Facebook has tremendous learning potential, the current consumption trends among university students pose significant challenges. An urgent intervention is thus warranted to address the correlation between addiction to Facebook and declining levels of academic performance. The aim of this study is to examine usage patterns and intensity of Facebook and its correlation with the academic performance of university students. Against the above problems, this research endeavors to contribute to the growing discourse of digital well-being and to formulate action strategies needed to overcome the negative impacts of overindulgence in Facebook consumption on a student's academic success.

### **Literature Review**

Social media as the most used medium to promote political campaigns (Abdillah, Darma, & Yani, 2014). Social media portends to be the current and future media for political campaigns and reach the voters and supporters immediately. Social media has ability to establish a political party's image in the contemporary society. Today, almost all the political parties have social media platforms used in sharing information and ideas among their teaming supporters as well as to engage actively most online citizens (Abdillah, et al., 2014). Social networking, specifically through Facebook, has become a primary tool of modern communication for nearly all people, thereby influencing every student's interaction, access to information, and management of academic responsibilities. Although

social networking sites are helpful in making significant connections and promoting e-learning, overreliance has been perceived as questionable in the context of mental health problems in students' heads as well as academic performance.

### ***Social Media usages Patterns***

Social Networking Sites (SNSs) have transformed the way students share information, connect with their peers, and participate in collaborative activities. According to Boyd and Ellison (2007), SNS refer to sites which are meant to be created and maintained social connections, primarily of the young user. Junco et al., (2021) argued that students sometimes use such as Facebook to keep in touch with friends and update them on their lives, becoming integral parts of their routines. However, a study revealed overindulgence leads to adverse effects. Miguel (2009) stated that the excessive use of SNS reduced the motivation of students towards study, which lowers their marks as well. Kist (2008) further highlighted that approximately 90% of America's teenagers have internet access; and 75% of them surf the internet more than once in a day, it reflected the extensive SNS usage among the youth.

### ***Addictive Patterns of Social Media***

Social media addiction becomes a global concern, as researchers point out how it has negatively impacted lives and especially the educational aspects. According to Ali and Elciyar (2019) during addiction, an individual is compelled, holding a strong craving with immense desire that frightens them into disrupting their daily chores for that something. According to Veronica and Samuel (2012), social media addiction is now at pandemic levels, cutting across all ages of students, thus causing extreme distractions to academic as well as personal responsibilities. Studies further elaborates that addiction is not only the frequency of usage but inability to control one's time spent on such sites. The University of North Carolina (2023) found that youth check their social media accounts more than 20 times a day, indicating a habitual and addicted behavior pattern. Rabadi et al. (2017) assert that such addiction results in poorer academic achievements because a student cannot put academic work first above social media activities.

### ***Facebook as a Social Media Giant***

Facebook is known as the "King of Social Media," with more than 3 billion active users worldwide. According to Bernhardt (2023), two-thirds of all users of social media around the world use Facebook and spend time reaching up to 18 hours a month. In Pakistan, Facebook has become the most actively used social media site with 37 million active users and 84% audience reach among the total population of Pakistan. Facebook presents

a number of important tools to facilitate social interactions, collaboration, and information dissemination, its overuse has been seen with negative consequences. Khan (2019) noted that excessive use of Facebook lowers students' academic performance because they get distracted and waste their time. Hosen et al. (2021) further note that Facebook is frequently used for entertainment rather than education purposes, thereby depriving students of their focus on academic pursuits.

### ***Impact of Facebook usage on Academic Performance***

This relationship has been analyzed extensively through literature with unvarying evidence that Facebook use negatively affects academic performance. According to Choney (2010), students with low Facebook usage have a relatively high GPA: 3.82 for users with moderate usage as opposed to 3.06 with high users. Duberstein (2009) further commented that Facebook often interferes with academic routines in that heavy users most of the time lack discipline in academics. Thuseethan and Khuhanesan (2012) further contend that procrastination ensues from the use of Facebook since many students take more time browsing the feeds rather than being in class to study. Vahishta and Ahuja (2017) further affirm that students who are addicted to Facebook have a deteriorating trend in study skills therefore low academic performance is realized overtime. This finding resonates with Enriquez (2010), who concluded that excessive use of Facebook snaps away the student's ability to focus, prioritize, and succeed academically.

### ***Theoretical Framework: Uses and Gratifications***

This research work was based on the Uses and Gratifications (U&G) theory to examine the consumption patterns of Facebook and how it will influence a student's academic performance. According to U&G theory, as stipulated by Katz and Blumler, who developed it back in 1974, individuals are active users of the media where people seek media in the process of satisfying a particular need and obtaining gratification. This would, therefore, be useful in the motivation related to social media use and its subsequent effects on behaviors, attitudes, and outcomes. The theoretical framework of this research is the Uses and Gratifications theory by Katz & Blumler (1974), which outlines the reasons for Facebook. This theory states that when there is an active selection of media, it happens for the fulfillment of specific needs as entertainment, information, or social contact. According to McQuail (1983), the user is not passive but an active participant in search of gratifications in the selected media.

- ***Entertainment:*** Students use Facebook as a source of amusement and relaxation, often to divert their minds from academic stress.

- **Social Interaction:** Facebook facilitates communication and relationship-building among students, connecting them with peers, teachers, and communities.
- **Information and Education:** Some students use Facebook to access educational content, though this is often secondary to other motivations. The framework further supports the analysis of the adverse effects of excessive Facebook usage, including addiction, and lower academic performance.

#### **Application of U&G Theory**

- 1) **Determining User Motivations:** According to McQuail (1983), motivations can range from the desire to stay in touch with social circles to entertain and diverts one's time. This aligns with the conclusions made by Katz and Blumler (1974), who observe that, "selectivity is the essence of media use for meeting specific communicative needs".
- 2) **Usage Patterns Analysis:** This paper assesses, by focusing on Facebook consumption, how often students use the site, their frequency of use, and the average time spent per visit. It examines whether their motives match with their actual uses; actually, according to some studies, such as Rabadi et al. (2017) and Boyd and Ellison (2007).
- 3) **Gratifications Exploration:** It helps determine what gratifications students derive from Facebook use. Examples of them could be stress alleviation, leisure or social involvement (McQuail, 1983). The paper discusses in more detail ways in which gratifications contribute to overuse, distraction, and procrastination, according to Miller (2022).
- 4) **Determining Academic Impact:** U & G provides the framework to understand how the appeal of Facebook can go from productive uses information-gathering, to counterproductive habits such as procrastination. The U&G theory provides an excellent foundation for the analysis of university students' use of Facebook through the active role of users in selecting and consuming media. It exposes the duality of Facebook as a means of connection and distraction by discussing gratifications sought and their unintended consequences.

#### **Objectives of the Study**

The specific objectives of the study were to:

- 1) To explore the usage patterns of Facebook among university students.

- 2) To analyze the relationship between Facebook usage and academic performance.

### **Research Questions**

- 1) What are the usage patterns of Facebook among university students?
- 2) Does Facebook usage significantly impact the academic performance of university students?

### **Hypotheses**

H 1: Heavy consumption of Facebook has a significant relationship with Facebook addiction among university students.

H<sub>0</sub> 1: Heavy consumption of Facebook has no significant relationship with Facebook addiction among university students.

H 2: Heavy Facebook consumption has a significant relationship with academic performance among university students.

H<sub>0</sub> 2: Heavy Facebook consumption has no significant relationship with academic performance among university students.

H 3 The more the addiction of Facebook, lower the academic performance.

### **Methodology**

This study is based on a quantitative research design, which focuses more on measurable data to analyze the consumption of Facebook and its resultant impact on the academic performance of the students in universities. This design will be helpful in assessing the relationship between the variables under study and testing the hypotheses proposed for this study. Data was gathered through surveys, thereby providing numerical insight into how frequently, intensely, and highly Facebook usage has an impact on students' academic life.

#### ***Population***

The population for this research consists of university students in Islamabad, specifically those who are regular users of Facebook. This demographic is particularly significant as they represent a substantial proportion of active Facebook users. The population includes students enrolled in 32 public sector HEC recognized universities of Islamabad in various academic programs.

#### ***Sample and Sampling Technique***

In this study, the purposive sampling technique was used, a non-probability method ideal for selecting participants based on specific criteria. Purposive sampling was chosen because they are active Facebook

users and enrolled in university programs. The use of purposive sampling in this study because it aligns with the research objective of examining the relationship between Facebook usage and academic performance. A non-probability sampling method, is focus on targeting participants based on relevant characteristics. The technique focused on university students who frequently use Facebook and improved the efficiency of data collection while ensuring the findings were directly relevant to the study's hypotheses.

The final sample consisted of 250 university students, who were surveyed using a structured questionnaire. The sample size was deemed sufficient to provide statistically significant insights into Facebook usage and its academic impact. Surveys were distributed among the selected participants, containing questions related to Facebook usage frequency, motivations, and its effects on academic performance.

The instrument used in this study was a structured questionnaire specifically designed to measure Facebook usage, addiction levels, and its impact on the academic performance of university students. The questionnaire included various items that assessed key constructs such as the frequency of Facebook usage, reason for using and addiction. Content validity was ensured by deriving the questionnaire items from previous research and established literature on social media usage and its effects on academic performance. This step ensured that the instrument covered all aspects of Facebook usage, addiction, and academic impact comprehensively. The instrument, pilot testing was conducted with a small subset of the target population. This allowed for adjustments to ensure clarity and appropriateness of the questions, improving the overall reliability of the instrument. The internal consistency of the questionnaire was measured using Cronbach's Alpha. This confirmed that the items consistently measured the intended constructs and that the results derived from the instrument would be dependable and replicable. By detailing the validity and reliability of the research instrument, this study ensures the credibility of its findings.

## **Findings**

The study aims to establish clear relationships between the increased Facebook usage leads to lower academic performance of students.

### ***Hypothesis 1***

H1: Heavy usage of Facebook has a significant relationship with Facebook addiction among university students.

H<sub>0</sub> 1: Heavy usage of Facebook has no significant relationship with Facebook addiction among university students.



Table 01  
*Facebook usage and addiction*

		Consumption of Facebook	Addiction of Facebook
Consumption of Facebook	Correlation Coefficient	1.000	.220**
	Sig. (2-tailed)	.	.000
	N	250	250
Addiction of Facebook	Correlation Coefficient	.220**	1.000
	Sig. (2-tailed)	.000	.
	N	250	250

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

According to the results, the correlation coefficient of 0.220 indicated a positive but weak relationship between heavy Facebook consumption and addiction among university students. This suggests that as Facebook usage increases, addiction levels also tend to rise. The p-value of 0.000 is less than the significance level (0.01), indicating that the results are statistically significant. This means there is sufficient evidence to reject the null hypothesis (H<sub>0</sub>).

The findings support H<sub>1</sub>, confirming a significant relationship between heavy Facebook consumption and addiction among university students. Although the relationship is not very strong, the results highlight that excessive Facebook usage contributes to addictive behaviors. The findings validate that heavy Facebook consumption is significantly associated with Facebook addiction among university students. Despite the weak strength of the relationship, the results are robust enough to establish a connection. The study highlights the potential risks of heavy Facebook consumption leading to addictive behavior. This has important implications for developing interventions aimed at mitigating social media addiction among university students, particularly focusing on time management and awareness campaigns. The analysis confirms that heavy Facebook consumption plays a role in fostering addictive behaviors among university students, underscoring the need for targeted measures to address this growing concern.

### ***Hypothesis 2***

- H<sub>2</sub>: Heavy Facebook consumption has a significant relationship with academic performance among university students.

- H<sub>0</sub> 2: Heavy Facebook consumption has no significant relationship with academic performance among university students.

Table 02  
*Facebook usage and academic performance*

		Usage of Facebook	Academic Performance of Student
Usage of Facebook	Correlation Coefficient	1.000	.209**
	Sig. (2-tailed)	.	.001
	N	250	250
Academic Performance of Student	Correlation Coefficient	.209**	1.000
	Sig. (2-tailed)	.001	.
	N	250	250

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

According to the results in table 02, It was found that the correlation is significant with a value of 0.01, so the predicted hypothesis has been approved by rejection of the null hypothesis. Subsequently, it has been proved that there is a positive correlation between the consumption of Facebook and academic performance of students. The null hypothesis (H<sub>0</sub>) is rejected, and the alternative hypothesis is accepted. This confirms that heavy Facebook consumption is significantly associated with a decline in academic performance among university students. The results suggest that excessive time spent on Facebook negatively affects students' academic outcomes, possibly due to distractions, procrastination, and reduced study time.

### ***Hypothesis 3***

- H<sub>3</sub> The more the addiction of Facebook, lower the academic performance.

Table 03  
*Facebook addiction and lower academic performance*

		Addiction of Facebook	Lower Academic Performance
Addiction of Facebook	Correlation Coefficient	1.000	.842**
	Sig. (2-tailed)	.	.000
	N	250	250
Lower Academic Performance	Correlation Coefficient	.842**	1.000
	Sig. (2-tailed)	.000	.
	N	250	250

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

According to the results it was found that the correlation is significant with the value of 0.000. The results indicate that there is a statistically significant association since the p-value is 0.000, which is below the standard threshold of 0.01 for significance. This high level of significance confirms the hypothesized statement; therefore, the null hypothesis is rejected. Hence, this study establishes that higher levels of Facebook addiction indicate lower academic performance among university students. This result highlights the adverse effects of excessive Facebook use on students' academics. Addiction to Facebook mainly hampers focus, time management, and smooth completion of academia. The results for students who spend a lot of time on the platform are likely to encounter difficulties in sticking within time frames, consistency in study habits, and even satisfactory grades. Addiction has a habitual nature that leads to diverting more attention from productive academic activities and creates procrastination habits, which makes the adverse outcomes worse.

The findings indicate that the use of excessive social media, specifically Facebook, is detrimental and therefore there is a need for universities and educators to be aware of the impacts and take proactive measures in minimizing them. This may be done through interventions like the promotion of better time management skills, offering workshops on digital distractions, and encouragement to set limits on the usage of social media. Further, the findings of this research also emphasize the need for balance between social media and academic performance. Although the Facebook offers a number of benefits including connectivity and information sharing, this research concludes that excessive use of the site would work against students' academic success. This study, therefore,

contributes to the literature that underscores the negative effects of social media addiction on the academic outcome of students, reiterating the need for focused interventions and awareness programs in educational settings to handle this issue.

### **Discussion**

Facebook is now one of the most widely used and consumed social networking platforms in the world, particularly with regard to younger populations. Being considered a top tool for communication and social interaction is celebrated for positive aspects that are being positively attached to: it connects people, brings colleagues together, and entertains them. However, despite these commendable accomplishments, heavy or overuse of Facebook among one of its largest demographics - the young population - has become a matter of growing concern. Since over 50 per cent of the active users of Facebook are less than 30 years old and most of them come from the young university-going world, it has become a part and parcel of daily life for most of them. They don't just come but go through the hectic life of being heavy, regular and frequently habituating Facebook, spending hours at a stretch at times. This intense engagement poses serious questions about the consumption pattern, its impact on their psychological well-being and physical health, and academic performance.

Excessive Facebook consumption is becoming increasingly related to addictive behavior as well as other problematic results. Some of the most serious ones entail disturbances in sleep in which students forego rest to spend more time and behavioral issues defined by irritability, lowered self-regulation as well as an addiction to social media. The addiction further interferes with students' ability to maintain meaningful social relationships in the real world, manage their time correctly, and develop consistent studying habits. Such behavior patterns not only interfere with the students' personal lives but also have serious implications for their educational activities and academic performance.

### **Conclusion**

According to the results, the present study provides strong evidence regarding the significant negative impact that Facebook addiction has on the academic performance of university students. As usage of Facebook increases, the likelihood of addiction is greater, which in turn adversely affects their concentration, time management, and overall academic performance. The strong correlation between levels of Facebook addiction and lower levels of academic performance underscores a clear need for interventions with the excessive use of social media in university students.

Recognizing the nature of addiction as a habit with detrimental effects on academic routines, institutions, and educators can devise intervention techniques to help students manage their habits more effectively, thereby preventing detrimental effects on their academic outcomes. This research makes an added contribution to the literature about how social media use impacts academics, which has made this educational organization take an important stance, calling it upon action, in mitigating adverse outcomes of over-accumulation by Facebook consumption.

The study established a strong negative relationship between Facebook consumption and academic performance among university students. Heavy users, finding it more difficult to control the behaviors, waste such an amount of time in frivolous scrolling and unfruitful interacting. This would otherwise be spent on academic or personal development matters. As a learner becomes more reliant on Facebook, his ability to focus on the targets, prioritize tasks, and meet deadlines fades away and lowers the grades and overall performance. The analysis is conclusive proof that the higher one consumes Facebook, the lower the academic performance. Besides, the addictive nature of consuming Facebook aggravates procrastination and distraction, and which students are seen to impact their academic performance negatively. Actually, students tend to be unable to resist Facebook notifications, updates, and a continuous flow of posts, thus interrupting study sessions and lowering their productivity.

For these problems to be addressed, a multi-prolonged effort by parents, teachers, and even students is required. Parents must take responsibility to monitor and guide children's habits about digital use so healthy behaviors can be set and practiced. Teachers can also play a very crucial role by introducing lessons in digital literacy as well as time management at school so that children make conscious decisions about their social media usage. Students, on their part, should realize their role in self-regulation and set priorities for their academic goals while disengaging from excessive social media usage.

Furthermore, institutions and policymakers should develop plans to adopt healthier use of digital technologies by creating awareness initiatives, workshop/lectures on time management and self-discipline, and counseling for students affected by addiction to social networking. Not to banish Facebook but to encourage responsible and meaningful use. Facebook itself could make a difference in being a 'healthy' social media provider. This is feasible by giving tools that would enable the citizens to monitor and control how much time they spend in the network.

Facebook may be an important utility for communication and connectivity, concerning consumption, it may pose adverse risks to the

academic performance and overall well-being of university students. The article suggests that there is an urgent need to intervene in a positive way with Facebook addiction and its adverse implications. Therefore creating digital awareness culture and balanced usage would always assist stakeholders to help students achieve better academic outcomes while maintaining a healthy relationship with social media.

## References

- Ali, S., & Elciyar, K. (2019). A Comparative Study on Social Media Addiction of High School and University Students. *Contemp Educ Technol, 10*(2), 106–119.
- Baran, S.J. (2010). *Introduction to mass communication media literacy and culture*. New York: McGraw-Hill.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: definition, history, and scholarship. *Journal of Computer Mediated Communication, 13*, 210e230. <http://dx.doi.org/10.1111/j.1083-6101.2007.00393.x>.
- Cheung, C. M. K., Chiu, P. Y., & Lee, M. K. O. (2011). Online social networks: why do students use Facebook? *Computers in Human Behavior, 27*(4), 1337e1343.
- Choney, S.(2010) *Facebook Use Can Lower Grades by 20 Percent, Study Says*. [http://www.msnbc.com/id/39038581/ns/technology\\_and\\_science-tech\\_and\\_gadgets/](http://www.msnbc.com/id/39038581/ns/technology_and_science-tech_and_gadgets/).Retrieved.
- Clayton, R. B., Osborne, R. E., Miller, B. K., & Oberle, C. D. (2013). Loneliness, anxiousness, and substance use as predictors of Facebook use. *Computers in Human Behavior, 29*, 687e693. 10.1016/j.chb.2012.12.002.
- De Andrea, D., Ellison, N. B., LaRose, R., Steinfield, C., & Fiore, A. (2012). Serious social media: on the use of social media for improving students' adjustment to college. *Internet and Higher Education, 15*, 15e23. 10.1016/j.iheduc.2011.05.009.
- Ellison, C. Steinfield, and Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students' use of online social network sites. *Journal of Computer Mediated Communication, 12*(4), 111-127. 10.1111/j.1083-6101.2007.00367.x.
- Enriquez, J.G. (2010). *Facebook and other online social networking sites can lower grades, study says*. <http://seerpress.com/facebook-and-other-online-social-networking-sites-can-lower-grades-studysays/6935/>.
- Ezeji P., & Ezeji K. (2018). Effect of social media on the study habits of students of Alvan Ikoku federal college of education, Owerri. *Int J Educ Pedagog Sci., 6*(2), 29-38.
- Gafni., & Ruti M. (2012). Costs and benefits of facebook for undergraduate students. *Interdiscip J Information, Knowledge, 9*(2), 68-75. 10.28945/1577.

- Hassan, M. (2023). *Control variable – definition, types and examples*. Retrieved from <https://researchmethod.net/control-variable/>
- Iqbal, M. (2023). *Facebook revenue and usage statistics (2023)*. *Business of apps*. Retrieved from <https://www.businessofapps.com/data/facebook-statistics/>
- Jaffar, k. (2022). Impact of social media on adolescents learning in district Quetta. *Pakistan journal of educational research*, 12(1), 22-29.
- Kasirye, F. (2022). *The importance of needs in uses and gratification theory*. International Islamic University Malaysia Press. <https://doi.org/10.31124/advance.14681667.v2>
- Khan, U. (2009). *Facebook students underachieve in exams*. Daily Telegraph. Retrieved on July, 2013, from <http://www.telegraph.co.uk/educationnews/5145243/Facebook-students-underachieve-in-exams.html>
- Kist, W. (2008). I gave up MySpace for lent: New teachers and social networking sites. *Journal of Adolescent & Adult Literacy*, 52(3), 245-247. 10.1598/JAAL.52.3.7.
- Laborde, S. (2023). *Teenage social media usage statistics in 2023*. *Tech Report*. Retrieved from <https://techreport.com/>
- Miller, S. (2022). *Why teens are more susceptible to the addictive features of social media and how parents and guardians can help adolescents develop a healthy relationship with social media*. Jefferson Health. <https://www.jeffersonhealth.org>
- Mpundu, N. (2022). *The effects of Facebook usage on students' academic performance in Lusaka*. GRIN Verlag. <https://www.grin.com/document/1278144>
- Murad A, Gul, Changezi R, Naz A, Khan. (2019). Effects of Facebook Usage on the Academic Performance on the Undergraduate Students of Quetta City. *Clin Soc Work Heal Interv*. 10(2), 70–9.
- Newport academy. (2023). *Teen social media addiction and mental health*. Retrieved from <https://www.newportacademy.com/resources/mental-health/teens-social-media-addiction>.
- Pempek, T. A., & Calvert, S. L. (2009). College students' social networking experiences on facebook. *Journal of Applied Development psychology*, 30(3),227-238. doi:10.1016/j.appdev.2008.12.010



- Rabadi, L., & Ajlouni M., & Masannat S., et al. (2017). The relationship between depression and internet addiction among university students in Jordan. *J Addict Res Ther*, 8(6), 1–8.
- Rick. (2022). *5 benefits of Facebook for students. Rick's daily tips*. Retrieved from <https://www.ricksdailytips.com/facebook-for-students/>
- Safdar, G. Khan, A.W., Abbasi, A. (2018). Role of social media for promotion of education in southern Punjab. *Journal of Education Research*, 21(1), 73-85.
- Safdar, G., Abbasi, A. (2020). Evaluation and development of social media: A historical perspective. *Online Media & Society*, 1, 35-44.
- Safdar, G., Javed, M.N., Amin, S. (2020). Use of internet for educational learning among female university students of Punjab, Pakistan. *Universal Journal of Educational Research*, 8(8), 3371- 3380. DOI: 10.13189/ujer.2020.080809.
- Safdar, G., Khan, A.W. (2020). E-learning: Current scenario of internet and educational learning among university students of Punjab, Pakistan. *Journal of Educational Research*, 23(1), 171- 185.
- Shabir, G., Hameed, Y.M.Y., Safdar, G., Gilani, S.M.F.S. (2014). Impact of social media on youth: A case study of Bahawalpur city. *Asian Journal of Social Sciences and Humanities*, 3(4), 132-151.
- Shabir, G., Iqbal, Y.W., Safdar, G. (2014). Demographics“ differences in social networking sites use: What communication motives does it gratify? *International Journal of Social Work and Human Service Practice*, 2(5), 184-194.
- Sheldon, P. (2008). Students favourite: Facebook and motives for its use. *Southwestern Mass Communication Journal*, 23(2), 39-53.
- Syed, U.E., Safdar, G., Khan, A. (2023). Relationship between social anxiety, social comparison and competitive behavior among social media users. *Online Media and Society*, 4(2), 101-108.
- Thuseethan, S., & Kuhanesan, S. (2012). *Influence of Facebook in academic performance of Sri Lankan university students*. GRIN Verlag. <https://www.grin.com/document/1278144>.
- Vahishtha, S., & Ahuja, S. (2017). Impacts of Facebook addiction disorder (FAD) on study habits and academic achievement of adolescents. *MIER Journal of Educational Studies, Trends & Practices*, 7(1), 57-65.

Veronica, S., & Samuel, A. (2012). Social media addiction among adolescents with special reference to Facebook addiction. *IOSR Journal of Humanities and Social Science*, 6(2), 72-76. Retrieved from <https://www.iosrjournals.org/iosr-jhss/papers/Vol6-issue2/A12020272.pdf>

Wong, B. (2023). *Top social media statistics and trends of 2023*. *Forbes*. Retrieved from <https://www.forbes.com/advisor/business/social-media-statistics/#source>.

Manzoor, S. & Ahmed, Z. (2024). Facebook usage patterns and its impact on the academic performance of university students. *Pakistan Journal of Distance and Online Learning*, 10(2), 50-67.