Digital Fatigue among Students and Teachers in Higher Education: A Human-Centred Reflection

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Abstract

The increasing reliance on digital technologies has reshaped higher education in unprecedented ways. While digital platforms have ensured accessibility, flexibility, and continuity of learning, they have also introduced a less visible but deeply felt challenge digital fatigue. This paper offers a human-centred exploration of digital fatigue as experienced by students and teachers in higher education. Rather than viewing the issue purely as a technological problem, the study situates digital fatigue within everyday academic life, emotional well-being, and pedagogical practice. By examining its causes, manifestations, and long-term implications, the paper argues for a more balanced, empathetic, and sustainable approach to digital education.

Keywords: *Digital Fatigue, Higher Education, Teachers, Students, Online Learning, Well-being*

1. Introduction

In recent years, classrooms have quietly transformed. Chalkboards have given way to screens, lectures to video calls, and conversations to chat boxes. What began as a necessary shift during the COVID-19 pandemic has gradually become a permanent feature of higher education (Dhawan, 2020). Digital tools now shape not only how we teach and learn, but also how we think, feel, and engage with academic life (Selwyn, 2016). While technology has expanded educational possibilities, it has also created a new form of exhaustion known as digital fatigue (Bailenson, 2021). Students attend multiple online classes in a day, submit assignments through portals, and remain constantly connected (Aristovnik et al., 2020). Teachers design digital content, attend virtual meetings, evaluate online assessments, and respond to messages beyond working hours (Rapanta et al., 2020). Over time, this continuous engagement takes a toll that is often unnoticed and unacknowledged (Wiederhold, 2020). This paper explores digital fatigue as a lived academic experience rather than a technical inconvenience.

1.1 Understanding Digital Fatigue

Digital fatigue is not a sudden or dramatic breakdown, but rather a gradual erosion of attention, energy, and emotional resilience. It develops subtly as individuals spend increasing amounts of time navigating screens, digital platforms, constant notifications, and virtual interactions (Mark et al., 2018; Larry D. Rosen et al., 2013). Unlike physical fatigue, which can often be alleviated through rest, digital fatigue tends to persist even after breaks, as the mind remains over stimulated and mentally engaged (Gloria Mark et al., 2018).

The continuous demand to process visual information, interpret digital cues, and maintain responsiveness places a significant cognitive burden on individuals (Daniel J. Levitin, 2014). Online environments frequently require multitasking such as listening to lectures while checking messages, reading slides, or responding to emails which further intensifies mental exhaustion (Clifford Nass et al., 2009). Over time, this constant switching between tasks diminishes the brain's capacity for sustained attention, deep focus, and reflective thinking (Levitin, 2014).

In addition to its cognitive effects, digital fatigue also has a strong emotional dimension. The absence of face-to-face interaction can foster feelings of isolation, detachment, and reduced motivation (Sherry Turkle, 2015). When academic engagement is mediated primarily through screens, both learners and educators may experience a sense of disconnection from the human presence that traditionally underpins meaningful educational experiences (Turkle, 2015; World Health Organization, 2020).

1.2 Causes of increasing Digital Fatigue

Prolonged screen engagement

The shift to digital education has significantly altered daily academic routines. Students often attend back-to-back online classes, followed by hours spent completing assignments, watching recorded lectures, or preparing presentations. Teachers, similarly, spend extended periods designing digital content, reviewing submissions, and attending virtual meetings. This prolonged screen exposure affects both physical and mental health. Limited movement, poor posture, and continuous visual focus contribute to headaches, eye strain, and musculoskeletal discomfort. More subtly, constant screen engagement reduces opportunities for informal learning moments such as corridor conversations, spontaneous discussions, or reflective pauses that once enriched academic life. As screens replace physical spaces, academic work becomes increasingly sedentary and mentally compressed, leaving little room for recovery or creative thought.

Monotony in Digital Teaching

Digital platforms often encourage uniform teaching methods. Long lectures delivered through video conferencing tools, slides shared on screens, and limited student participation can create a monotonous learning environment. Without physical presence, teachers struggle to read body language, facial expressions, or emotional cues, making it difficult to adapt teaching strategies in real time. For students, passive listening over extended periods demands sustained concentration without the natural variation provided by classroom interaction. This monotony increases cognitive load, making learning feel effortful rather than engaging. Over time, students may associate online learning with boredom and exhaustion rather than curiosity and intellectual growth. The lack of sensory variety movement, voice modulation, group activity further deepens digital fatigue, turning learning into a repetitive and draining experience.

Blurring of academic and personal life

Digital education has disrupted traditional boundaries between academic and personal spaces. Homes have become classrooms, offices, and examination halls. While this flexibility offers convenience, it also eliminates clear distinctions between work and rest. Teachers often feel compelled to respond to emails, messages, and academic queries beyond official working hours. Students, similarly, experience pressure to remain constantly available and productive. The absence of temporal boundaries leads to a sense of perpetual academic engagement, leaving little time for mental recovery. This continuous connectivity fosters guilt during rest and anxiety during downtime, reinforcing fatigue and emotional strain.

Psychological pressure to perform digitally

Digital competence has become an unspoken expectation in higher education. Teachers are often required to adapt to new platforms, tools, and assessment methods with minimal training or support. Fear of technical failure, reduced student engagement, or perceived inadequacy contributes to professional anxiety. Students, on the other hand, face pressure to meet digital deadlines, navigate learning management systems, and perform consistently in online environments. Technical glitches, internet instability, or lack of digital literacy can trigger stress and feelings of helplessness. This psychological pressure, combined with constant evaluation and comparison, accelerates burnout and deepens digital fatigue.

1.3 Digital fatigue among students

Digital fatigue alters the way students experience learning. Instead of active engagement, many resort to surface-level participation in logging into classes without emotional or intellectual involvement. Reduced attention spans make it difficult to follow complex discussions or retain information. Emotionally, students may feel disconnected from peers and instructors, weakening their sense of belonging. Prolonged isolation, combined with academic pressure, increases vulnerability to anxiety and emotional exhaustion. For students facing economic or technological constraints, digital fatigue is compounded by frustration and inequality. Limited access to stable internet or private study spaces turns learning into a constant struggle, reinforcing educational disparities. Digital fatigue affects both academic performance and emotional health. Many report reduced attention spans, declining motivation, and difficulty retaining information. Learning becomes mechanical rather than meaningful.

In addition, prolonged screen exposure disrupts sleep patterns and physical health. Students from disadvantaged backgrounds face added challenges such as poor internet connectivity, shared devices, and unsuitable study environments, intensifying fatigue and frustration.

Digital fatigue, therefore, widens existing inequalities in higher education.

1.4 Digital Fatigue among Teachers

Teachers often experience digital fatigue silently. Preparing online content, managing digital platforms, attending virtual meetings, and addressing student concerns require sustained cognitive and emotional labour.

The absence of direct classroom interaction reduces teaching satisfaction and makes it harder to gauge student engagement. Over time, this leads to professional burnout, reduced creativity, and emotional exhaustion. The expectation to continuously adapt without adequate institutional support further intensifies this fatigue. Teaching in digital environments requires sustained emotional labour. Teachers must motivate students through screens, manage silence in virtual classrooms, and maintain enthusiasm despite limited feedback. The absence of immediate student response often creates self-doubt and emotional disconnection. Administrative responsibilities have also increased, with digital documentation, reporting, and monitoring adding to workload. Many teachers experience fatigue not only from teaching itself but from the constant adaptation required in digital systems.

Over time, this cumulative strain reduces professional satisfaction, creativity, and pedagogical innovation, leading to burnout.

1.5 Post-pandemic Continuity of Fatigue

Even after the reopening of physical classrooms, digital fatigue has not disappeared. Hybrid teaching models, online documentation, and digital assessments continue to dominate academic practices. What was once temporary has become routine, often without reflection on its long-term impact. This persistence highlights the need to critically evaluate how much technology is necessary and how much is excessive.

1.6 Pedagogical and Emotional Implications

Digital fatigue affects the quality of teaching and learning. Students become passive recipients of information, while teachers struggle to maintain engagement. Emotional disconnect replaces intellectual curiosity. Education, at its core, is a human process. When learning becomes overly digitised, it risks losing empathy, dialogue, and relational depth.

1.7 Human-Centred Strategies to Overcome Digital Fatigue among Teachers and Students

Digital fatigue cannot be addressed through technical solutions alone. Since it affects attention, emotion, motivation, and identity, responses must also be human, compassionate, and context-sensitive. Both teachers and students need not only strategies, but permission—to slow down, to disconnect, and to acknowledge fatigue without guilt. Addressing digital fatigue requires collective responsibility. At the individual level, students and teachers must practice digital self-regulation, take screen breaks, and prioritise physical and mental well-being. At the pedagogical level, teaching strategies should include shorter sessions, interactive elements, reflective activities, and offline learning components. At the institutional level, policies should acknowledge digital fatigue as a genuine concern. Reasonable workloads, wellness initiatives, and faculty support systems are essential.

2. Suggestions for Teachers

i. **Limit Continuous Screen Time**: Teachers should avoid long, uninterrupted online sessions and allow natural pauses during classes. Continuous screen exposure drains attention and energy, whereas shorter sessions with breaks help both teachers and students remain mentally present and emotionally engaged.

ii. **Prioritise Meaningful Engagement over Content Coverage**: Rather than rushing to complete syllabi, teachers can focus on key ideas and meaningful discussion. When learning emphasises understanding and reflection, it reduces pressure and makes digital education more sustainable.

iii. **Introduce Variety in Teaching Methods**: By using a mix method of synchronous and asynchronous activities, offline readings, and reflective tasks breaks the monotony of screen-based learning. Variety helps maintain curiosity and prevents learning from becoming mechanically exhausting.

iv. **Acknowledge Digital Fatigue Openly**: When the teachers recognise fatigue as a shared experience, students feel seen and understood. This openness reduces emotional distance and creates a more supportive and humane learning environment.

v. **Set Clear Digital Boundaries**: Defining specific hours for online communication helps prevent constant connectivity and emotional exhaustion. Clear boundaries protect teachers' well-being while also teaching students the importance of balance.

vi. **Seek Institutional and Peer Support**: Teachers should be encouraged to share challenges, seek training, and collaborate with colleagues. Institutional recognition of digital labour helps reduce burnout and fosters professional resilience.

3. Suggestions for Students

i. **Recognise Early Signs of Fatigue**: Students should become aware of physical and emotional signals such as loss of concentration, headaches, or irritability. Early recognition allows timely rest and prevents deeper exhaustion.

ii. **Take Regular Screen Breaks**: Short breaks between classes, eye relaxation, and physical movement help restore focus and reduce strain. These small practices significantly improve mental clarity during long academic days.

iii. **Create Boundaries Between Study and Rest**: Establishing fixed study hours and designated learning spaces helps separate academic work from personal life. This separation supports emotional recovery and prevents constant mental engagement.

iv. **Engage Actively in Learning**: Active participation through discussion, note-taking, and questioning enhances attention and reduces monotony. Meaningful involvement makes learning feel purposeful rather than draining.

v. **Maintaining Healthy Daily Routines**: Regular sleep, balanced nutrition and physical activity play a vital role in managing digital fatigue. A healthy routine strengthens resilience against prolonged digital exposure.

vi. **Seeking Support Without Guilt**: Experiencing digital fatigue is common and does not reflect a lack of ability. Seeking help from peers, teachers, or support systems promotes emotional well-being and academic continuity.

4. Shared Responsibilities for both Teachers and Students

i. **Rebuild Empathy in Digital Classrooms**: Understanding each other's challenges fosters patience and compassion. Empathy restores the relational dimension that digital learning often weakens.

ii. **Encourage Open Conversations on Well-being**: Honest dialogue about stress and exhaustion normalises care and reduces feelings of isolation. Such conversations strengthen academic communities.

iii. **Use Technology Intentionally, not Excessively**: Digital tools should be chosen thoughtfully to serve learning goals rather than convenience alone. Intentional use reduces overload and enhances educational quality.

iv. **Value Rest as Part of the Learning Process**: Rest and reflection are essential for creativity, memory, and intellectual growth. Recognising rest as productive supports sustainable higher education.

5. Conclusion

Digital fatigue has emerged as one of the most understated yet deeply influential consequences of the growing dependence on digital technologies in higher education. It is not merely a by-product of screen time, but a reflection of how academic life has been reorganised around continuous connectivity, efficiency, and digital performance. For both students and teachers, this fatigue shapes daily experiences of learning and teaching, often reducing motivation, emotional engagement, and a sense of belonging within academic spaces.

The findings discussed in this paper suggest that technology itself is not inherently detrimental to education. Rather, digital fatigue arises from uncritical and excessive use of digital tools without adequate consideration of human limits.When digital platforms dominate academic routines without space for rest, reflection, and interpersonal connection, education risks becoming emotionally distant and cognitively overwhelming. In such contexts, learning may continue, but its quality and meaning are gradually diminished.

Recognising well-being as central to educational quality is therefore essential. Higher education cannot be sustained through productivity and efficiency alone. Mental health, emotional balance, and physical well-being are integral to effective teaching and meaningful learning. Addressing digital fatigue requires moving beyond individual coping strategies toward collective responsibility, where institutions, educators, and learners acknowledge fatigue as a structural issue rather than a personal failure.

The persistence of digital fatigue in post-pandemic academic environments highlights the urgent need for reflection. As digital practices become permanent features of higher education, decisions about their use must be guided by care, empathy, and ethical responsibility. Convenience and technological advancement should not overshadow the relational and human dimensions of education, which remain at its core.

Ultimately, this paper calls for a more conscious and humane approach to digital education one that balances technological innovation with compassion, flexibility, and respect for human rhythms. Digital tools should serve as supports for learning, not sources of exhaustion. By placing well-being, connection, and empathy at the centre of digital transformation, higher education can move towards a more sustainable, inclusive, and human-centred future.

Declarations

Conflict of interest: The authors declare that they have no conflict of interest.

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