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Managing Digital Stress: Emotional Intelligence as a Key to Coping and Learning

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Abstract

Digital technologies have revolutionized education and lives in general, enhancing accessibility and interactivity while also introducing challenges, particularly digital stress. This paper explores digital stress and its impact on emotional intelligence (EI) and student well-being, which are crucial for effective learning. Factors such as excessive screen time, digital multitasking, and constant connectivity are examined in relation to their disruptive effects on students' ability to develop and apply EI skills, including self-awareness, emotional regulation, and empathy. Building on theoretical research and insights gained through a year-long Erasmus+ project on digital engagement and education, this paper also highlights practical strategies for mitigating digital stress and fostering EI development in the classroom. By combining research-based knowledge with project-derived good practices, it offers educators actionable solutions for creating supportive, emotionally intelligent learning environments.

Keywords: digital stress, emotional intelligence, learning, education, technology

1. Introduction

Digital technologies have revolutionized learning environments, making resources more accessible and fostering innovative teaching methods. However, the pervasive use of digital tools also introduces significant stressors for students and educators. Digital stress, characterized by feelings of overwhelm, fatigue, and anxiety due to digital engagement, can have profound implications for emotional intelligence (EI) and in turn learning.

The author chose this topic because of her personal and professional interest in the impact of technology on mental health and emotional regulation. During a year-long eTwinning and Erasmus+ project *Digital Me* (Pipuš, 2023), which involved over 100 participants from three countries, the author has also explored the impact of digital tools on emotional intelligence and student well-being. The central aim of this paper is to explore how digital stress affects the emotional intelligence of individuals, with a specific focus on students, and to offer practical solutions for enhancing EI in the face of digital challenges.

Digital stress manifests at multiple levels, including physical, cognitive, emotional, and behavioural. At the physical level, it can lead to symptoms such as increased heart rate,

dizziness, fatigue, and disrupted sleep. Cognitively, individuals may experience difficulties with concentration, negative self-evaluations, and reduced attention span. Emotionally, digital stress can result in feelings of anxiety, insecurity, and overwhelm. Behaviourally, it may manifest in compulsive checking of digital devices or avoidance of technology altogether. The unique feature of digital stress lies in its direct relationship with the constant engagement with digital platforms—social media, messaging apps, and digital learning tools—which demand immediate responses and often fuel anxiety about performance or availability.

At the same time, emotional intelligence plays a critical role in managing and mitigating digital stress. EI refers to the ability to recognize, understand, and regulate one's emotions, as well as to empathize with others. High emotional intelligence allows individuals to better cope with the pressures and demands of digital communication and to maintain balance in a digitally saturated environment. This paper will discuss the link between digital stress and emotional intelligence, examining how stressors in digital environments can impair emotional regulation, and how emotional intelligence can be developed to counter these effects.

1.1. Purpose of the Paper

The purpose of this paper is to explore the relationship between digital stress and emotional intelligence, examining how stress from digital engagement can affect emotional responses and overall well-being. The paper aims to define digital stress and emotional intelligence and investigate the impact of digital stress on various aspects of emotional functioning. It also explores the role of emotional intelligence in managing digital stress and proposes strategies for enhancing EI in both educational and professional settings.

The central sections of this paper will discuss the origins of digital stress, the physiological, cognitive, emotional, and behavioural effects it causes, and how emotional intelligence can help mitigate these impacts. The paper will also review strategies that can be used to enhance EI, both for students and adults, as a means to better cope with the demands of digital technology. In conclusion, the paper will offer practical advice for educators and individuals on how to cultivate emotional intelligence to manage digital stress effectively.

1.2. Methodology

This paper adopts a theoretical approach to exploring the relationship between digital stress and emotional intelligence (EI), using both descriptive and comparative methods. The analysis draws upon existing scientific literature on digital stress and emotional intelligence, including studies that examine how digital engagement influences emotional regulation. This paper also integrates personal experience in running a year-long project with over 100 students aged 13-15-year-olds from Slovenia, Germany, and Spain, as part of the eTwinning and Erasmus *Digital Me* project. The project involved students from three different cultural backgrounds, providing a diverse context for understanding the role of technology in student well-being.

Through a combination of literature review and personal insights, the paper compares different theories and findings from various researchers, aiming to offer a comprehensive understanding of how emotional intelligence can serve as a tool for managing digital stress in both learning environments and daily life. The research discusses the impact of technology on students' emotional well-being and highlights how fostering EI in classrooms can help students navigate the challenges of digital engagement.

The comparative aspect involves contrasting various educational systems and cultural perspectives on digital stress and emotional intelligence, using data and personal observations from the *Digital Me* project. Insights from this international perspective are incorporated to

enrich the theoretical framework and provide a more practical, classroom-based perspective on how teachers can support students in managing digital stress through emotional intelligence.

By blending scientific research with real-world teaching experience, this paper aims to offer a balanced and actionable approach for educators working with adolescents in an increasingly digital world.

1.3. Results

The paper reveals that digital stress is a significant issue for students, though many of them are not fully aware of its impact. Through both literature review and the author's personal experience working with 13-15-year-olds in the *Digital Me* project across Slovenia, Germany, and Spain, it was found that digital stress affects students' emotional well-being and their ability to regulate emotions in a digital context. However, students often do not recognize the symptoms or the underlying causes of their stress, attributing their feelings to other factors such as schoolwork or social pressures.

The research indicates that the constant exposure to digital devices, social media, and the pressure to maintain an online presence contributes to a sense of overwhelm, anxiety, and burnout among adolescents. Despite this, many students are not conscious of the term "digital stress" and how it differs from general stress or anxiety. This lack of awareness may make it more challenging for students to address the issue proactively.

Furthermore, the findings suggest that emotional intelligence (EI) can play a critical role in helping students manage digital stress. The ability to identify and regulate emotions, as well as empathize with others, was observed to have a positive impact on students' ability to cope with the digital pressures they face. The paper highlights the importance of raising awareness among students about digital stress and equipping them with tools, such as emotional intelligence skills, to better manage their emotional responses in a digital world.

Ultimately, the results show that digital stress is not just a personal issue but a broader challenge that educators and schools must address, integrating emotional intelligence into teaching practices to support students' emotional well-being in the digital age.

2. (Digital) Stress

As any other stress digital stress manifests on four levels:

- **physical leve**l: change in the nervous and hormonal system, adrenaline begins to enter the blood stream, which leads to increased heartbeat, dry mouth, sweating palms, trembling, shallow and irregular breathing, nausea, dizziness, and blurred vision,
- **cognitive level**: concentration difficulties, increased awareness, our senses sharpen, negative evaluation of one’s abilities and performance,
- **emotional level**: worry, fear, panic, insecurity, and a feeling of inferiority,
- **behavioural level**: making mistakes, irritation (Steptoe, 1989).

The result of digital stress is therefore the same as with any stress, the only difference is the cause. Digital stress refers to stress caused by excessive or inappropriate interaction with digital technologies. It is characterized by feelings of overwhelm, and anxiety, stemming from constant availability and the pressure to respond right away to digital communication. The unique aspect of digital stress lies in its root cause on reliance on digital technologies which affects both personal and professional domains. Digital stress can be subgrouped into different categories based on the initiator.

With children and teenagers, the root causes for digital stress are social media platforms and video gaming. Both serve as significant sources of stress due to their addictive nature, constant engagement, and emotional impact.

2.1. Social Media Stress

Platforms such as TikTok amplify digital stress through their algorithms and engagement mechanisms. The pressure to create content, gain likes, exchange fires on Snapchat fosters anxiety. Moreover, constant comparisons with peers and influencers can erode self-esteem and amplify feelings of inferiority. People have a strong need to connect with and belong to, and not to be excluded from, the social world (Baumeister & Leary, 1995). Receiving messages, exchanging fires on Snapchat, remaining in a form of 'communication loop' within a social network can contribute to a sense of belongingness and trigger a dopamine addiction leading to digital stress, because this permanent alertness requires mental effort and becomes exhausting and stressful (Warm, Parasuraman, & Matthews, 2008). Platforms like TikTok, Snapchat, and Instagram drive constant engagement and presence, which manifests as stress on different levels.

- Physical Level: The dopamine-driven engagement cycle causes overstimulation, leading to symptoms such as shallow breathing, fatigue, and even sleep disruptions.
- Cognitive Level: Frequent use of platforms like TikTok diminishes attention spans, as short-form content conditions the brain for quick gratification while impairing deep focus.
- Emotional Level: Social media use, particularly TikTok, is linked to increased feelings of inadequacy, fear of missing out (FOMO), and social comparison-induced anxiety.
- Behavioural Level: Users may exhibit compulsive scrolling behaviours, withdrawal symptoms when disconnected, and irritability during offline moments.

Teenagers are experiencing this type of stress on a daily basis without even realizing consciously.

Several studies highlight that both adults and children are affected by digital stress. For instance, Nick et al. (2022) found that nearly half of the participants in their survey reported experiencing digital stress at least occasionally. Additionally, Keles, McCrae, and Grealish (2019) established a link between digital stress and depression in teenagers and adolescents. The review from Odgers, C. L., & Jensen, M. R. (2020) examines the association between digital technology use and mental health, highlighting potential influences on adolescents' experiences of depression and anxiety.

To better understand how these trends manifest in real-life contexts, we conducted a much smaller scale research during the project *Digital Me*, where we surveyed 100 students from Slovenia, Germany and Spain, aged between 13-15 about their usage of social media, technology as well as on gaming. The results showed that more than a half of participants spend from three to five hours online gaming, scrolling through social media, YouTube, etc. The majority of the time is spent on social media (70%). Most popular social media among the respondents is TikTok (with almost 80% users), then Instagram (72%) and Snapchat (36%) (Pipuš, 2023).

The students and teachers participating in Digital Me also conducted a digital stress self-test taken from MediaSmarts (Mediasmarts, 2024). The goal of the self-test was to assess how much digital stress we're under. The test was anonymous and consisted of responding with "yes" or "no" to statements such as:

- *I have gotten up in the night to check my phone.*
- *I have told myself I'll go to sleep after I get one more like on my photo, reach the next level of a video game, etc.*
- *I could not guess how many times I check my social media.*
- *I often play games or check my social media when my parents think I am asleep.*
- *I could not guess how much time I spend playing online games in a week.*
- *I often compare my life to other people's lives based on what I see on social media.*
- *I often worry my friends are having fun without me.*
- *I have been late for appointments with my friends and family because I was checking social media or playing games.*
- *I have missed out on enjoying things because I was busy documenting them (taking photos, posting about them)* (Pipuš, 2023).

Although, the self-test showed that the majority of students and teachers are not under significant digital stress, certain statements indicated that digital stress is certainly a problem among teens. For example, 79% responded that they could not guess how many times a day they check their social media. 30% said that they have gotten up in the night to check their phone. 53% could not guess how much time they spend playing online games in a week. 50% often play games or check their social media when their parents think they are asleep. 54% have told themselves they will go to sleep after they get one more thing (a new level in a video game, another like on social media, etc.). 20% responded that they find it stressful to go a long time (like a class period) without checking their social media.

Afterwards, students were asked to describe and explain what digital stress was. Surprisingly, only 30% could provide a coherent definition, illustrating a widespread lack of awareness about this issue. To emphasize this, we included Figure 1 showing a student repeatedly writing, *'I don't know what digital stress is.'* The repetition highlights the gap between the students' experiences and their understanding of the phenomenon, reinforcing the need for greater education on digital well-being.

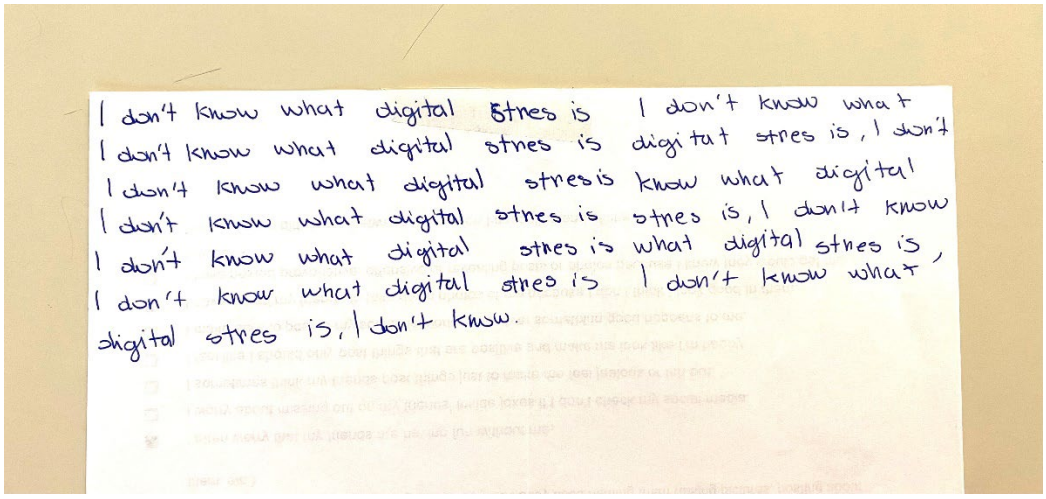

Figure 1. What is digital stress?
Note. From personal archive

2.2. Gaming Stress

Video gaming is another significant contributor to digital stress for children and teenagers. Prolonged gaming session, exposure to competitive environments, and the addictive nature of gaming design contribute to emotional and cognitive strain. Extended periods of gaming can lead to physical and

mental fatigue. Another study in rural China found that higher amounts of video game usage among adolescents are associated with increased symptoms of anxiety, depression, and stress (Li et al., 2022). Many video games are designed with competitive elements that can induce stress. The design of many video games incorporates elements that encourage prolonged play, such as rewards systems and social comparisons. This can lead to addictive behaviours, negatively affecting academic performance, social interactions, and overall well-being.

In our research we found that gaming occupies a significant portion of students' time, second only to their use of social media and therefore video gaming represents another major contributor to digital stress, particularly for children and teenagers.

3. Emotional Intelligence

Emotional intelligence refers to the ability to recognize, understand, and manage one's own emotions, as well as the ability to recognize and influence the emotions of others. It encompasses several key components:

1. **Self-awareness:** The ability to identify and understand one's own emotions and their effect on thoughts and behaviour.
2. **Self-regulation:** The ability to manage or redirect disruptive emotions and impulses and adapt to changing circumstances.
3. **Motivation:** The ability to remain driven and focused on goals, despite challenges or setbacks.
4. **Empathy:** The ability to understand the emotions of others and respond appropriately.
5. **Social skills:** The ability to build and maintain healthy, cooperative relationships.

High emotional intelligence allows individuals to navigate complex social environments, manage stress, and maintain well-being. In educational settings, it helps students regulate their emotions in response to academic challenges, maintain positive interactions with peers and teachers, and adapt to the demands of a constantly changing environment.

3.1. The Importance of Emotional Intelligence in Coping with Stress

Emotional intelligence plays a vital role in stress management, especially in high-stress environments like digital spaces. Studies show that emotional intelligence contributes to resilience, especially among youth in academic settings (Fatima, Nasir, & Shaheen, 2024). The capacity to regulate emotions, remain calm under pressure, and manage negative feelings is essential for coping with stress. EI helps individuals:

- **Recognize the impact of stress** on their emotions and behaviour.
- **Maintain perspective** in emotionally charged situations.
- **Develop coping strategies** that prevent stress from overwhelming them.
- **Build resilience** against setbacks or failures.

These abilities are especially important in the context of digital stress, where the rapid flow of information, constant digital engagement, and pressures to respond immediately can leave individuals feeling drained and emotionally unbalanced.

3.2. Digital Stress and the Waning of Emotional Intelligence

As the digital world continues to expand and shape everyday life, individuals, particularly students, are becoming more exposed to the stressors associated with constant digital

engagement. This constant exposure, coupled with the demands of immediate responses, social media pressures, and digital distractions, takes a toll on emotional intelligence (Reena, 2021).

There are several ways in which digital stress contributes to the waning of EI:

- **Reduced Self-awareness:** The constant bombardment of digital stimuli (e.g., notifications, social media updates, messages) leads to decreased self-awareness. Individuals may find it increasingly difficult to tune in to their own emotions, as they are distracted by external digital cues. Without the time and space to reflect on their feelings, people may struggle to identify the root causes of stress and anxiety, hindering emotional regulation.
- **Impaired Self-regulation:** Digital stress can overwhelm the ability to manage emotions effectively. The need for immediate responses and constant availability creates heightened emotional responses, such as frustration, anxiety, or irritability. The continuous exposure to digital platforms often makes it harder for individuals to disengage, leading to emotional burnout. This erodes the ability to regulate emotions, making it difficult to maintain calm and composure under stress.
- **Decreased Empathy:** The rise of digital communication, particularly through text-based platforms, often lacks the depth of face-to-face interactions. This can result in a decrease in empathy, as individuals may struggle to fully understand the emotions of others. Furthermore, the anonymity of online communication may lead to more impulsive and less empathetic responses, as digital interactions often bypass the emotional nuance that characterizes in-person conversations.

Social Skills Deterioration: In a digitally connected world, people often turn to screens for social interaction rather than engaging in face-to-face communication. Over time, this can impair social skills, as individuals may become less practiced in non-verbal cues, body language, and emotional nuances essential for building strong interpersonal relationships. The lack of physical presence and personal connection can contribute to feelings of isolation and emotional disconnection, which may exacerbate stress.

Increased Cognitive Overload: The constant demand for attention and the need to multitask across digital platforms can lead to cognitive overload, diminishing the ability to focus and think clearly. As a result, emotional responses become more reactive and less reflective. Digital stress contributes to this by constantly drawing attention away from emotional processing, making it difficult to engage in thoughtful, and regulated emotional responses. Maintaining constant attention in digital environments is mentally taxing and contributes to stress through cognitive overload (Warm, Parasuraman, & Matthews, 2008).

4. Practical Strategies to Reduce Digital Stress

In light of the increasing prevalence of digital stress, it is crucial to implement strategies in the classroom that help students manage their emotions effectively and build emotional intelligence, because higher emotional intelligence has significant effects on students' well-being and resilience. Below are several practical approaches that can help both reduce digital stress and improve students' emotional regulation:

4.1. Acknowledging Digital Stress

A surprising finding from our research was that when we asked students about digital stress, many of them were unaware of the concept. This lack of awareness highlights a crucial gap in understanding the impact of digital engagement on mental health. It is essential for educators to raise awareness about digital stress and its effects, as many students might not recognize it as a challenge they are facing. Teachers, as role models, can greatly influence students' emotional intelligence by guiding them in developing healthy coping strategies for digital

stress. One of the first steps in addressing digital stress is recognizing it as a problem. Teachers can openly acknowledge the presence of digital stress and its impact on students' well-being. This can be done through class discussions where students are encouraged to express their feelings related to their online experiences. By normalizing the conversation about digital stress, students may feel more comfortable discussing the emotional challenges they face. This acknowledgment also provides a foundation for cultivating emotional intelligence in the classroom by validating students' emotions and experiences. There are different ways on how to approach digital stress in the classroom, one way is to track notifications on the phones. There is also a multitude of ready-made lesson plans available on the internet.

4.2. Educating Students About Social Media and Digital Engagement

In order to mitigate digital stress, it is important to raise awareness about the potential negative impacts of social media and excessive digital engagement. Teachers can integrate lessons into their curriculum that explore the effects of social media on mental health and emotional well-being. This can include discussions about social comparison, the pressure to maintain an online presence, and the addictive nature of certain platforms. Encouraging critical thinking about these topics helps students become more conscious of their digital habits and equips them with the knowledge to manage their emotional responses to online content more effectively.

The first step in overcoming any problem is by acknowledging it. One example illustrating the impact of digital stress is the sheer volume of notifications students receive daily. When asked, the students admitted to receiving over 100 notifications a day. To highlight this, we conducted a brief experiment in which we asked students to come up to the blackboard and draw a line each time they received a notification over a span of 15 minutes. As shown in Figure 2, out of the 30 students present, over 60 notifications were recorded, with a couple of students receiving the majority of them.

Figure 2. Notifications game
Note. From personal archive

4.3. Mindfulness and Emotional Regulation Techniques

Teaching mindfulness and emotional regulation techniques can significantly enhance students' ability to manage stress. Mindfulness practices, such as deep breathing exercises, body scans, or breath-drawing techniques, can be used to help students centre themselves and regulate their emotional responses. These practices enable students to pause, reflect, and refocus, which can be especially useful when they feel overwhelmed by digital engagement. Integrating short mindfulness exercises into the daily routine, either at the start or end of class, can promote emotional resilience and support the development of emotional intelligence.

In addition to mindfulness, other emotional regulation techniques, such as journaling or guided visualization, can provide students with tools to process their emotions constructively. These techniques help students develop self-awareness and self-regulation—key components of emotional intelligence—by teaching them how to identify, understand, and manage their emotions in challenging digital environments.

Breathing techniques play an important role in dealing with stress and anxiety. If we can calm down our breathing, we can lower our heartbeat and reduce stress in the body. We can perform simple breathing exercises on our own, but we can also teach breathing techniques in class as part of our daily routine. Here is one very simple breathing exercise, where we inhale and slowly count to 5, 6, 7 and then slowly exhale and again count to 5, 6, 7. This exercise is very simple to do, the children like it and it is important for them to become more conscious of their breathing and how it impacts their body. They can do this exercise lying down, sitting, or standing, they can place their hand on their tummy and observe how their tummy moves up and down while breathing deeply.

Another very simple breathing technique is breath drawing, where we close our eyes and with a pencil draw lines synced with breathing. After which we make a drawing of our breathing pattern.

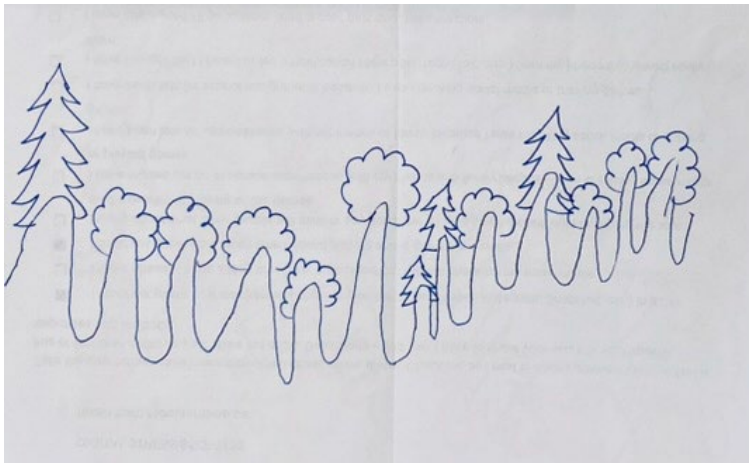

Figure 3. Breath drawing
Note. From personal archive

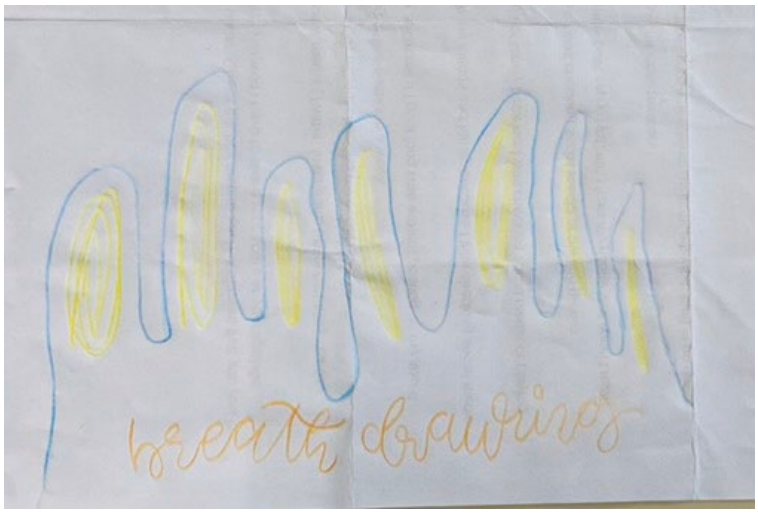

Figure 4. Breath drawing
Note. From personal archive

4.4. Encouraging Digital Detox and Healthy Digital Habits

Another approach to reducing digital stress is promoting healthy digital habits and encouraging regular "digital detox" periods. Students can be encouraged to set boundaries around their use of digital devices, such as limiting screen time before bed or designating certain times during the day as "device-free" moments. Providing opportunities for students to engage in offline activities, such as outdoor play, face-to-face interactions, or creative expression, helps them disconnect from the digital world and re-establish a sense of balance.

5. Conclusion

The growing presence of digital technologies in education and daily life has introduced significant challenges, particularly in the form of digital stress. This stress, which stems from constant digital engagement and the pressures of social media, gaming, and multitasking, disrupts emotional intelligence and can negatively affect both cognitive and emotional well-being. As this paper has explored, emotional intelligence plays a critical role in managing stress, and the decline of EI due to digital stress further exacerbates the challenges faced by individuals, especially students, in today's digitally driven world.

Teachers and students alike are impacted by this dynamic, with educators often needing to balance digital engagement in the classroom while managing their own stress levels. Teachers, as role models, can greatly influence students' emotional intelligence by guiding them in developing healthy coping strategies for digital stress. By promoting awareness of digital stress and integrating emotional intelligence into the curriculum, teachers can equip students with the skills needed to manage their emotions, reduce stress, and navigate digital spaces more effectively.

However, by acknowledging the impact of digital stress and taking proactive steps to enhance emotional intelligence, both educators and students can better navigate the complexities of digital environments. Strategies such as fostering mindfulness practices, encouraging healthy digital habits, and creating supportive learning environments are essential in mitigating the effects of stress and nurturing EI. Cultivating emotional intelligence not only helps students in managing their stress but also strengthens their academic performance and overall well-being.

Ultimately, fostering emotional intelligence is essential for both teachers and students. It enhances resilience, promotes a healthier school environment, and prepares individuals to thrive in an increasingly connected world. As digital technologies continue to shape our lives, integrating emotional intelligence development into educational settings will be crucial in supporting the mental and emotional health of both teachers and students, ensuring they are equipped to face the challenges of the future.

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