*Corresponding Author's Email: darjaps@gmail.com
Proceedings of the World Conference on Education and Teaching
Vol. 4, Issue. 1, 2025, pp. 111-119
DOI: https://doi.org/10.33422/etconf.v4i1.1129
Copyright © 2025 Author(s)
ISSN: 2783-7807 online

Diamond Scientific Publishing

Videogames in Real Life as a Form of Learning

Darja Pipuš
OŠ Gustava Šiliha Laporje, Slovenia

Abstract

This paper explores the innovative use of gamified real-life activities as a tool for enhancing learning, fostering emotional development, and reducing stress, all while improving student motivation. By integrating game design principles into hands-on activities, gamification creates an engaging and interactive approach to education, encouraging students to think critically, work collaboratively, and develop emotional intelligence. Drawing on recent studies and insights from the Digital Me Erasmus+ project, this paper examines the benefits and challenges of gamification in educational settings. The project involved over 100 students aged 13–15 from Slovenia, Germany, and Spain, who collaborated to create and play real-life adaptations of video games. Students used their familiarity with digital gaming concepts to design creative, team-based activities, discovering that learning can be fun, interactive, and physically engaging. These activities not only reduced digital stress by shifting focus away from screens but also promoted teamwork, problem-solving, and communication. Furthermore, the paper discusses the potential of gamification to address critical educational needs in today's digital age. By providing a balance between digital engagement and outdoor, hands-on learning, gamified activities support emotional regulation, encourage physical activity, and foster interpersonal connections. The findings from the project suggest that educators can leverage gamification to build a more holistic learning environment that enhances academic, emotional, and social outcomes for students.

Keywords: videogames, gamification, learning, emotional intelligence, outdoor learning, digital stress

1. Introduction

The article introduces the concept of video games as an educational tool, discussing how they are increasingly being incorporated into classrooms and learning environments. The role of video games in fostering problem-solving skills, creative thinking, and emotional regulation is discussed, as well as the potential for reducing digital stress when games are used intentionally. The article also acknowledges concerns about the addictive nature of gaming, but argues that with proper guidance, video games can serve as an effective tool for learning.

The author chose this topic because of her personal and professional interest in the impact of gamification on learning and emotional intelligence, connecting with other students.

In recent years, the use of video games and gamification has gained traction as a powerful strategy in education. Gamification involves applying game mechanics, such as rewards, challenges, and competition, to non-game contexts, including learning environments. This approach taps into the intrinsic motivation that games naturally foster, making educational experiences more engaging and enjoyable. By leveraging elements of gaming, educators can create dynamic learning scenarios that promote not only academic growth but also emotional and social development.

Video games and gamified experiences offer numerous benefits, including the development of critical thinking, problem-solving skills, and teamwork. For instance, collaborative games encourage players to communicate effectively and work together toward shared goals, fostering emotional intelligence skills like empathy and conflict resolution. Additionally, the immersive nature of games can stimulate creativity, as players navigate complex scenarios and devise innovative solutions.

However, concerns about the potential negative effects of gaming, such as addiction or excessive screen time, remain prevalent. Critics argue that gaming can lead to distractions, reduced productivity, and even heightened digital stress. Despite these challenges, structured and intentional use of video games in educational settings has the potential to mitigate these drawbacks. When designed with purpose, games can promote healthy habits, encourage balance, and even help students manage digital stress through mindful engagement and positive reinforcement.

This paper explores the intersection of video games, gamification, and real-life learning activities such as scavenger hunts. It draws on personal experiences and recent studies to highlight the potential for these tools to enhance emotional intelligence and overall well-being while addressing the challenges of incorporating gaming into educational frameworks.

2. Methodology

This paper combines theoretical research with practical insights to examine the relationship between emotional intelligence (EI), digital stress, outdoor activities, and gamification in education. The theoretical framework draws on existing literature exploring these concepts and how they intersect in learning environments. Additionally, personal observations from the **Digital Me Erasmus+ project**, involving over 100 students aged 13–15 from Slovenia, Germany, and Spain, provide a practical foundation for the analysis.

The **theoretical component** focuses on four key areas:

1. **Digital Stress**: Studies on how prolonged digital engagement impacts students' mental well-being and emotional regulation are reviewed to establish the challenges students face in increasingly digital learning environments.
2. **Emotional Intelligence**: Research on EI as a tool for managing stress and fostering social-emotional growth is used to frame its importance in equipping students to handle digital challenges.
3. **Outdoor Activities**: Literature highlighting the benefits of outdoor and hands-on activities is explored to demonstrate how these experiences mitigate the effects of screen time, foster collaboration, and encourage creativity.
4. **Gamification**: Studies on the role of gamification in education are examined, focusing on how game-based learning fosters engagement, problem-solving, and teamwork while reducing stress.

The **practical component** builds on experiences from the **Digital Me Erasmus+ project**, where students were guided through the process of designing and creating real-life versions of video games. The project allowed for first-hand observation of how gamification and outdoor, group-based activities can foster emotional intelligence and reduce stress by creating a collaborative and enjoyable learning environment. Working in culturally diverse groups, students demonstrated skills in communication, problem solving, and teamwork, which were further enhanced by the structured activities designed to develop their social and emotional competencies. Observations from the project were gathered through teacher logs, student reflections, and peer evaluations, providing a practical context for understanding the benefits of these approaches.

By integrating the theoretical foundation with real-world experiences, this paper provides a balanced perspective on how combining emotional intelligence, gamification, and outdoor activities can help address the challenges posed by digital stress in educational settings. The methodology highlights the relevance of both research and practical application, offering insights for educators aiming to foster emotional and social growth in students.

3. Background and Theory

3.1. Gamification in Education

Gamification refers to the application of game-design elements and principles in non-game contexts, particularly in educational settings, to enhance student engagement and learning. Video games, which are immensely popular among children and teens, serve as a significant source of inspiration for gamified learning approaches. Their widespread appeal makes them a powerful motivator, offering an engaging way to learn strategic thinking, problem solving, and collaboration skills.

Video games captivate players through dynamic storytelling, immersive challenges, and opportunities for achievement, all of which can be adapted to educational environments. By integrating mechanics such as scoring points, achieving levels, completing quests, and earning badges, educators can recreate the excitement and motivation inherent in video games. These elements provide immediate feedback, a sense of accomplishment, and progression, transforming traditional classroom activities into engaging and rewarding experiences.

One of the reasons video games resonate with students is their ability to balance intrinsic and extrinsic motivation. Intrinsically, students enjoy the process of tackling challenges and exploring solutions, while extrinsically, they are driven by rewards such as virtual badges, leader board rankings, or tangible recognition. Gamification taps into these motivations, aligning educational objectives with game-like incentives to foster a deeper connection to the subject matter.

Scientific research supports the effectiveness of gamified learning in various educational contexts. For instance, Hamari et al. (2015) conducted a review of gamification studies and concluded that it significantly enhances engagement and motivation in learning environments by aligning tasks with enjoyable game mechanics. Dicheva et al. (2015) found in a systematic literature review, that gamification improves active learning, particularly when progress tracking, goal setting, and reward systems are integrated effectively.

Additional studies further corroborate the benefits of gamification. Hanus and Fox (2015) examined gamified classrooms and reported increased motivation and participation among students compared to traditional classroom settings. Similarly, Sung and Hwang (2013) found

that cooperative learning activities in gamified environments foster teamwork and social interaction while also improving individual performance.

However, designing successful gamified learning experiences requires careful thought to ensure inclusivity and balance. Overemphasizing rewards or competition can lead to stress or disengagement, particularly for students who may struggle academically. Educators must create adaptable systems that cater to different learning styles, skill levels, and interests, ensuring every student feels motivated and supported. As Nicholson suggests, focusing on meaningful gamification—where students see the relevance of tasks to their personal goals—can enhance the overall learning experience (Nicholson, 2015).

3.2. Emotional Intelligence (EI)

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.

3.3. Digital Stress and Changes in 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, and 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, regulated emotional responses.

3.4. Benefits of Outdoor and Hands-on Activities

Engaging students in outdoor and hands-on activities not only strengthens physical health but also enhances cognitive and emotional development. These activities stimulate creativity, encourage teamwork, and foster problem-solving skills in real-world contexts. Studies have demonstrated that learning in natural environments, where students can directly interact with their surroundings, increases engagement and motivation. The combination of movement, fresh air, and social interaction during these experiences contributes to a more holistic approach to learning. Furthermore, such experiences help mitigate the effects of screen time, offering a balanced alternative to the increasingly digital learning environments that students navigate daily. Engaging students in outdoor and hands-on activities not only strengthens physical health but also enhances cognitive and emotional development. These activities stimulate creativity, encourage teamwork, and foster problem-solving skills in real-world contexts. Research has demonstrated that nature-specific outdoor learning environments promote socio-emotional, academic, and well-being benefits, underscoring the importance of integrating these experiences into the school curriculum (Beames et al., 2012). Learning in natural environments, where students can directly interact with their surroundings, increases engagement and motivation. Furthermore, studies show that experiential, hands-on approaches to STEM education improve students' self-efficacy and motivation across all educational levels (Freeman et al., 2014).

Therefore, while learning outdoors, we are accomplishing several goals at one time. The students are learning and are more motivated for learning, the students are decreasing stress levels and the students are working on their emotional intelligence.

4. Implementation and Case Study

As part of the **Digital Me Erasmus+ project** (Pipuš, 2023), conducted in partnership with students aged between 13 and 15 from Slovenia, Spain and Germany, we designed a hands-on activity centred around creating video games that can be played in real life. Surprisingly, much of the work was already made easier by the students' familiarity with video games. Given their extensive exposure to gaming, they quickly grasped the basic elements and concepts we introduced, making the learning process both seamless and highly engaging. Their intrinsic knowledge of game mechanics, objectives, and design principles allowed them to adapt these ideas effortlessly into physical, real-life game creations.

The activity began with a brief introduction to the fundamentals of video game design, including game rules, player roles, objectives, and interactive elements.

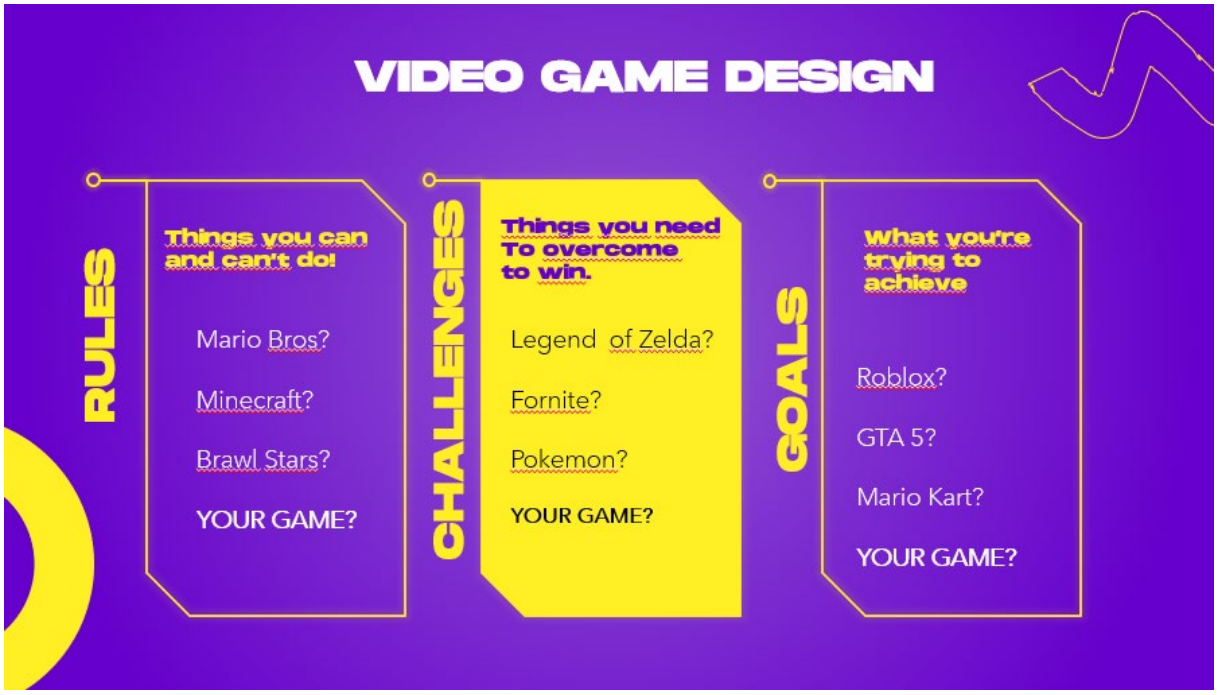

Figure 1. Video game design
Note. Personal archive
We also explained the equipment and materials they would use.

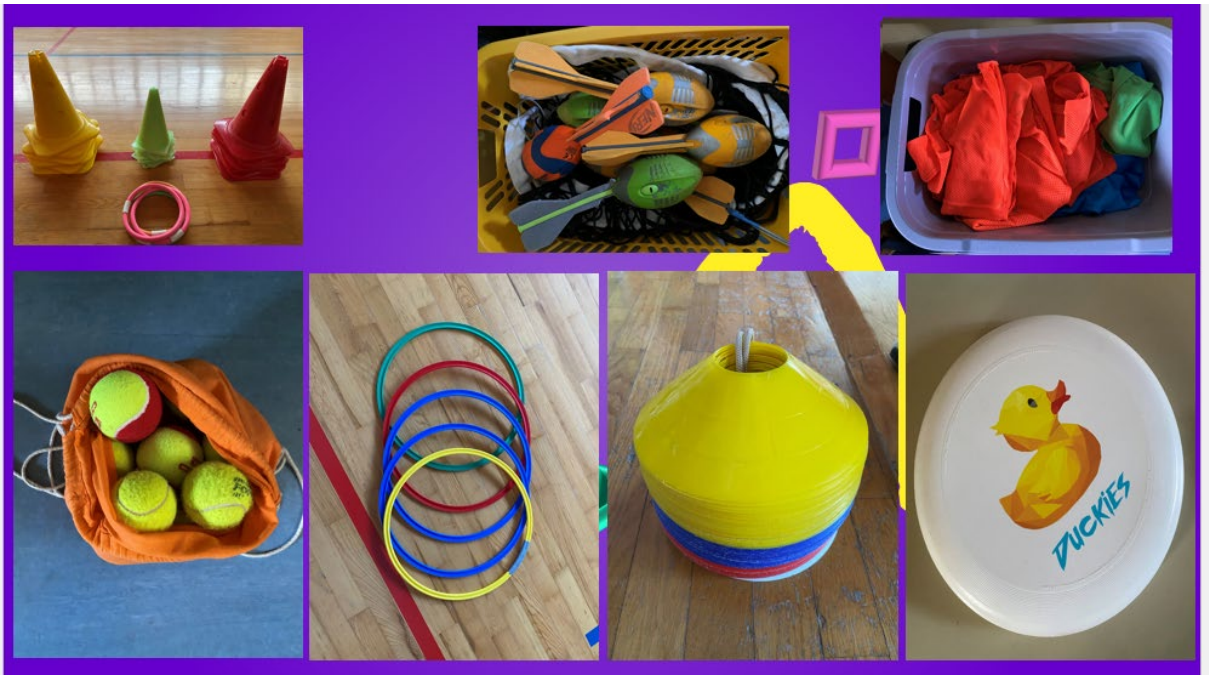

Figure 2. Video game equipment
Note. Personal archive

From there, we divided the students into small groups, empowering them to collaborate on designing and building their own real-life video games. We set some basic rules that all games needed to adhere to, such no violence and no use of mobile phones. With minimal guidance, they demonstrated remarkable creativity, translating digital concepts into physical activities that mirrored the games they play online or on consoles. For example, one such game involved teams of five working together to capture the opponents' zone, such as a designated area marked by trees, as quickly as possible. The rules prohibited physical contact with opponents, encouraging players to strategize and rely on teamwork. This game was inspired by mechanics from the popular video game *Overwatch*, where

players collaborate to achieve objectives while avoiding opponents' interference. The real-life adaptation allowed students to apply similar strategic thinking and coordination skills while engaging in physical activity.

One of the most rewarding aspects of the project was observing how naturally and enthusiastically students took ownership of the process. Their familiarity with video games not only made the design process intuitive but also fostered meaningful discussions about game dynamics, and fair play. How to make their games fun and engaging for their peers.

While the activity centred on creating games, it was also carefully designed to achieve several broader learning goals:

1. **Emotional Intelligence**: Students learned to navigate group dynamics, practice empathy, and handle disagreements constructively. Designing games required them to consider how their peers would feel when playing, fostering a deeper understanding of emotions and perspectives.
2. **English Language Skills**: As the working language of the project, English was used throughout the activities, which is not a mother tongue for any of the students participating in the project. Students improved their communication skills by explaining their game designs, giving instructions, and collaborating with peers from different countries.
3. **Group Work and Collaboration**: Working in diverse teams required students to assign roles, divide tasks, and support one another to bring their ideas to life. This collaboration enhanced their teamwork and problem-solving abilities while building mutual respect and trust.
4. **Creative and Critical Thinking**: Students had to think creatively to adapt digital game elements into physical ones and critically evaluate what would work in a real-life context. This required innovative problem solving and adaptability.
5. **Cross-Cultural Understanding**: Collaborating with peers from Spain and Germany gave students the opportunity to learn about different cultures, share ideas, and strengthen their ability to work in international teams.
6. **Physical and Social Engagement**: Creating and playing their games provided an opportunity to integrate physical activity into the learning process while reinforcing social bonds among participants.

The project concluded with a full day dedicated to learning and playing the games.

Figure 3. Video game in nature
Note. Personal archive

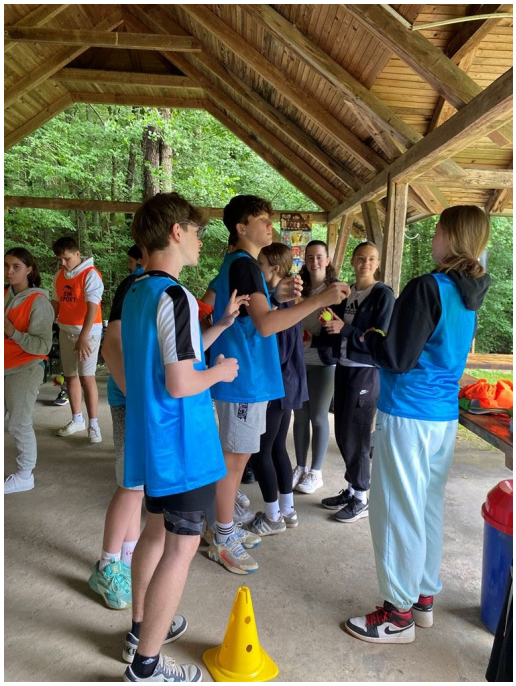

Figure 4. Video game play
Note. Personal archive

Each group showcased their creation, explained the rules, and facilitated gameplay for their peers. This experiential approach not only deepened their understanding of game design but also created a memorable and fun learning environment. Although the *Digital Me* project spanned a full year and included various digitally related activities, this particular hands-on gaming activity stood out as a favourite among students.

5. Conclusion

Gamification, as demonstrated through the activity of Videogames IRL as part of the ***Digital Me Erasmus+ project***, proves to be a highly effective and engaging approach to learning. By incorporating game-based elements into education, students not only develop essential academic and life skills but also experience a meaningful reduction in stress, including the digital stress that has become increasingly prevalent in today's technologically saturated world.

The activity proved how gamification, combined with outdoor activities, helps students realize that learning can be fun, dynamic, and interactive. By creating and playing real-life versions of video games, students discovered the joy of physical activity, teamwork, and creativity, demonstrating that games are not confined to screens. These activities provided a balanced alternative to the digital environments they are accustomed to, fostering a healthier relationship with technology.

Beyond its immediate appeal, gamification has far-reaching benefits for emotional intelligence. Throughout the project, students learned to navigate group dynamics, communicate effectively, resolve conflicts, and empathize with others. These experiences strengthened their social and emotional skills, equipping them with tools to better manage stress, regulate their emotions, and work collaboratively in diverse settings.

Moreover, the project highlighted the value of hands-on, experiential learning in education. By engaging students in designing and implementing their own games, they developed critical thinking, problem-solving, and leadership skills, all while building confidence in their abilities. The cross-cultural aspect of the project further enriched these experiences, promoting mutual understanding and teamwork among students from different backgrounds.

Thus, in conclusion, gamification offers a powerful, multi-dimensional approach to education that addresses key challenges faced by modern learners. By blending fun, creativity, and collaboration with outdoor and hands-on activities, it helps students combat digital stress, build emotional intelligence, and discover new ways to enjoy learning. As educators continue to navigate the complexities of a digital world, incorporating gamification into teaching practices can provide a much-needed balance, fostering both academic success and emotional well-being in students.

Acknowledgment

This paper is an output of the eTwinning and Erasmus+ project entitled *Digital Me*. The author would like to thank her partner Isabell Youngkin.

References

Beames, S., Higgins, P., & Nicol, R. (2012). Learning outside the classroom: Theory and guidelines for practice. Routledge. https://doi.org/10.4324/9780203816011

Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. Educational Technology & Society, 18(3), 75-88. https://www.jstor.org/stable/jeductechsoci.18.3.75

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences, 111*(23), 8410–8415. https://doi.org/10.1073/pnas.1319030111

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? – A literature review of empirical studies on gamification. In *Proceedings of the 47th Hawaii International Conference on System Sciences* (pp. 3025–3034). IEEE. https://doi.org/10.1109/HICSS.2014.377

Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education, 80*, 152–161. https://doi.org/10.1016/j.compedu.2014.08.019

MediaSmarts. (n.d.). *Dealing with digital stress*. https://mediasmarts.ca/sites/default/files/lesson-plans/lesson_dealing_with_digital_stress.pdf

Nicholson, S. (2015). A recipe for meaningful gamification. In T. Reiners & L. C. Wood (Eds.), *Gamification in education and business* (pp. 1–20). Springer. https://doi.org/10.1007/978-3-319-10208-5_1

Pipuš, D. (2023). *Digital Me (eTwinning & Erasmus+ project)*. European School Education Platform. https://school-education.ec.europa.eu/en/etwinning/projects/digital-me/twinspace

Reena. (2021). The impact of emotional intelligence in the digital age. *Psychology and Education Journal, 58*(1), 1844–1852. https://doi.org/10.17762/pae.v58i1.1039

Sung, H.-Y., & Hwang, G.-J. (2013). A collaborative game-based learning approach to improving students' learning performance in science courses. *Computers & Education, 63*, 43–51. https://doi.org/10.1016/j.compedu.2012.11.019