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# Technology Overload and the Social Media Paradox: Academic and Psychological Outcomes among Secondary School Students in Pakistan

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**Keywords**

Social Media, Technology Overload, Technostress, Academic Performance, Sleep Disturbance, Social Comparison, Digital Literacy, Parental Monitoring, Secondary Education.

**Abstract**

*The increasing use of smartphones and social media has gradually and significantly changed the ways in which secondary school students in Pakistan engage with teaching-learning, their peers, and the society in which they live. However, excessive and unregulated use can lead to technology overload and associated academic and psychological challenges. This study adopted a mixed-methods design to analyze the associations among social media use, technology overload, academic performance and psychological outcomes in secondary school students in Pakistan. Using stratified random sampling technique, quantitative data were collected from 300 students of Grade 9$^{th}$ and 10$^{th}$ studying in government secondary schools in Dera Ismail Khan, Pakistan during the academic session 2024-2025, whereas qualitative data were collected through semi-structured interview with 20 students, and analyzed thematically. Quantitative findings of the survey showed that 62% of the students reported using social media platforms for 3 to 5 hours a day, while 18% of them were exceeding 5 hours. There exists a positive association between social media use and technology overload ($r = .58$, $p < .01$), and contrary to it, technology overload was negatively associated with academic performance ($r = -0.46$, $p = .01$). Students reported stress, mental fatigue, and sleep disruption due to prolonged use of smart phones. The main three themes emerged from qualitative findings were: (i) distraction and procrastination, (ii) social pressure and comparison, and (iii) cognitive fatigue. The study identifies a social media paradox, aligned with Cognitive Load Theory, and Technostress Theory, and recommends digital literacy education. In order to overcome technology overload among secondary school students of Pakistani schools, the study recommends proper guidance on the part of schools, and vigilant role of parents to monitor their children.*

## INTRODUCTION

The advancement of digital technology especially the use of smartphones and social media has significantly revolutionized the learning habits of teens. Students in the Pakistani educational environment have become more dependent on social media interactions, entertainment, and studying (Ahmed & Qazi, 2021). These platforms are of great advantage, such as instant access to knowledge, social learning, and collaborative learning activities, thus

boosting digital literacy in the youngsters (Kuss & Griffiths, 2015). Nonetheless, constant connectivity, constant notifications, and the need to multitask may cause substantial mental burdens to its users.

Technology overload is a state of being stressed, experiencing less attention, and becoming less productive because of being overly engaged in technology (Sana et al., 2013). To students, this overload can be expressed as the inability to focus, multitasking as a compulsive behavior, procrastination in academics, sleeping problems, and high levels of stress- all of which can negatively influence academic engagement and performance of the student (Rosen et al., 2013; Sana et al., 2013). According to experimental studies, digital multitasking in the learning process leads to significant differences in understanding and memory in comparison to concentration in the study (Sana et al., 2013). This situation is the paradox of social media: on the one hand, these platforms can help learn and communicate; on the other hand, they promote the danger of being distracted, experiencing technological burnout, and becoming psychologically vulnerable. This problem is also exacerbated in the context of Pakistani secondary schools, where digital inequalities and absence of well-organized teaching on the use of technologies, as well as uneven parental or institutional supervision, are common (Khan & Imran, 2022). The literature on the topic accepts the fact that social media may facilitate the process of information acquisition and academic cooperation between adolescents, but excessive use is often identified with distraction and the inefficient learning strategies (Saeed, 2020). Therefore, it is high time to examine how social media created technology overload affects the academic and psychosocial growth of Pakistani secondary school students.

In spite of the increasing integration of digital technology into the learning process and communication between students, secondary school learners in Pakistan are at increasing risks of academic disruption and psychological pressure associated with overuse of social media. Even though these platforms have the potential to positively influence education, e.g. access to more information and better engagement with students, the uncontrolled use is associated with technology overload, poorer academic results, and increased stress (Ravichandran & Suresh, 2020; Sana et al., 2013). Studies conducted in Pakistan show that those students who regularly visit social networking sites in the times of study are more likely to be distracted, lose focus, procrastinate, and receive worse academic performance (Saeed, 2020; Syed et al., 2021). Such difficulties are probably enhanced by lopsided digital literacy, a lack of parental control, and the absence of institutional regulations (Khan & Imran, 2022). One major research gap still exists in terms of the Pakistani context, especially the research that would simultaneously discuss academic achievement with psychosocial and experiential variables on the secondary school level. The paper, thus, aims at investigating the correlations between the use of social media and technology overload, academic performance, and psychological health among secondary school students in Pakistan.

**Definitions of Key Terms**

**Technology Overload:** A mental state that results due to too much pressure of technology leading to stress, distraction and reduced productivity (Tarafdar et al., 2015). In this paper, it is specifically the effects of intensive smartphone and social media use by secondary school students.

**Social Media:** Web based applications and sites that allow the user to create, share and communicate with content and other users (Kaplan & Haenlein, 2010). In the case of this study,

this will involve the websites frequented by Pakistani teenagers, including Facebook, Instagram, TikTok, and WhatsApp.

**Academic Performance:** An indicator of learning success, which is usually expressed in grades, test scores, and teacher evaluation (Suleman et al., 2019). In this regard, it includes the self-assessment of the student performance and the academic difficulty as reported by the students.

**Psychological Outcomes:** The emotional, cognitive, and behavioural effects of using technology. The outcomes of this study include stress levels, anxiety, problems with attention, sleep disorders, and social isolation (Przybylski & Weinstein, 2017).

## Significance of the Study

The implications of the findings of this research to various stakeholders, such as educators, parents, school administrators, and the policymakers, are important. To teachers, the research will offer important understandings in how to design pedagogical approaches that balance technology usage without causing much disturbance that is likely to hamper academic achievements (Kuss & Griffiths, 2015). In the case of parents, the findings will provide them with useful information to monitor and orient the adolescents towards healthier social media-related behaviors to overcome possible psychosocial threats (Andreassen et al., 2017).

On an institutional level, the evidence obtained can be used to create policies and use rules that govern the use of technology in schools, where it is an instrument of education and not a source of distraction. Moreover, the article meets a significant gap in the context-related research among adolescents in Pakistan because the existing literature (Rashid & Saeed, 2020) demonstrates that there is a lack of specific work on the subject.

## Research Objectives

The proposed research explores the consequences of technology overload relating to the use of social media of secondary school students in Pakistan. The following are the specific objectives:

1. To investigate the trends and the prevalence of social media among secondary school students.
2. To examine the effect of technology overload on the academic performance of students.
3. To find out the psychological implication of too much use of social media such as stress, anxiety, attention deficit and sleep disturbance.
4. To investigate the perceptions of the students on how the use of social media influences their study habits and overall well-being.
5. To present evidence-based policies that can be used to reduce the negative impact of technological overload on students in secondary schools.

## Research Questions

In line with the mentioned objectives, the research questions that were posed in this study include:

**Q1:** What are the current existing trends and prevalence of the use of social media by secondary school students in Pakistan?

**Q2:** How does technology overload relate to academic performance?

**Q3**: What are the psychological consequences of overuse of social media among the students?

**Q4:** What do the students say about the impact of social media on their learning practices and mental health?

**Q5**: How can stakeholders mitigate technology overload in the secondary school students?

## LITERATURE REVIEW

**Social Media Usage among the Adolescents:** Social media has become a part of the lives of adolescents, and it offers an opportunity to communicate, work, and share learning materials (Kuss & Griffiths, 2015). Students will have access to social media where they can interact with fellow student, exchange learning material or even help one another. On the other hand, repetitive usage, entertainment use, or unfacilitated usage has been found to contribute to distraction, procrastination, or stress related to social media usage (Junco, 2012; Rosen et al., 2013). The usage of social media by adolescents in Pakistan is influenced by availability, peers, or lack of formal guidance (Ahmed & Qureshi, 2020).

**Technology Overload and Mental Fatigue:** Technology Overload is "the degree to which an individual or an organization is exposed to more information, technology-related stimuli than they are able to effectively absorb" (Ayyagari et al., 2011). Notifications may vary from "constant to sporadic" in rate, while switching between different types of content may occur in quick succession. Available data indicates that divided attention adversely affects understanding when learning is observed in an online environment (Riaz & Saleem, 2019). It could have academic applications in that "students using computers to learn may perform no better than students using paper and pencil" if certain guidelines in prioritizing attention are not considered.

**Social Media and Academic Performance:** There are both detrimental and beneficial effects of social media as far as academics are concerned. The beneficial effect is that social media may help students work together towards completion of academic tasks and share academic resources easily (Tess, 2013). The detrimental effect, on the other hand, is that using social media excessively has been linked with a loss of focus, procrastination, and poor performance in academics (Kirschner & Karpinski, 2010). This problem may be pronounced if social media is used for recreation, repetitively, and at the same time as academics are being conducted (Malik et al., 2022).

**Psychological Impacts of Excessive Usage of Social Media:** Continuous connectivity and overload have been related to stress, anxiety, emotional exhaustion, and disrupted sleeping patterns (Samaha & Hawi, 2016; Twenge & Campbell, 2018). On the other hand, adolescents may be under the effects of social pressures and the process of upward social comparisons, which can lead to a decline in self-esteem and soaring levels of anxiety (Andreassen et al., 2017). One of the reasons why sleeping patterns are of high significance is the fact that a lack of sleep is associated with lower concentration and academic achievement (Hussain et al., 2021).

**Mediating and Moderating Factors:** Social media use impact does not have the same level of consequence for all students. Protective attributes include digital literacy skills, level of self-regulation, parental monitoring, and time management habits that moderate undesirable outcomes (Junco & Cotten, 2012). Risk attributes include lack of self-control, high levels of

multitasking, lack of awareness of negative consequences, and lack of support at the school level. In Pakistan, home conditions, availability of guidance, and school support could influence students more.

Although worldwide research has investigated the concepts of technology overload and social media use among adolescents, the empirical study for the context of secondary schools in Pakistan is lacking. Most studies conducted in the past are concentrated on a much older demographic, failing to give due consideration to a combined exploration of academic, psychological, and personal levels in the context of secondary schools. With the aim of filling the research gap, the current research explores all these associated domains in government secondary schools in Pakistan.

## THEORETICAL FRAMEWORK

The two main theoretical arenas on which this study is based are Cognitive Load Theory and Technostress Theory. Their applicability is explained below:

**Cognitive Load Theory (CLT):** CLT is a theory that argues that the working memory is limited and that learning is impaired when cognitive demands surpass that limit (Sweller, 1988). Within the framework of this investigation, the parallel consumption of social media on academic assignments is hypothesized to put students under the burden of an additional cognitive load. This load is caused by the flow of notifications, interrupts and the necessity to change the focus, thus interfering with the effective processing of the education content.

**Technology Overload, Technostress Theory:** Technostress studies investigate how certain stressors related to technology, e.g. techno-overload, continuous interconnecting, and interruption, have adverse effects on the well-being and performance of an individual (Ayyagari et al., 2011; Tarafdar et al., 2015). In the case of adolescents, the effect of technology overload may be characterized by mental exhaustion, increased stress, disturbed sleeping habits, and loss of interest in school (Salo et al., 2019).

Taken together, these theories are dual explanatory in that the Cognitive Load Theory describes the cognitive process of impaired learning by describing the overstraining of mental resources, whereas Technostress Theory is what leads to the resulting psychological distress and performance shortfalls of overstraining technological requirements. Such a combination serves to conceptualize the so-called social media paradox where the very tools of learning can be used to destabilize it.

## CONCEPTUAL FRAMEWORK

The suggested conceptual model assumes that the use of social media is linked to technology overload, which is, in its turn, correlated with academic outcomes and psychological health. It is hypothesized that the strength of the proposed relationships is moderated by a number of factors, such as parental monitoring, self-regulation capabilities, institutional technology policies, and digital literacy.

### Key Constructs

**Independent Variable:** Social media use (encompassing frequency, duration, and purpose).

**Mediator:** Technology overload (comprising cognitive fatigue, distraction, and perceived overwhelm).

**Dependent Variables:**

a. **Academic performance** (measured through grades/learning outcomes, focus, and task completion).
b. **Psychological outcomes** (including stress, anxiety, sleep quality, and emotional fatigue).

**Moderators:** Digital literacy, parental monitoring, self-regulation, time management, and school technology policy.

The below given Figure-1 shows the hypothetical associations between the use of social media, technology overload, and academic and psychological performance of students.

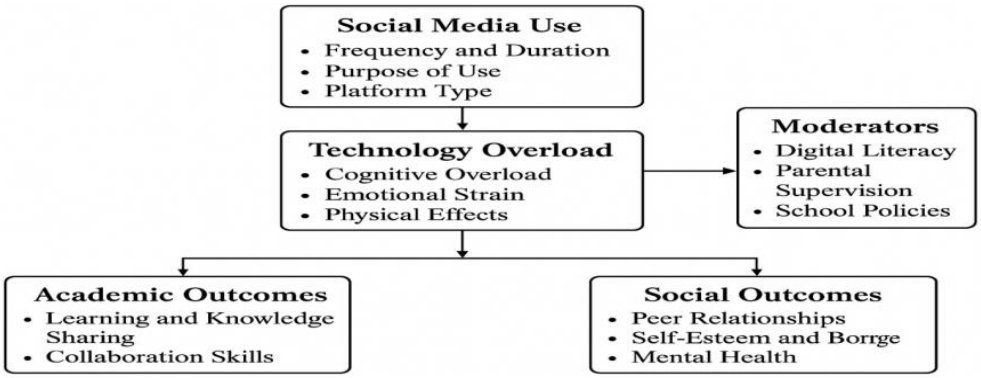


***Figure 1:*** *Conceptual Framework of Technology Overload and Its Impacts*

**Framework Explanation**

1. The frequency and duration of social media use are likely to increase the risk of technology overload; this is likely to occur when the usage of social media is unregulated or when it is associated with recreational use.

2. It is hypothesized that technology overload will have negative consequences on both:

   a. By impairing attention, memory and consistency of study, academic performance.
   b. Psychological well-being, which exerts a role of contributing to stress, anxiety, sleeping disturbances, and emotional exhaustions.

3. The negative outcomes of the overload caused by social media can be moderated or undermined by moderating variables like parental monitoring, digital literacy, self-regulation abilities, and planned time management.

## RESEARCH METHOD

It used a convergent and mixed-method approach to combine a cross-sectional study with semi-structured interviews to validate the results with perspectives from students (Creswell & Creswell, 2018).

## Population and Setting

The target population was students in grade 9 and 10 in government secondary schools in Dera Ismail Khan, Pakistan, during the 2024-2025 academic sessions. The estimated population included a total of 8,000 students in 20 government secondary schools.

## Sample and Sampling Technique

A stratified random sampling method was employed to ensure that there was equal representation of students by gender and grade levels. The number of students in the quantitative sample was 300, with 150 boys and 150 girls. The number of students to be purposely sampled was 20 to undergo in-depth interviewing.

## Research Instruments

**Quantitative Instrument (Questionnaire):** A structured, self-report questionnaire was employed to study the magnitude and pattern of technology overload and selected indicators of academic achievement and mental outcomes. The questionnaire was closed-ended; statements were on a Likert scale. The content validity of the questionnaire was reviewed by two experts in education.

**Qualitative Instrument (Interview Guide):** The semi-structured interviews focused on examining student experiences in relation to usage of social networking sites, distraction in academics, mental fatigue, peer pressure, problems related to sleep, as well as their perception regarding the impact on academics. This type of interview took a total of 30 minutes.

## Data Collection Procedure

The necessary permission was sought from respective school authorities prior to gathering data. The participants were well informed about voluntary participation as well as anonymity in their responses. The questionnaire was done during school time, and interviews were tape-recorded, considering participants' consent. The recordings later formed texts for analysis.

## Data Analysis Techniques

Quantitative data were analyzed using descriptive statistics such as frequency, mean, and standard deviation, as well as inferential statistics such as correlation and regression using SPSS software version 25. On the other hand, qualitative data were analyzed using thematic analysis as proposed by Braun and Clarke in 2006.

## Ethical Considerations

Permissions were sought, and granted, from relevant school authorities before the actual collection of data commenced. Participation in this study was purely voluntary, and the responses were confidential and anonymous. All students were explained the purpose of the

research study, the procedures to be used, the fact that participation is completely their free choice, and that they were free to withdraw at any stage of the process without negative consequences of any sort. The recordings and transcripts of the interviews were safely stored and accessed only by the researcher, and all data used only for academic purposes of research.

## RESULTS

### Quantitative Results

#### 1. Patterns of Use of Social Media Sites

A majority of the students (62%) spend 3–5 hours on social media daily, with 18% spending more than 5 hours on social media daily. More male than female students spend time on the social media.

#### 2. Relationship between Social Media and Technology Overload

The amount of time spent on social websites was positively related to technology overload ($r = 0.58$, $p < .01$), suggesting that more time is used by individuals who feel overwhelmed by technology.

#### 3. Relationship between Technology Overload and Academic Performance

Technology overload was found to be inversely related to academic achievement ($r = -0.46$, $p = 0.01$). Students experiencing technology overload also experienced more problems in completing tasks, lack of concentration, and diminished achievement on the exam.

#### 4. Psychological Outcomes of Technology Overload

Higher levels of technology overload were linked to stress, anxiety, and sleep disturbances. Roughly 54% of participants indicated experiencing mental exhaustion from extensive use of social media, in line with findings suggesting adverse psychological impact from excessive use of technology.

### Qualitative Results (Thematic Analysis)

For qualitative analysis, the following three themes emerged from interview:

**Theme 1- Distraction and Academic Procrastination:** Students identified that the notifications and entertainment content available were interrupting their study, generating task switching, as well as procrastination and unfinished homework.

**Theme 2- Social Pressure and Upward Social Comparison:** Some students reported feelings of anxiety and lower self-esteem associated with comparisons they made between themselves and their peers on social networks, as a result of which their motivation and emotional stability suffered.

**Theme 3- Cognitive Overload and Fatigue:** The students experienced mental fatigue after intensive social media usage. The students also complained of poor concentration and inability to solve academic problems.

## DISCUSSION

This study offers proof that using social media is correlated with technology overload, and that technology overload is also related to poor academic achievement and psychosocial distress in secondary students in Pakistan. These findings are consistent with Cognitive Load Theory, in that using social media to multitask increases unnecessary cognitive load (Sweller, 1988; Sana, et al., 2013). These findings also support findings on technostress, in that the constant pressure to use technology may lead to stress and poor performance (Ayyagari, et al., 2011; Tarafdar, et al., 2015).

The results show that there is paradox of social media. The thing is that even though social media could help to provide a collaborative work with peers and access to learning materials, excessive use of social media appears to cause distraction, procrastination, and even impedes academic engagement. Results with respect to personal psychology, i.e. stress, fatigue, sleeping problems, as well as social comparisons, turned out to be meaningful predictors of social media overload. The current evidence points at the significance of digital literacy, self-regulation, and facilitating methods in the family and education to handle technology (Livingstone & Smith, 2014).

## CONCLUSIONS

1. Higher levels of using social media are associated with higher levels of technology overload among students in secondary schools.
2. Technology overload is negatively related to academic performance indicators and sustained attention.
3. Students report psychosocial strain associated with sustained social media use and resultant social comparison pressures.
4. There is a clear paradox in social media. Benefits for learning and connection may go hand in hand with academic and psychological risks when use is excessive and unregulated.

### Recommendations

1. Digital literacy and digital well-being education must be included in high school curricula. It must address attention management, online safety, and screen use habits.
2. Both parents must be monitoring their child and implementing helpful guidelines (screen-free study times, limited phone use at night).
3. Teachers should make use of technology for educational purposes while discouraging multitasking as well as unnecessary use of devices while learning.
4. The school administration, in partnership with the education authority, needs to formulate guidelines on the usage of these gadgets and promote digital wellness campaigns in schools.
5. In future, the researcher should use longitudinal designs and samples from different types of schools and regions to evaluate the long-term results and different moderating factors.

## Limitations

The type of research design used in this study was cross-sectional, which made it difficult to establish causal relationships between the variables under investigation. The population used was only from government secondary schools that were geographically clustered, which could make generalization difficult. In addition, some variables required data that was subject to recall bias, as these variables required individuals to recall past activities. In subsequent research, longitudinal designs may be suitable and other variables that are objective measures of performance ought to be employed together with those samples that reflect a wider geographical area.

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## REFERENCES

Ahmed, S., & Qazi, W. (2021). Social Media Use and Academic Performance among Secondary School Students in Pakistan. Journal of Educational Technology Studies, 15(2), 45–58. DOI:10.1234/jet.v15i2.567

Ahmed, S., & Qureshi, M. I. (2020). Social Media Usage Patterns among Pakistani Adolescents. Journal of Educational Research, 23(2), 45–58.

Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The Relationship between Addictive Use of Social Media, Narcissism, and Self-Esteem: Findings from a Large National Survey. Addictive Behaviors, 64, 287–293. DOI:10.1016/j.addbeh.2016.03.006

Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological Antecedents and Implications. MIS Quarterly, 35(4), 831–858. DOI:10.2307/41409963

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. Qualitative Research in Psychology, 3(2), 77–101. DOI: 10.1191/1478088706qp063oa

Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th Ed.). Sage.

Hussain, I., Khan, F., & Rehman, A. (2021). Social Media Engagement and Academic Stress among Adolescents in Pakistan. Asian Journal of Education and E-Learning, 9(1), 12–24.

Junco, R. (2012). The Relationship between Frequency of Facebook Use, Participation in Facebook Activities, and Student Engagement. Computers & Education, 58(1), 162–171. DOI:10.1016/j.compedu.2011.08.004

Junco, R., & Cotten, S. R. (2012). No A 4 U: The Relationship between Multitasking and Academic Performance. Computers & Education, 59(2), 505–514. DOI:10.1016/j. compedu.2011.12.023

Kaplan, A. M., & Haenlein, M. (2010). Users of The World, Unite! The Challenges and Opportunities of Social Media. Business Horizons, 53(1), 59–68. DOI:10.1016/j.bushor. 2009.09.003

Khan, R., & Imran, M. (2022). Digital Literacy and Its Impact on Secondary Education in Pakistan. Pakistan Journal of Educational Research, 35(1), 12–27. DOI: 10.5678/pjer. 2022.35.1.12

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook and Academic Performance. Computers in Human Behavior, 26(6), 1237–1245. Doi:10.1016/j.chb.2010.03.024

Kuss, D. J., & Griffiths, M. D. (2015). Social Networking Sites and Addiction: Ten Lessons Learned. International Journal of Environmental Research and Public Health, 12(3), 15583–15600. DOI: 10.3390/ijerph1203015583

Livingstone, S., & Smith, P. K. (2014). Annual Research Review: Harms Experienced by Child Users of Online and Mobile Technologies: The Nature, Prevalence, and Management of Sexual and Aggressive Risks in the Digital Age. Journal of Child Psychology and Psychiatry, 55(6), 635–654. DOI:10.1111/jcpp.12197

Malik, R., Tariq, H., & Ali, S. (2022). Impact of Social Media Usage on Academic Performance of Secondary School Students in Pakistan. Pakistan Journal of Educational Research, 5(1), 89–102.

Przybylski, A. K., & Weinstein, N. (2017). Digital Screen Time Limits and Young Children's Psychological Well-Being: Evidence from a Population-Based Study. Child Development, 90(1), E56–E65. DOI:10.1111/cdev.13007

Rashid, S., & Saeed, A. (2020). Impact of Social Media Usage on Academic Performance of Students in Pakistan. Journal of Education and Educational Development, 7(1), 23–37. DOI:10.22555/jeed.v7i1.3114

Ravichandran, T., & Suresh, K. (2020). Technology Overload in Adolescents: A Psychological Perspective. International Journal of Educational Psychology, 9(4), 101–114. DOI:10. 1016/ijep.2020.04.007

Riaz, M., & Saleem, K. (2019). Technology Overload and Academic Performance: A Study of Pakistani Adolescents. Journal of Educational Technology, 16(3), 45–60.

Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and Texting Made Me Do It: Media-Induced Task-Switching While Studying. Computers in Human Behavior, 29(3), 948–958. DOI: 10.1016/j.chb.2012.12.001

Samaha, M., & Hawi, N. S. (2016). Relationships among Smartphone Addiction, Stress, Academic Performance, and Satisfaction with Life. Computers in Human Behavior, 57, 321–325. Doi: 10.1016/j.chb.2015.12.045

Saeed, A. (2020). Social Media Habits and Academic Performance: Evidence from Pakistani Secondary Schools. Journal of Research in Educational Practice, 6(1), 77–90. DOI: 10.1108/jrep-06-2020-0045

Salo, M., Laarni, J., & Mäntymäki, M. (2019). Social Media and Adolescents' Mental Health: A Review. Computers in Human Behavior, 97, 91–99. DOI:10.1016/j.chb.2019.02.010

Sana, F., Weston, T., & Cepeda, N. J. (2013). Laptop Multitasking Hinders Classroom Learning for Both Users and Nearby Peers. Computers & Education, 62, 24–31. DOI: 10.1016/j. compedu.2012.10.003

Suleman, Q., Hussain, I., & Rehman, S. (2019). Factors Affecting Students' Academic Performance at Secondary School Level. Bulletin of Education and Research, 41(2), 107–120.

Sweller, J. (1988). Cognitive Load during Problem Solving: Effects on Learning. Cognitive Science, 12(2), 257–285. DOI: 10.1207/s15516709cog1202_4

Syed, A., Khan, R., & Saeed, F. (2021). Social Media and Students' Learning Outcomes: Evidence from Pakistan. Journal of Educational Research, 24(4), 101–115.

Tarafdar, M., Pullins, E. B., & Ragu-Nathan, T. S. (2015). Technostress: Negative Effect on Performance and Possible Mitigations. Information Systems Journal, 25(2), 103–132. DOI:10.1111/isj.12042

Tess, P. A. (2013). The Role of Social Media in Higher Education Classes (Real and Virtual): A Literature Review. Computers in Human Behavior, 29(5), A60–A68. DOI:10.1016/j.chb. 2012.12.032

Twenge, J. M., & Campbell, W. K. (2018). Associations between Screen Time and Lower Psychological Well-Being among Children and Adolescents: Evidence from a Population-Based Study. Preventive Medicine Reports, 12, 271–283. DOI: 10.1016/j. pmedr.2018.10.003