

Increased Screen Time and Digital Fatigue among Students: A Study

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Abstract

The rapid integration of digital technologies into daily routines has significantly increased screen exposure among students, particularly following the shift to online and blended learning environments during the COVID-19 pandemic. This study synthesizes recent evidence on student screen use and its consequences for everyday life, with emphasis on mental health, sleep, academic outcomes, and psychosocial well-being. Drawing on peer-reviewed studies, guidelines, and meta-analyses, it was found that average screen time among school and university students commonly exceeds recommended limits which results in poor physical and mental health including sleep disturbances and reduced academic performances. Since smartphones are the devices, students turn to most often for activities like social media and entertainment, the study highlights the need for practical policy measures that can address the issue.

Keywords: screen time; digital fatigue; academic performance; mental health

With the rapid progression of technological innovations in recent years, individuals across all age groups increasingly rely on a wide range of digital devices. In the contemporary technology-driven context, tools such as mobile phones, laptops, and tablets have become integral to communication, information retrieval, academic engagement, business activities, and entertainment. Among these users, students constitute a prominent group, utilizing digital technologies extensively for diverse academic and non-academic purposes. Following the COVID-19 pandemic, educational processes shifted significantly toward virtual platforms, compelling students to depend on screens for instructional delivery and evaluation (Kaewpradit et al., 2025). Consequently, digital engagement has become a vital component of students' everyday lives. Furthermore, many educational institutions have begun adopting blended learning approaches in place of conventional classroom models, thereby contributing to increased screen exposure among students. Although the widespread integration of digital technologies has improved accessibility, connectivity, and efficiency in learning, it has simultaneously given rise to concerns regarding digital fatigue or burnout. Digital fatigue, also known as tech fatigue or digital burnout, refers to the mental and physical exhaustion experienced because of prolonged use of digital devices and continuous exposure to online activities (Yglesias-Alva et al., 2025; Bagaji & Rao, 2025). Considering these emerging concerns, the present study aims to explore how students engage with digital screens in both academic and non-academic settings, with particular attention to the duration and patterns of such use. It further seeks to investigate the prevalence of digital fatigue and its effects on students' physical health, cognitive functioning, and emotional well-being. By addressing these objectives, the study intends to offer a more comprehensive understanding of the ways in which sustained digital engagement shapes students' overall wellness and academic performance, while also providing insights that may guide future

educational practices and policy initiatives.

Kaewpradit et al. (2025) in their study show that university students demonstrate particularly high screen use because of their increased reliance on devices for academic and social purposes. Nearly 85% of Thai university students primarily use smartphones, with individuals under age 22 averaging 8+ hours of daily screen time. In the same study it was found that the prevalence of excessive digital screen time (EDST) was 48.4% among undergraduates, with smartphones—especially social media—being the main source of usage.

Wiguna et al (2024) suggest that during COVID-19, adolescents' daily screen exposure sharply increased due to school closures and remote learning. The study found significantly higher screen use during the pandemic peak, followed by a decline post-peak.

Misra (2024) found that screen time has demonstrated mixed effects on academic performance. Digital access improves personalized learning opportunities and engagement; however, excessive use—especially on mobile phones—has been associated with impaired concentration, reduced cognitive functioning, and weaker academic achievement (Kaewpradit et al., 2025). Another study found that students with screen-time limits showed better academic performance, lower stress, and better time-management skills (Janaki & Sangeetha, 2024). Online learning fatigue has also emerged as a critical outcome of sustained screen-based learning. Tugtekin (2023) found that **information overload, communication overload, and system complexity** significantly predicted online learning fatigue in blended-learning environments.

The reviewed studies demonstrate that while digitalization enables educational access, excessive screen exposure is associated with mental health challenges,

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reduced academic performance, sleep disruption, social-behavioural problems, and online learning fatigue. These risks are particularly pronounced in adolescents and university students.

Objectives

1. **To study the patterns of screen-time usage among students.**
2. **To assess the prevalence and impact of digital fatigue on students' well-being.**

Method

The present study is primarily based on secondary data. A systematic review of relevant literature was conducted using peer-reviewed journals, research papers, and other credible academic sources to obtain information on patterns of screen use and its influence on daily life.

Results and Discussion

Exposure to digital technologies now begins early in life. Consequently, the integration of devices such as smartphones, laptops, and tablets has become an established norm within students' academic routines. Although moderate screen exposure can enhance students' learning processes and support academic achievement, extensive or prolonged use has been associated with several adverse outcomes. Evidence suggests that excessive screen time may negatively affect cognitive functioning, including attention and memory, and contribute to behavioural challenges such as anxiety, irritability, and social withdrawal (Kaewpradit et al., 2025; Wiguna et al., 2024). Research indicates that mobile phones are the most frequently used digital devices among students, with laptops and tablets following behind (John et al., 2024). Moreover, students devote substantial portions of their daily screen time to non-educational activities predominantly entertainment, video gaming, peer communication, and social media (Qi et al., 2023). The average screen time of schoolchildren aged 6 to 14 was 2.77 h per day, and 46.4% of them had an average screen time ≥ 2 h per day (Qi et al., 2023). In a recent study by Kaewpradit, Ngamchaliew, and Buathong (2025), it was found that smartphones were used chiefly for social-media purposes (73.1 %), whereas tablets (28.4 %) and computers (19.3 %) were predominantly employed for educational tasks by the university students. In 2023, the worldwide average duration of daily digital screen exposure was estimated at approximately 6 hours and 37 minutes, with mobile phones contributing about 3 hours and 46 minutes and computers around 2 hours and 51 minutes. In the Indian context, individuals spent an average of five hours per day using mobile devices, nearly 70% of which was allocated to activities such as social networking, gaming, and video consumption. This level of mobile phone engagement positioned India as the third-highest country in

terms of daily mobile usage, following Indonesia and Brazil. Indian evidence indicates substantial screen exposure in early childhood and adolescence. A recent systematic review and meta-analysis from AIIMS Raipur estimated that children under five years in India accrue a pooled mean of about **2.22 hours/day** of screen time well above prevailing guideline thresholds (Khobragade et al., 2025). Among adolescents, studies from India commonly report **multi-hour daily use** across activities such as gaming, video-chatting, OTT streaming, television viewing, internet browsing, messaging, app use, and device-based learning or creative work. Mean values typically cluster around **3.5–4 hours/day** in community samples (e.g., 3.8 h/day in an urban New Delhi cohort), with variation by age and setting, ranging from 2 h/day among early adolescents in one North Indian study to **higher averages approaching 5 h/day** in some post-COVID clinic/community cohorts. Guideline reviews likewise summarize a **broad span (1.3–7.1 h/day)** for Indian adolescents across studies (Dubey et al., 2018; Gupta et al., 2022; Ray et al., 2025; Rai et al., 2025).

Post-COVID-19, a substantial rise in digital screen use has been observed. Prolonged exposure to digital devices has contributed to multiple concerns associated with **digital fatigue**, a condition characterized by cognitive and mental weariness resulting from sustained or excessive screen engagement. After the COVID-19 pandemic, students' everyday routines became increasingly dependent on digital platforms, resulting in longer hours spent in front of screens and a growing concern about digital fatigue. This kind of fatigue, often described as mental exhaustion, trouble focusing, and emotional strain, has become especially common among college and university students. A study conducted in Southern Thailand reported that nearly half of university students (48.4%) spent excessive time on digital devices mainly smart phones for about four to six hours daily, balancing both academic requirements and social media activities (Kaewpradit et al., 2025). Similarly, research on students engaged in blended learning found that many experienced significant levels of online learning fatigue. The constant stream of information, ongoing communication demands, and continuous use of digital systems were identified as key contributors, with female students appearing more affected than their male counterparts (Tugtekin, 2023). The effects of digital fatigue go well beyond just feeling tired. Extended screen time has been linked to higher levels of anxiety, depression, stress, and low self-esteem, as well as increased feelings of loneliness. Much of this emotional strain stems from continual connectivity, online comparison, and social media pressures (Kaewpradit et al., 2025). In addition, frequent late-night screen use interferes with natural sleep patterns, disrupting circadian rhythms and leading to persistent tiredness, mood swings, and difficulty managing emotions (Kaewpradit et al., 2025). Cognitive and academic outcomes are also

affected. Excessive screen use can reduce students' ability to concentrate, maintain attention, and remember information, all of which can negatively influence academic performance (Janaki & Sangeetha, 2024). Furthermore, heavy dependence on digital devices has been associated with lower productivity and higher stress levels. In contrast, students who limit their screen time tend to experience better academic performance, improved time management, and greater psychological well-being (Janaki & Sangeetha, 2024; Misra, 2024). The ongoing mental strain of online and hybrid learning particularly during and after the pandemic has also been linked to constant information flow, communication overload, and the fast-paced evolution of learning technologies, all of which contribute to digital fatigue (Tugtekin, 2023). Even though digital technologies help people stay connected, they can also make students feel isolated and lonely. Because online interactions are often brief and surface-level, students may struggle to build deep and meaningful relationships, which can negatively affect their mental health and social well-being.

Conclusion

As society continues to move toward an increasingly digital landscape, individuals are required to engage extensively with a wide range of technological tools in both academic and non-academic domains. While this has enhanced access to information, learning opportunities, and communication, such integration has simultaneously raised concerns regarding excessive screen exposure and its implications for health and well-being. Students appear to be among the most vulnerable groups, as contemporary learning environments demand prolonged interaction with digital devices, often leaving little scope for meaningful offline engagement. In this context, the need for intentional digital detox practices becomes critical. Encouraging students to disengage periodically from digital platforms can help mitigate risks such as cognitive overload, mental fatigue, reduced attention span, and psychosocial stress. To support healthier patterns of technology use, systematic interventions must be considered at both institutional and policy levels. Educational institutions can implement guidelines that emphasize balanced screen time, promote blended learning strategies, and incorporate awareness programmes on responsible digital behaviour. Likewise, policy making bodies may introduce age-appropriate screen-use recommendations for children and adolescents, ensuring that young learners develop healthy digital habits from an early age.

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