

Editorial. Weaving the future of education, innovative pedagogy in a digital, inclusive, and sustainable world

Editoriale. Tessere il futuro dell'istruzione, pedagogia innovativa in un mondo digitale, inclusivo e sostenibile

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As we navigate the complexities of 21st-century education, a clear imperative emerges from recent scholarship: we must move beyond viewing educational technology as a mere tool and instead embrace it as a catalyst for profound pedagogical transformation. The discourse is no longer simply about if we should use technology, but how we can leverage it to create more inclusive, engaging, and critically aware learning environments. The second general issue of 2025 of the Italian Journal of Educational Technology brings together diverse perspectives that reflect the growing richness and complexity of research in educational technologies, both in terms of contexts explored and methodological approaches adopted.

Our journey begins by exploring the transformative power of education in one of society's most challenging contexts: the prison. The explorative case study by Decembrotto and Mari (2025) on the "Giocare Dentro" project powerfully illustrates the universal and foundational need for structured game as an educational practice. By introducing board games into the Italian prison system, the project creates a regulated space where cognitive, emotional, and social skills can be developed. In a setting defined by isolation and rigid control, games offer a counter-narrative of empowerment and personal growth. They become a medium for managing conflict within shared rules, fostering self-reflection, and encouraging communication, reminding us that the core principles of good pedagogy transcend context and serve even the most marginalized learners.

From the structured, physical interactions of board games, we shift our focus to the digital realm, examining the challenges of extending educational opportunities through mobile technology in formal schooling. The systematic literature review by Amalia et al. (2025) on mobile learning in Indonesian primary schools highlights a critical gap between potential and practice. While mobile apps, augmented reality, and e-modules have successfully improved educational outcomes, their implementation is hampered by significant systemic barriers. These include limited infrastructure, inequitable access to devices, and a pressing need for enhanced teacher skills. This research offers an important reminder that technological

innovation cannot thrive in isolation from its social and educational contexts. It requires a supportive ecosystem built on professional development, robust infrastructure, and community engagement to ensure that digital tools become instruments of inclusion rather than exclusion.

If technology is to be integrated effectively and inclusively, then the training of future educators becomes paramount. The phenomenological study by Trevisan and De Rossi (2025) explores how blended learning and flipped classroom models can transform pre-service teacher education. Their findings show that these student-centered approaches are highly effective in fostering higher-order thinking skills, such as analysis and evaluation. By actively engaging pre-service teachers in the very methodologies, they will be expected to use, such programs prepare them to design flexible, technology-permeated learning experiences. This direct experience is crucial for building the professional identity and confidence needed to overcome the challenges of innovative teaching.

The potential for technology to revolutionize teacher training, particularly for inclusive education, is further explored by Filippone et al. (2025). Their research on using 3D virtual worlds and educational escape rooms with special education teachers in training demonstrates remarkable success in enhancing digital competencies. These immersive environments boost motivation and provide a powerful platform for designing personalized activities aligned with Universal Design for Learning (UDL) principles. The study shows a significant improvement in skills related to problem-solving and digital content creation, confirming that hands-on, engaging training can equip teachers with the practical abilities needed to create truly inclusive learning spaces.

Beyond the acquisition of technical skills, however, lies the deeper challenge of fostering a culture of collaborative reflection. The work of Romiti et al. (2025) investigates how Computer-Supported Collaborative Learning (CSCL) can promote "evaluative thinking" among in-service teachers. Their study of an online professional development program reveals that structured collaborative activities encourage teachers to move beyond mere data literacy. Through educational dialogues, participants learn to collectively analyze practices, interpret data within their school's cultural context, and co-construct strategies for improvement. This process of reflective, social inquiry is fundamental for driving meaningful and sustainable school self-evaluation and improvement.

Finally, as we embrace the digital transformation of education, we are called to a new level of critical consciousness regarding its hidden costs. The contribution by Orsenigo et al. (2025) serves as a powerful concluding reflection, urging us to consider the environmental impact of our increasingly digital world. The authors detail the immense footprint of technology, from the "embedded emissions" in device production, which uses over seventy chemical elements, to the "operational emissions" from the energy and water consumed by data centers every time we stream content or use an AI model. This reality necessitates an "environmental education of digital resources", a new pedagogy that fosters digital moderation and a critical understanding of the tangible consequences of our virtual actions.

In conclusion, the papers in this issue collectively argue for an educational future built on thoughtful integration. It begins with the fundamental humanism of play-based learning, extends through the critical and equitable application of technology, is actualized by innovative and reflective teacher education, and is ultimately grounded in a profound sense of responsibility to our planet. The overarching goal is to foster a holistic form of education that prepares citizens to navigate the complexities of the digital era while remaining aware of their ethical obligations within an ecologically interdependent world.