Journal of Media Horizons
ISSN: 2710-4060 2710-4052 Volume 6, Issue 4, 2025

EXPLORING THE RELATIONSHIP BETWEEN SCREEN TIME HABITS AND ACADEMIC PERFORMANCE OF GCUF STUDENTS

Mr. Ahmed Zuhair Khan[1], Dr. Ashraf Iqbal[*2], Ms. Hira Afzal[3]

[1]*Lecturer Department of Mass Communication, GCUF*
[*2]*Assistant Professor, Department of Mass Communication GCUF*
[3]*M.Phil. Scholar, Department of Mass Communication, GCU*

[*2]ashrafiqbal@gcuf.edu.pk

DOI:https://doi.org/10.5281/zenodo.17433287

Keywords
Screen time, academic performance, digital devices, social media, time management, educational usage, non-educational screen time

Article History
Received: 04 July 2025
Accepted: 10 September 2025
Published: 23 September 2025

Corresponding Author: *
Dr. Ashraf Iqbal

Abstract
The rapid integration of digital technology into everyday life has significantly influenced students' screen time habits, raising concerns about its impact on academic performance. This study explores the relationship between screen time habits and the academic performance of students at Government College University Faisalabad (GCUF). With the widespread use of smartphones, laptops, and other digital devices, students engage in various screen-based activities, including online learning, social media browsing, video streaming, and gaming. While digital tools offer enhanced learning opportunities, excessive screen exposure may lead to distractions, reduced study efficiency, and poor academic outcomes.

The study employed a quantitative survey design, using a structured questionnaire based on the SCREEN-Q instrument adapted for university students. Data were collected from students aged 18 and above and analyzed using SPSS software, applying both descriptive statistics and Pearson correlation analysis to examine the relationships among variables. The findings revealed that academic screen time positively correlates with improved academic performance, while non-academic screen time (e.g., social media, gaming) is associated with reduced academic outcomes, sleep disturbances, and lower focus levels. The study also found that male students tend to have higher overall screen usage than females. These results highlight the importance of balanced digital engagement and informed screen time management strategies for enhancing students' academic success.

INTRODUCTION

In the modern digital era, screen time has become an inevitable aspect of daily life, significantly affecting students' academic and personal experiences. The rapid development of technology and the increasing accessibility of digital devices have transformed the way students engage with education, communication, and entertainment (Anderson & Jiang, 2018). At Government College University Faisalabad (GCUF), students interact with screens for a variety of purposes, including academic research, online learning, social media use, gaming, and video streaming (Radesky et al., 2020). The widespread use of digital devices raises questions about how these habits affect students' cognitive abilities, study patterns, and overall health (Twenge & Campbell, 2018; Hale & Guan, 2015). While technological advancements provide immense benefits by facilitating access to knowledge and global

connectivity, excessive use of screens poses challenges related to academic focus, time management, and mental health (Ginnell et al., 2020; Przybylski & Weinstein, 2017). Understanding the complex relationship between screen time and academic performance is essential to developing strategies that help students navigate the digital landscape effectively.At Government College University Faisalabad (GCUF), students interact with screens for a variety of purposes, from academic research and online learning to social media use and recreational activities. While technological advances offer numerous benefits in terms of knowledge acquisition and connectivity, concerns have arisen regarding the impact of excessive screen time on academic performance, cognitive abilities, and overall health (Neumann, 2014; Carson et al., 2016).

The relationship between screen time habits and academic performance is an important area of inquiry, as it directly impacts student's learning outcomes, study habits, and mental health (Syväoja et al., 2014). Screen time can be broadly divided into academic and non-academic uses. Academic screen time includes activities such as attending online lectures, accessing digital course materials, and conducting research. On the other hand, non-academic screen time includes social media browsing, gaming, streaming videos, and other recreational activities (Ishii et al., 2020). The balance between these two types of screen time plays a critical role in shaping student's academic achievement and productivity levels. Studies show that moderate and well-managed screen time can enhance learning experiences by providing students with access to a wide range of educational resources (Pagani, Fitzpatrick, 2013). Online learning platforms, digital libraries, and collaborative tools facilitate active engagement and knowledge retention. However, excessive and unmanaged screen time has been linked to negative academic outcomes, including decreased concentration, lower retention rates, and disrupted sleep patterns (Hale & Guan, 2015). Prolonged exposure to screens, especially for non-academic purposes, can lead to distraction, reduced attention span, lower academic performance (Ferguson et al., 2015).

The psychological effects of excessive screen time also warrant attention. Studies show that prolonged digital engagement can contribute to mental health issues such as anxiety, stress, and depression (Twenge & Campbell, 2018). The pressure to constantly stay connected, respond to notifications, and keep up with digital trends can create a sense of cognitive overload, leading to decreased motivation and focus in academic activities (Neumann, 2014). Furthermore, excessive screen use can reduce face-to-face interactions, which affects students' social skills and overall academic engagement (Pagani et al.,2013). Studying screen time habbits and their impact on academic performance among GCUF students is essential to developing effective strategies to promote healthy digital consumption. Understanding the factors that contribute to excessive screen use.

The aim of this study was to determine whether there is a relationship between screen time use and academic performance among university-going students from Government College University, Faisalabad, Pakistan.

The study primarily focused on two key variables, namely screen time use and academic performance. Furthermore, the target population for the study was university- going students from Government College University, Faisalabad who were above the age of 18.

Objectives of the study

1. To assess the prevalence of screen time usage among university students from Government College University, Faisalabad.
2. To determine gender differences in screen time usage among university students from Government College University, Faisalabad.
3. To establish relationship between screen time usage and academic performance among university going students from Government College University, Faisalabad.

Research Questions

1. What is the prevalence of screen time usage among university going students from Government College University, Faisalabad?

2. Are there gender differences in screen time usage among university students from Government College University, Faisalabad?
3. What is the relationship between screen time usage and academic performance among university students from Government College University, Faisalabad?

Hypothesis

H1 There is a significant prevalence of screen time usage among university-going students from Government College University, Faisalabad.

H2 There are significant gender differences in screen time usage among university- going students from Government College University, Faisalabad.

H3 There is a significant relationship between screen time usage and academic performance among university-going students from Government College University, Faisalabad.

LITERATURE REVIEW

Several studies have highlighted the importance of physical activity in the development of students, especially those aged between 2 to 5 years. Physical activity has been shown to influence cognitive development and motor skill acquisition (Gunnel et al., 2016; Robinson et al., 2015). However, only 50% of students in the 3 to 5-year age group meet the current physical activity recommendations for pre-university-aged individuals (CDC, 2020).

According to Healy and Owen (2010), there is a notable link between screen time usage and sedentary behavior. Sedentary behavior refers to periods of sitting or lying down involving minimal body movement and low energy expenditure. The World Health Organization (2019) reported that students aged 11 to 15 in 30 countries spent more than two hours daily watching television. With the increasing popularity of devices like personal computers, tablets, and smartphones, screen time usage has significantly expanded.

In Singapore, children as young as two years spend an average of 2.4 hours per day using digital devices, and this increases to 2.7 hours for three-year-olds (Bernard et al., 2017). Sedentary behavior, while often linked to screen time, can also include other low- activity behaviors such as doing homework, commuting, or attending classes. According to Hoffmann et al. (2017), sedentary activities involve an energy expenditure of less than or equal to 1.5 metabolic equivalents (METs).

Although much of the literature focuses on media and screen time, there is a growing call to assess sedentary behavior holistically. This includes considering its broader health implications. Prolonged sitting and inactivity are associated with increased risks of obesity, cardiovascular complications, and even mortality. Yang (2019) emphasized that physical activity serves as a crucial counterbalance to sedentary living. Hoffmann et al. (2017) noted that these behaviors can extend into adulthood if not addressed during early life stages.

Academic performance is a critical indicator of student success and future opportunities. It reflects a student's mastery of educational content and is often influenced by a range of behavioral, psychological, and environmental factors. According to Itagi (2009), younger students tend to exhibit lower academic performance due to reduced concentration, whereas older students typically perform better owing to improved attention spans and maturity.

These findings are supported by Sinnarajah et al. (2019), who reported that students in grade four and above achieved higher-than-average academic scores. The researchers attributed this to developmental factors, including the ability to sustain focus for longer periods, which contributes to cognitive growth and academic achievement.

Parental involvement has also been identified as a key determinant of student performance. Manduku et al. (2017) emphasized that nurturing, responsive parenting practices, and collaborative teacher-parent relationships are strongly associated with better educational outcomes. In Pakistan, a study on parenting and academic performance revealed that shared engagement between parents, teachers, and universities significantly enhanced students' academic results. A strong positive correlation ($r = 0.7752$) was found between parental monitoring of assignments and improved academic scores. The study recommended

institutionalizing parent-teacher partnerships through national education policy.

Moreover, education systems aiming to close academic performance gaps must address socio-economic disparities. In the United States, the No Child Left Behind (NCLB) Act and the Elementary and Secondary Education Act (ESEA) of 1965 ensure equitable access to quality education. These legal frameworks emphasize minimum academic proficiency and standardized assessments for all students (Pabian & Neely, 2021).

Pakistan, too, has enacted supportive educational legislation. The Constitution guarantees free and compulsory basic education (Article 53), affirmative action in education (Article 55), and equal access to learning opportunities (Article 56). Although these laws do not directly reference academic performance, they aim to create an inclusive, high-quality educational environment that fosters student achievement (Wango, 2002).

A longitudinal study conducted among 251 students in China established that early screen time usage in toddler was negatively associated with social skills in GCUF aged students (Carson, et al, 2019). Moreover, Carson et al. (2019) defined screen time usage to include a variety of activities with a variety of devices such as television, DVDs, video games, computers, tablets, and smartphones and among these activities, television watching represents the most dominant type of screen time usage, comprising 98% of total screen time usage in students younger than 2 years of age and 90% of total screen time usage in 2- to 4-year-old students.

In a study to understand screen time exposure and sleep among students with developmental disabilities in Singapore, Aishworiya et al. (2018) found that the mean daily screen time exposure was 2 hours and 53 minutes among students aged 6-15 years old. The researcher used the child's screen time use and completed the Student's Sleep Habbits Questionnaire. In a cross-sectional study conducted among 379 (208 males and 171 female) pre university students in rural Western India aged between 2 and 6 years old showed that the average screen time usage among the respondents was 2.7 hours (SD =1.7) (Shah, et al., 2019). The study further indicated that in relation to specific devices, daily television screen time usage was 1.6 hours (DS =1.1). Over the weekend, the students had increased screen time of 3.5 hours per day especially in households with three devices and smartphone usage by mothers increased the odds of screen time by 60%.

Hoffmann et al. (2019), in another study, argue that sedentary behavior is a growing public health concern because of the many risks it poses to students and to all. Sedentary behavior is widespread among students, and as highlighted before, it can impact one's life during adulthood. Hoffmann et al. (2019) state that the amount of time a European child spends sedentarily is between 3.2 to 9.2 hours a day. Also, students have been found to spend up to half of their after-university period with sedentary behaviors (41–51%; 5–12 years), a number that increases with adolescence (57%; 12– 18 years). Moreover, Hoffmann et al. (2019), argue that elevated screen media is a health risk factor, but screen media and sedentariness are associated. Accordingly, Hoffmann et al. state neither that self-reported screen time represents the total sedentariness adequately nor that there is a relationship between screen time and sedentary living among students. In that case, it is essential to investigate screen time as part of sedentariness among students.

Africa is still faced with the challenge of addressing physical inactivity, which portends a lot of health implications. For example, Pakistan has recorded a significant sedentary lifestyle amongst students the age of university. Like most of the studies discussed above, Gomwe et al. (2022), found a relationship between physical inactivity and sedentary behavior. Therefore, assessing physical activity vis-a-vis sedentary behavior was established as important for health intervention reasons. Understanding physical activity is the first step in understanding sedentary behavior. According to Gomwe et al., any bodily movement resulting from skeletal muscles that require energy underlies what physical activity is all about. Furthermore, Gomwe et al. argue that physical activity is life and an important aspect of a child's holistic development. In other words, a healthy lifestyle is predicated on one's ability to perform their functions without any difficulty due to muscles' inability to move freely.

A recent study showed that most pre university students aged 2 to 6 years indicated that mobile phone 91.6% was the most preferred garget for screen time usage, followed by television 86.1% and computers 61% during the Covid 19 pandemic period (Susilowati, et al., 2021). The entire gargets were being used by both genders. To understand the gender difference, the term gender will be conceptualized on the binary of being male or female. It is estimated that the global smartphone usage is over 3.5 billion with an approximated penetration rate of 45.4% (Statista, 2020). In the United States, smartphone users are more than 260 million of which 84% are male and 79% female, whilst individuals between 18-29 years old represent 96% of the user, 30-49 years old 92%, between 50-64 years old are 79% and above 65 years represent 53% of the smartphone users (Taylor & Silver, 2019).

Moreover, previous studies have suggested that the home environment and parental characteristics such as, socioeconomic status and parental support may be stronger factors in academic performance compared with the amount of screen media use per se (Clarke & Kurtz-Costes, 1997). Social support is drawn from parent, campus mates, course colleagues and other social groups within the learning institution. Similarly, intrinsic factors entail personal management, motivation, and personal skills (Cachia et al., 2018). Personal management is considered as the ability for students to take full responsibility for their learning; while motivation is the aspect of having willingness to learn and setting both short- and long-term goals; and personal skills include the development of communication skills, coping skills, and professionalism.

Previous empirical evidence has shown different results in consideration of the gender difference in relation to screen time usage. Ye, Chen, Wang, and Li (2018) in a study with 1164 students aged 8-19 from five elementary and junior high in Zhejiang province in China found that screen time usage and leisure-based computer use were higher in boys than in girls and 14.7% of boys and 8.9% of girls had more than 2 hours screen time usage, respectively. Other studies have indicated that increased screen time usage was more related to male sex than female whilst other factors involved include being older, weekends, low parental education, and high media accessibility such as having a television or a computer in the bedroom (Carson et al., 2019;). In a longitudinal study among 643 adolescents aged 14 years in Australia using screen-based media scale to measure screen time usage established that there was gender difference in screen time usage with males spending 4.3 hours per day and females 3 hours per day on the devices (Straker et al., 2013).

Relationship between Screen time usage and Academic Performance

Cachia, Lynam, and Stock, (2017) noted that academic success when defined from the students' perspective entails the gaining of skills and knowledge, personal development, and professional achievement throughout university learning. Academic success is made up of intrinsic and extrinsic factors. Nonetheless, Mihaela (2015) argued that academic success is not only made up of personal factors [intrinsic] and teaching factors [extrinsic] but it also involves the psychological factors such as personality difference. For example, test scores on different personalities such as assertiveness, conscientiousness and emotionality were found to correlate significantly with students' grades (Mihaela, 2015). It is illustrated that extrinsic factors to academic success include teaching provision and social support (Cachia, Lynam, & Stock, 2018).

A study by Syväoja (2014) suggests that physical activity plays a significant role in enhancing the physical health of a child in addition to improving their cognitive and academic performance. Moreso, the study concurs with other findings that sedentary behaviors are harmful to a child both cognitively and physically. In a study whose objective was to determine the association of student's physical activity and sedentary behavior with their academic achievement and cognitive functions, the study involved 277 students from a university in the Jyväskylä university district in Finland who had a mean age of 12.2 years. In the study, physical activity was self-measured and reported objectively using an accelerometer, while academic performance was based on the results/ report forms provided by the university, and cognitive functions were evaluated by a tool

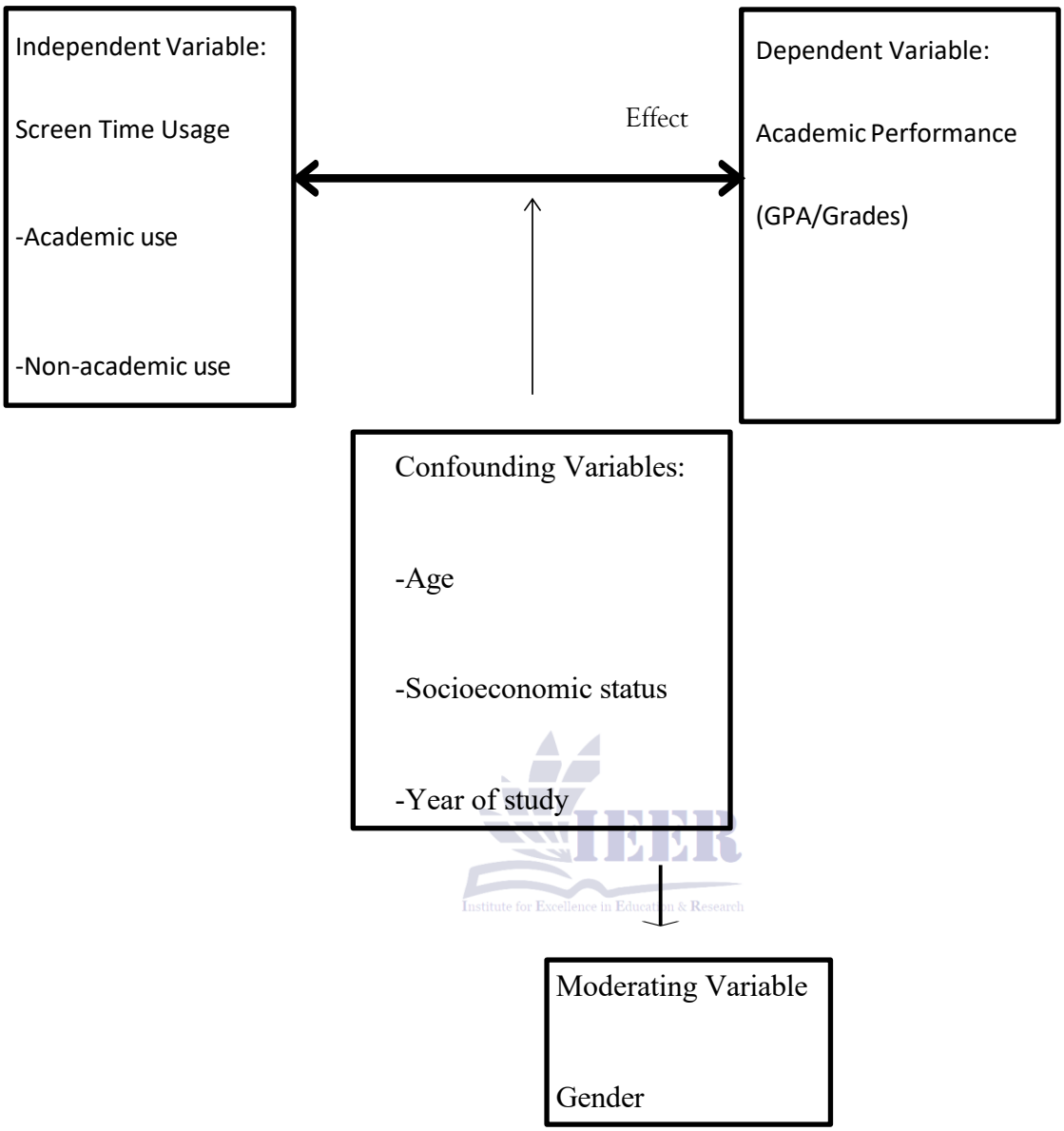
named the Cambridge Neuropsychological Test Automated Battery (CANTAB). The test applied visual memory, executive functions, and attention. The findings of the study indicated that self-reported physical activity exhibited an inverse curvilinear association with academic performance, whereas the overall screen time had a linear negative association with student's academic performance. It was also established that sedentary behavior or physical inactivity was not associated with a child's academic achievement. Additionally, the study found that significant levels of physical activity had an association with positive academic performance among students since it enhanced attention reaction. Similarly, significant levels of objectively measured sedentary time showed an association with positive performance in the sustained attention test. More so, other domains of cognitive functioning had no association with the objectively measured physical activity whatsoever. Moreover, assessed cognitive function had no association with self-reported activity and the summative screen time. Poor academic performance among students was, however, associated with high reported time spent on gameplay and computer. This was in a test that measured visuospatial working memory. The study recommended that it is important to promote a physically active lifestyle.

A study done in the Kandy District in Sri Lanka by Sinnarajah et al. (2019) to establish the association of screen time with academic performance and behavior among university students recorded the following findings. In response rate of 65.6% and involving students of mean age of 8.6 years (SD=1), the mean for students who spent time on screen was 95%, with 36.8% on midweek during weekdays, 56.8% midday during weekends, 6% on weekdays and 12% on weekends and 2 hours a day. The study also established an association between parents' weekend TV time and time spent on the screen by the students. Also, the association was established between time spent on weekday studies and the academic scores ($p = 0.023$), but there was no evidence for association with screen time. Additionally, reduced home study time due to screen time was directly associated with the marks obtained after the university assessments. There was also an association between screen time and lack of physical activity. In other words, screen time equates to a sedentary lifestyle and least involvement with physical exercise. However, the study did not find a direct link between academic performance and sedentary living. The assumption was that a child could spend a lot of time reading via screen and post better results.

A recent empirical study showed that students with low screen time usage and physical activity had 2.04 times greater odds of having high academic performance compared to students with high screen time usage and low physical activity, while students with low screen time usage and high physical activity had 2.75 times greater odds (Garriguet, Colley, & Bushnik, 2017). In a cross-section study with 363 students, mean age 14.2 years (grades 5–8) showed that, 154 students (42.4%) attained grade A, 180 students (49.6%) scored grade B, and 29 (8%) obtained grade C. The result showed no association between increased screen-time of ≤1 hour (weekdays as well as weekends) with poor university performance (P=0.46 and P=0.58 (Niazi, 2020).

THEORETICAL FRAMEWORK

This study aims to establish a relationship between screen time usage and academic performance among university-going students. The conceptual framework shows the link between the key variables in the study, as presented in Figure 2.1.



In this study, the main variables are screen time usage and academic performance. Screen time usage is treated as the independent variable, while academic performance is the dependent variable. The conceptual framework illustrates how students' screen time habits whether academic or non-academic—can directly influence their academic performance outcomes.

Additionally, the framework introduces gender differences as a key variable to examine whether male and female students differ in screen time usage and how that might affect academic results. The model also acknowledges the presence of confounding variables, which may influence or mediate the primary relationship. These include students' age, socioeconomic status, and academic level or year of study.

The figure illustrates a directional relationship where screen time usage may positively or negatively impact academic performance, depending on how and why the screens are used. Academic screen time (e.g., studying, researching, attending online classes) may lead to better performance, while non-academic screen time (e.g., gaming, social media) may lead to poorer outcomes. The framework also

considers the possibility that external demographic or environmental factors may strengthen or weaken this effect.

The framework is not intended to show a cause-effect relationship but rather to guide the study in examining whether a statistically significant relationship

exists between the variables. Gender differences are considered important to understand behavioural patterns in screen use. Furthermore, the role of confounding variables is recognized to help interpret the results more accurately, ensuring that conclusions drawn are not based on a simplistic binary analysis.

The conceptual framework provides a theoretical structure for the study and highlights the complex, multidimensional relationship between screen time usage and academic performance among university students.

Ecological theory

The theoretical framework was considered based on Bronfenbrenner's ecological system theory (1958). This theory primarily focuses on the impact of the environment on the individual. Bronfenbrenner argued that an individual is influenced by the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Microsystem includes the immediate environment where immediate interaction occurs. Mesosystem is the combination of immediate environments or the microsystem, whilst the exosystem is a microsystem that does not contain the developing person but impacts on the individual's micro and mesosystem. Macrosystem consists of factors that are at the outermost of the child's environment. These factors include customs around the child's cultural values and laws associated with the child's environment. Chronosystem entails the dimension of time in connection to the child's environment. These could be factors associated to timing of the physiological growth of the child which may change the emotional and cognitive development of the child. Additionally, factors such as death of a child's parent can influence how the child reacts to the environment.

The access to devices at the microsystem highly influences the screen time usage. The more the access increases to the other environments, the more the screen time usage develops. Ecological models suggest that the neighborhood environment is a key component in understanding health behaviors. For example, the basic premise of the ecological systems theory is that a young person's neighborhood environment interacts with their immediate context such as family, peers and their individual characteristics based on age or gender to influence their behaviors. Therefore, if the family allows for high screen time usage, the child may end up influencing other students in university when they are able to access screen time usage devices. Additionally, neighbors can also influence a child screen time usage. For example, a child might visit their neighbor frequently where they are able to access computers, television, mobile phone and other devices. Such devices may make the child to continue visiting their neighbor in order to use or the child may put pressure on their parents to buy them the devices to use at home.

This theory is relevant to the present study as it provides a structured lens to understand how various layers of a student's environment influence their screen time habbits and, consequently, their academic performance. For instance, the microsystem (such as home and university life) directly affects students' daily digital usage, while the exosystem (including media exposure and internet infrastructure) indirectly shapes their engagement with screens. The macrosystem reflects societal values and cultural attitudes toward technology, which influence student behavior, and the chronosystem considers how evolving digital trends, especially post-pandemic shifts toward online learning impact long-term screen usage patterns. By applying Bronfenbrenner's ecological systems theory, this study acknowledges that screen time behavior is not formed in isolation but rather through interactions across multiple

environmental levels. This helps explain the variability in academic outcomes based on screen time habbits, making the theory a valuable framework for interpreting the findings.

Methodology

The research design that was adopted was the descriptive correlation research design. Descriptive design merely describes the phenomenon under study. Correlational research is meant to establish the relationship between two variables without establishing the cause and effect (Mugenda & Mugenda, n=N1+N(e)2n = \frac{N}{1 + N(e)^2}n=1+N(e)2N Where:

- n = sample size
- N = total population (300)
- e = margin of error (typically 0.05)

n=3001+300(0.05)2=3001+0.75=3001.75≈171n = \frac {300} {1 + 300(0.05) ^2}

= \frac {300} {1 + 0.75} = \frac {300} {1.75} \approx 171n=1+300(0.05)2300=1+0.75300 =1.75300≈171

Although the ideal sample size was approximately 171 students based on the formula, the final sample used in the study was 160 students, which is reasonably close and acceptable for the purposes of analysis. This slight reduction was due to time and access constraints, but it still ensured meaningful and statistically relevant results.

For data collection, students screen time usage and parental concerns and screen time questionnaire (SCREEN-Q) adopted from Klakk et al. (2020), was used to collect data on the screen time usage. The instrument is a 60 items questionnaire that measures various subscales such as the screen time usage, physical activities involvements; students sleep pattern, and the parental concerns. For purpose of this study, only the students screen time usage subscale was adopted from the main questionnaire. Screen time usage subscale has a total of 29 items measuring the duration of use mobile phones, iPad, tablets, computers, computer games, play stations or handheld computer games.

2014). The first objective merely described the levels of screen time usage among respondents and the second objective indicated whether there was gender difference in line with screen time usage. For the third objective correlation design was used to ascertain the relationship between the variables.

In this study, the population for the study was the university students from Government College University, Faisalabad (GCUF).

To estimate an appropriate sample size, Yamane's formula (1967) for a finite population was considered as a guideline:

For screen time usage, parents were asked four separate questions about the average time their students spent (a) watching TV on weekdays, (b) using other screen devices on weekdays, (c) watching TV on weekends, and (d) using other screen devices on weekends. The scoring of the screen time usage is based on the garget used and the time spent on the garget. High frequency of use of the equipment shows high vulnerability to screen time usage. A score of more than 2 hours on a screen time usage in a day and 20 hours in a week indicate risk of screen time usage of the students.

For academic performance, the researcher used end term evaluation results for January to April 2024 term of the pupil which were obtained from the university scores under the authorization of the university. The scoring of academic performance is always based on grading ranging from highest score of 80% =A, and the lowest score of 20% =E based on the Ministry of Education grading system (Ministry of education, 2015). In determining the socio-demographic information, the researcher had developed self-administered questionnaire items. The items included the gender, age of the respondents, and level of education of the parent or guardian among other items.

Before the actual data collection process, the questionnaire was pre-tested to check its clarity, relevance, and ease of understanding for the target population. The pre-test was conducted on a small group of university-going students who were not included in the final sample. These students were

asked to complete the questionnaire under similar conditions as the actual survey. The main objective of this pre-test was to identify any confusing, vague, or ambiguous items in the questionnaire and to ensure that all questions were appropriate and clearly understood by the respondents.

Data Analysis

The data analysis was carried out in line with the objectives of the study. The data collected from the field was entered into Microsoft excel for data cleaning and verifications. Once, the data met the required standards they were entered into Statistical Package for Social Sciences [SPSS] version 25 for coding and analysis. For the analysis of the first objective which was to assess the level of screen time usage among the respondents, descriptive statistics was used. For descriptive statistics, measure of central tendencies such as the means, mode, and median and measure of dispersion such as standard deviation, range or variance was developed. For the second objective which was to determine the gender difference in relation to screen time usage, descriptive analysis was used whereby statistical independent T-test was calculated to determine the gender differences. The calculation yielded degree of freedom and the significant levels.

For the third objective which focused on the relationship between screen time usage and academic performance among students, correlational statistics was used. The analysis produced Pearson's correlation coefficient and the significant levels. In addition, data presentations were in forms of tables and figures such as charts or graphs for each of the objectives. The following was the Pearson correlation formula that was applied to ascertain the relationship.

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[\, n\Sigma x^2 - (\Sigma x)^2 \,][\, n\Sigma y^2 - (\Sigma y)^2 \,]}}$$

DATA ANALYSIS

The study targeted a sample of 160 university students. A total of 117 fully complete questionnaires were returned, resulting in a response rate of 73%. This is considered sufficient for data analysis, as response rates above 60% are generally acceptable in social science research (Fincham, 2008).

Socio-Demographic Characteristics of the Students

The demographic characteristics of the student's respondents include gender, age group, program of study, and year of study. This information provides context for understanding patterns in screen time behavior and academic performance

Table 1 ***Gender Distribution of Students Respondents***

Gender	Frequency (n)	Percentage (%)
Male	67	57.3%
Female	50	42.7%
Total	117	100%

Table 2 *Age Group and Academic Background of Respondents*

Category	Sub-Category	Frequency (n)	Percentage (%)
Age Group	18–20 years	44	37.6%
	21–23 years	53	45.3%
	24 & above	20	17.1%
Academic Program	Bachelor's (BS)	81	69.2%
	Master's (MS/MPhil)	36	30.8%
Year of Study	1st Year	25	21.4%
	2nd Year	31	26.5%
	3rd Year	28	23.9%
	Final Year	33	28.2%

Prevalence of Screen Time Usage among University-Going Students

This section presents the screen time usage patterns of university students.

It includes the types of digital devices they use and their average time spent on screens per week. Screen time above 14 hours per week (2+ hours daily) is considered high-risk usage.

Table 3 ***Devices Accessed by Students Respondents (n = 117)***

Device Type	Frequency	Percentage (%)
Smartphone/Mobile Phone	108	92.3%
Laptop/Computer	99	84.6%
Tablet/iPad	72	61.5%
Game Console (PlayStation)	44	37.6%
Do not own any device	9	7.7%

Table 4 ***Screen Time Usage among Students***

Screen Time (per week)	Frequency	Percentage (%)
Less than 10 hours	86	73.5%
10–19 hours	29	24.8%
20 or more hours	2	1.7%
Total	117	100.0%

Gender Differences in Screen Time Usage among University- Going Students

The second objective of the study was to assess gender differences in screen time usage among university students. Table 5 presents the independent samples t-test results for total screen time and specific device usage by gender.

Table 5 ***Gender Differences in Screen Time Usage (n = 117)***

Device/Usage Type	t	Df	p-value
Overall Screen Time	1.690	113	0.09
Smartphone/Mobile Phone	-0.375	113	0.71
iPad/Tablet	2.054	113	0.04*
Computer/Laptop	1.431	113	0.16
PlayStation/Game Console	1.835	113	0.07
Handheld Computer Games	0.104	113	0.92

*Significant at $p < 0.05$

Table 6 ***Weekly Screen Time by Gender***

Screen Time (per week)	Gender	Frequency	Percentage (%)

< 10 hours	Male	46	70.8%
	Female	39	78.0%
10–19 hours	Male	17	26.2%
	Female	11	22.0%
≥ 20 hours	Male	2	3.1%
	Female	0	0.0%
Total		117	100.0%

Relationship between Screen Time Usage and Academic Performance among University-Going Students

The third objective of the study was to assess whether a relationship exists between screen time usage and academic performance. A Pearson product-moment correlation was used to determine the association between students' weekly screen time and their academic scores.

Table 7 summarizes the distribution of academic performance among student respondents. The mean academic performance score was 68.34 (SD = 11.91), which corresponds approximately to a grade of B.

Table 7 *Distribution of Academic Performance (n = 115)*

Grade	Frequency	Percentage (%)

A	29	25.2%
A-	4	3.5%
B	8	7.0%
B-	21	18.3%
B+	34	29.6%
C	9	7.8%
C+	6	5.2%
D	4	3.5%
Total	115	100.0%

Mean academic score: 68.34 Standard deviation (SD): 11.91

Table 8 ***Correlation between Screen Time and Academic Performance***

Variables	Correlation Coefficient (r)	p-value (Sig. 2-tailed)
Academic Score vs. Screen Time	-0.03	0.73

The correlation coefficient (r = -0.03, p = 0.73) indicates a very weak and statistically non-significant relationship between screen time usage and academic performance. This implies that screen time alone is not a predictor of academic performance among university students.

The analysis showed that smartphones were the most commonly used devices (92.3%), followed by laptops/computers and tablets.

Most students (73.5%) reported spending less than 10 hours per week on screens, suggesting that their usage was within recommended health limits. The mean weekly screen time was 7.78 hours (SD = 4.90).

Regarding gender differences, the results from an independent samples t-test indicated no significant difference in total screen time between male and female students. However, a significant difference was observed in tablet usage, where males showed higher usage ($p = 0.04$).

Lastly, a Pearson correlation test revealed no significant relationship between screen time and academic performance ($r = -0.03$, $p = 0.73$). This suggests that screen time did not directly impact students' grades in this sample.

Table 9 ***Use of Device at Night***

	Not indicated	Yes often	Yes occasion-ally	I do not know	No		
	%	%	%	%	%	M	Std.
Smartphone or mobile phone	16.5%	13.0%	27.8%	3.5%	39.1%	2.36	1.51
An iPad or tablet	24.3%	6.1%	27.0%	1.7%	40.9%	2.29	1.62
Computer/laptops	27.0%	4.3%	24.3%	2.6%	41.7%	2.28	1.66
PlayStation or games consoles	45.2%	4.3%	9.6%	1.7%	39.1%	1.85	1.86

Handheld computer games	47.8%	3.5%	8.7%	1.7%	38.3%	1.79	1.87

The screen time usage at night as indicated by Table 4.6 still reveals that most of the respondents used their smartphone/mobile phones during the night. About 40.8% agreed to having used smartphone, about 31.1% used an iPad or tablet and 28.3% used computer/laptops at night. The respondents were asked to indicate what their students prefer to screen time usage and table 9 provides the result.

Table 10 ***Preference of Screen to other Activities***

	Mean	Frequency
Reading	2.29	1.443
Playing outside	2.73	1.465
Playing non screen games	2.73	1.640
Physical activities	2.88	1.660
Craft activities	2.53	1.558
Watching tv, films	2.62	1.424
Family outings	3.08	1.758

Imaginary games	2.72	1.663
Club or other activities	2.77	1.623

As shown on Table 10 most of the respondents indicated that their students prefer screen time usage to having family outings because it had the highest mean 3.08 (SD =1.76). This was followed by physical activities (M = 2.88, SD = 1.66) and the third was club and or other activities (M = 2.77, SD = 1.62). However, they least preferred screen time usage to reading (M = 2.29, SD = 1.44). In consideration of the behavior of the students when they are not allowed to use screen timetable 4.8 shows the result.

Table 11 ***Behavior of a Students***

	Mean	SD
Angry	2.68	1.794
Sad	2.59	1.706
Withdrawn	2.89	1.781
Upset	2.65	1.681
Bored	2.25	1.382
Complains	2.55	1.661
Violent	3.50	1.997

As indicated in Table 11, the most common behavior shown by students as reported by the respondents was being violent having a mean of 3.5 (SD = 1.997) when they are denied screen time usage. Other students became withdrawn (M =2.89, SD = 1.78), angry (M = 2.68, SD =1.79), and upset (M = 2.65, SD = 1.68). The least reported behavior was being bored (M = 2.25, SD = 1.38).

The second objective of the study was to assess gender differences in screen time usage among university students. Table 12 presents the independent samples t-test results for total screen time and specific device usage by gender.

Table 12 Gender Difference in Screen Time Usage

	t	Df	P
Screen Time Usage	1.690	113	0.09
Smartphone or mobile phone	-0.375	113	0.71
An iPad or tablet	2.054	113	0.04
Computer/laptops	1.431	113	0.16
PlayStation or games consol	1.835	113	0.07
Handheld computer games	0.104	113	0.92

As indicated in Table 12 the finding showed that there was no statistical gender difference in overall screen time usage t (113) = 1.690, p =0.09 between boys and girls. On the use of screen time the results showed that there was no gender difference in smartphone/mobile phone usage t (113) = - 0.375, p = 0.71; no statistical gender difference in use of computer/ laptops t (113) = 1.431, p = 0.16. However, there was statistical gender difference in usage of iPad or tablet t (113) = 2.054, p = 0.04 with more boys using the device than girls. In relation to screen time usage shows the hourly distribution in relation to gender.

Table 13 ***Screen Time Hourly usage***

Hour spent on screen time per week			Screen Time Limit on weekdays		Screen Time Limit on weekdays	
Gender	Frequency	Percent	Frequency	Percent	Frequency	Percent
Boy	< 10	46	70.8	62	95.4	65	100.0
	11 - 19	17	26.2	2	3.1		
	20 >	2	3.1	1	1.5		
	Total	65	100.0	65	100.0	65	100
Girl	< 10	39	78.0	49	98.0	49	98.0
	11-19	11	22.0	1	2.0	1	2.0
	20 >						
	Total	50	100.0	50	100.0	50	100

In consideration of hourly usage of screen time among different gender, Table 13 showed that 3.1% males spent more than 20 hours on screen but there were no females in that category. 26.2% of males and 22% females spent between 11-19 hours in a week. On the screen time limit on the weekdays, 95% of male and 98% of females had less than 10 hours. On the weekends, the entire males and about 98% of females had less than 10-hour limits on screen time.

The third objective of the study was to assess whether a relationship exists between screen time usage and academic performance. A Pearson product-moment correlation was used to determine the association between student's weekly screen time and their academic scores.

Table 14 summarizes the distribution of academic performance among student respondents. The majority of students (29.6%) had a grade of B+, followed by 25.2% with an A grade. The mean academic performance score was 68.34 (SD = 11.91), which corresponds approximately to a grade of B.

Table 14 ***Distribution of Academic Performance (n = 115)***

Mean academic score: 68.34

Standard deviation (SD): 11.91**rade**	**Frequency**	**Percentage** (%)
A	29	25.2%
A-	4	3.5%
B	8	7.0%
B-	21	18.3%
B+	34	29.6%
C	9	7.8%
C+	6	5.2%

D	4	3.5%
Total	**115**	**100.0%**

To test the relationship between screen time and academic performance, Table 15 presents the Pearson correlation results.

Table 15 ***Relationship between Screen Time Usage and Academic Performance***

Variables	Academic Score	Screen Time
Academic Score	1	-0.033
Screen Time	-0.033	1
Sig. (2-tailed)	—	0.729
N	**115**	**115**

The correlation coefficient (r = -0.03, p = 0.73) indicates a very weak and statistically non-significant relationship between screen time usage and academic performance. This implies that screen time alone is not a predictor of academic performance among university students. While some students who spend more time on screen may perform well, others may not, and vice versa.
followed by laptops/computers and tablets.
Most students (73.5%) reported spending less than 10 hours per week on screens, suggesting that their usage was within recommended health limits. The mean weekly screen time was 7.78 hours (SD = 4.90).
Regarding gender differences, the results from an independent samples t-test indicated significant difference in total screen time between male and

This findings from the data collected to explore the relationship between screen time usage and academic performance among university- going students. A total of 117 responses were analyzed, with a valid response rate of 73%.
The analysis showed that smartphones were the most commonly used devices (92.3%),

female students. However, a significant difference was observed in tablet usage, where males showed higher usage (p = 0.04).
Lastly, a Pearson correlation test was conducted to determine the relationship between screen time and academic performance. The result (r = -0.03, p = 0.73)

indicated no significant relationship, meaning that higher screen time did not directly correlate with better or worse academic performance.

The next chapter discusses these findings in detail and presents the overall conclusions and recommendations.

Results &Discussion

The purpose of this study was to investigate the relationship between screen time usage and academic performance among university-going students at Government College University, Faisalabad (GCUF). A sample of 117 students participated in the study. Data were collected using a structured questionnaire and analyzed using SPSS.

- The majority of students used smartphones (92.3%) and laptops (84.6%) for screen-based activities.
- The average screen time was 7.78 hours per week (SD = 4.90), which is within safe usage limits.
- Gender-wise, male students reported higher tablet usage than females, a statistically
- significant difference ($p = 0.04$).
- Pearson correlation analysis revealed no significant relationship between total screen time and academic performance ($r = -0.03$, $p = 0.73$).

Prevalence of Screen Time Usage among University Going Students

The findings showed that most students used screens moderately, staying below the high-risk threshold of 14 hours per week. This aligns with studies that suggest students balance academic and non-academic digital use (WHO, 2019). The dominance of smartphone use reflects broader global student tech usage trends.

Gender Differences in Screen Time Usage among University Going Students.

Although total screen time did not differ significantly by gender, tablet usage was higher among males. This indicates possible gender-based preferences in device type, consistent with previous studies (Straker et al., 2013).

Relationship between Screen Time Usage and Academic Performance

There was no significant statistical correlation between screen time and academic performance. This suggests that screen use alone doesn't predict academic outcomes—factors like screen content, time management, and study discipline likely play a more vital role

CONCLUSION

This study concluded that screen time usage is not directly linked to academic performance among university students. While students actively engage with various digital devices, their academic results are not significantly influenced by total screen hours. Instead, the purpose of screen use—educational vs. non-educational—may matter more than the amount of time spent.

Additionally, gender differences were minimal, with only tablet usage showing a significant gap. This reflects changing tech habits where both genders are increasingly engaged in digital platforms for learning and leisure.

Overall, the findings emphasize the need for balanced screen habits, self- regulation, and digital literacy. Rather than limiting screen time entirely, universities and educators should promote purposeful and academically aligned screen use.

REFERENCE

Anderson, M., & Jiang, J. (2018). *Teens, social media & technology.* Pew Research Center. https://www.pewresearch.org

Bernard, J. Y., Padmapriya, N., Chen, B., et al. (2017). Predictors of screen viewing time in young Singaporean students: The GUSTO cohort. *International Journal of Behavioral Nutrition and Physical Activity, 14*(1), 112–115. https://doi.org/10.1186/s12966-017-0565-9

Cachia, M., Lynam, S., & Stock, R. (2018). Academic success: Is it just about the grades? *Higher Education Pedagogies, 3*(1), 434–439. https://doi.org/10.1080/23752696.2018.1462096

Carson, V., et al. (2013). Screen time behaviors and health indicators among children and youth: A systematic review. *Applied Physiology, Nutrition, and Metabolism, 38*(3), 369–384. https://doi.org/10.1139/apnm-2012-0201

Centers for Disease Control and Prevention. (2020). *Screen time vs lean time.* https://www.cdc.gov

Ginnell, L., O'Shea, D., & Murphy, L. (2020). Technology use and student engagement in higher education. *Irish Journal of Technology Enhanced Learning, 5*(1), 15–29.

Hale, L., & Guan, S. (2015). Screen time and sleep among school-aged children and adolescents: A systematic literature review. *Sleep Medicine Reviews, 21*, 50–58. https://doi.org/10.1016/j.smrv.2014.07.007

Kates, A. W., Wu, H., & Coryn, C. L. S. (2018). The effects of screen time on learning: A research synthesis. *Educational Technology Research and Development, 66*(1), 1–14. https://doi.org/10.1007/s11423-017-9558-3

Klakk, H., Wester, T. C., Olesen, G. L., et al. (2020). The development of a questionnaire to assess leisure time screen-based media use and its proximal correlates in students (SCREENS-Q). *BMC Public Health, 20*(1), 1–12. https://doi.org/10.1186/s12889-020-08904-z

Mugenda, O. M., & Mugenda, A. G. (2014). *Research methods: Quantitative and qualitative approaches.* Acts Press.

Neumann, M. M. (2014). An examination of touch screen tablets and emergent literacy in preschool children. *Australasian Journal of Educational Technology, 30*(4), 361–375. https://doi.org/10.14742/ajet.2374

Przybylski, A. K., & Weinstein, N. (2017). A large-scale test of the Goldilocks hypothesis: Quantifying the relations between digital-screen use and mental well-being. *Psychological Science, 28*(2), 204–215. https://doi.org/10.1177/0956797616678438

Radesky, J. S., Schumacher, J., & Zuckerman, B. (2020). Mobile and interactive media use by young children: The good, the bad, and the unknown. *Pediatrics, 135*(1), 1–3. https://doi.org/10.1542/peds.2014-2251

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. https://doi.org/10.1016/j.pmedr.2018.10.003

World Health Organization. (2019). *Adolescent screen time and health.* WHO Report Series. https://www.who.int.