

PREFACE

Digital Wellbeing for Teens: Designing Educational Systems.

In an age where digital technologies profoundly shape how young people interact, learn, and grow, promoting digital wellbeing has become a central concern across education, design, and technology research [1]. While personal devices and online platforms offer rich opportunities for exploration and connection, their persuasive and sometimes manipulative design strategies can undermine users' autonomy, particularly among teenagers and children, whose cognitive and emotional development is still unfolding [2].

Recently, researchers have been exploring the unexpected issues arising from the excessive use of personal devices and social media apps, particularly as companies adopt "attention-capture" tactics, like guilty-pleasure recommendations and automatic content playback. These strategies exploit users' psychological vulnerabilities to increase advertising revenue, resulting in significant impacts on users' perceived agency and often leading to a sense of losing control over their technology use [2]. This has led to the emergence of a new focus on "digital wellbeing," studied in fields such as Human-Computer Interaction and psychology. Traditional approaches by practitioners and researchers to tackle these issues involve developing Digital Self-Control Tools (DSCTs) [3], such as mobile apps and browser extensions, that help users track their usage patterns and implement interventions like timers and lock-out mechanisms to regulate device use. However, both researchers and users are beginning to emphasize that achieving digital wellbeing requires more than just self-monitoring strategies; it is a journey of personal growth that necessitates education [4].

This focus section brings together interdisciplinary contributions that explore how educational systems, participatory design methods, and creative technologies can be reimaged to support digital wellbeing among youth. Rather than treating digital wellbeing as a matter of self-regulation alone, the included works emphasize collaboration, critical reflection, inclusion, and playful engagement as pathways toward more meaningful and sustainable digital experiences.

The selected papers examine diverse contexts, from collaborative learning environments enhanced through Human-Centered Design and Self-Determination Theory, to gamified platforms tackling sensitive issues, like gender-based violence and online grooming; from creative coding projects that challenge assumptions about digital efficiency, to inclusive co-design activities involving neurodiverse children and their peers. Across these contributions, the authors highlight how digital wellbeing can be fostered not only through individual tools but also through educational processes that empower young people to understand, question, and shape the technologies in their lives.

The article "Integrating Self-Determination Theory and Human-Centered Design to Enhance Students' Well-being in Computer Supported Collaborative Learning Environments" [5] explores how wellbeing can be meaningfully integrated into the design of educational technologies. Focusing on Computer-Supported Collaborative Learning (CSCL), the authors present a case study in which they applied Self-

Determination Theory (SDT) within a Human-Centered Design (HCD) framework to guide the redesign of a CSCL tool. Across three participatory phases (observation, ideation and prototyping, and evaluation), they investigated how SDT-informed insights could enhance the user experience by addressing students' psychological needs. The study highlights the value of embedding well-being considerations throughout the design process and suggests that combining SDT and HCD offers a replicable approach for developing more supportive and engaging learning environments.

The article "Empowering Through Play: Leveraging Gamification for Discussing Sensitive Topics" [6] explores how gamified platforms can be designed to support digital wellbeing while addressing complex and emotionally charged issues such as online grooming, cyberbullying, and gender-based violence. The authors present two educational platforms: RiseUp, aimed at adolescents and focused on gender-based violence, and ScreenSafe, targeting younger children to raise awareness about online grooming and child sexual abuse. Drawing on literature and expert consultation, the paper details how gamification strategies were used not only to increase engagement but also to create safe, supportive environments for learning. The authors highlight key design challenges and introduce novel approaches that emerged in response to the sensitivity of the topics, emphasizing the importance of balancing playfulness with emotional safety.

The article "Designing Counter-Efficient Artifacts: Critical Educational Approaches in Creative Coding" [7] examines how creative coding can be used as a pedagogical tool to challenge dominant narratives of efficiency in digital technologies. The authors argue that user-friendly and seamless interfaces often obscure the underlying operations of digital systems, potentially diminishing users' agency and awareness. Through a critical and speculative design approach, the paper presents an educational setting where students engage in creative coding projects that intentionally de-emphasize efficiency to make hidden aspects of technology visible. Based on the outcomes of this course, the authors identify seven replicable strategies that can help educators and artists foster critical digital literacy. The work emphasizes the importance of creating spaces, often lacking in professional contexts, where students can explore the socio-technical implications of digital systems and develop a deeper, more reflective understanding of their everyday technological interactions.

The article "Collaborative Design through Play for ADHD Children and Peers: an Exploratory Study" [8] investigates how playful, game-based approaches can support the inclusion of children with ADHD traits in the design of technology. Moving beyond traditional views that frame these children primarily as users of behavior-regulating tools, the authors explore how they can instead act as co-designers alongside their peers. The study centers on a collaborative board game designed to facilitate the ideation of simple smart technologies, such as bracelets that respond to temperature changes with light effects. Through a workshop involving one child with ADHD traits and three peers, the paper examines how game mechanics foster participation, collaboration, and creative engagement. The findings offer insights into how playful co-design methods can empower neurodiverse children and inform the development of inclusive design practices.

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