

PREFACE

Smart Learning Ecosystems: toward the polyphonic construction of a new normality

This Special Issue contains contributions from researchers and practitioners involved in the development of Smart Learning Ecosystems and Smart Education as engines of social innovation and territorial development. At the core, the adjective “smart” comprises terms like intelligent, purpose-oriented, supportive, artful, or clever. Thus, smart does not necessarily include the usage of technology (neither does it exclude technology!).

After the shock of the pandemic, learning ecosystems (in particular schools, universities, and territorial learning communities) all over the world are facing a new phase characterized by the search for and the experimentation of ways to their “new normality“. In such a context, collaborative learning is emerging as an approach of considerable relevance that stays also at the basis of the polyphonic construction of the future of learning ecosystems. Alongside collaboration, on the technological side, the relevance of intelligent systems, generically collected under the label of Artificial Intelligence (AI), is gradually increasing; concurrently, on the pedagogical side, competencies have become the goal of future education, also in the attempt to close the skill gap, which represents one of the greatest dangers for the transition towards smarter productive systems and societies. Competences and AI are also topics that intersect and influence each other and raise questions of ethical nature.

As such, what should we expect from future learning ecosystems? How “smart learning ecosystems” are changing? How such changes may be related to the achievement of “a better learning for a better world” [1] as a contribution to the United Nations 2030 Agenda for Sustainable Development Goals (SDGs) [2]? How will they contribute to the reduction of inequalities and, at the same time, to the empowering of individuals according to their expectations and talents?

This Special Issue is supported by the Association for Smart Learning Ecosystems and Regional Development (ASLERD) [3] and contributes to the discussion about these issues. The issue includes 5 articles that investigate the use of smart technologies in learning ecosystems as enablers of social innovation, inclusion, participation, and societal development [4]. Altogether, the articles highlight challenges and opportunities for the empowerment of the diverse actors involved in the educational process: teachers, learners, and wider educational communities.

The article titled “*Evaluating the Impact of FoLA² on Learning Analytics Knowledge Creation and Acceptance during Multidisciplinary, Co-Design and Learning Activities*” by Marcel Schmitz, Maren Scheffel, Roger Bemelmans, and Hendrik

Drachsler [5] investigates the use of Learning Analytics (LA) as a tool to co-design educational activities by teachers, students, and educational-oriented advisers. This article contributes to advancing knowledge about the decisions on the planning, implementation, and evaluation of educational activities, and it sheds light on the role of LA in supporting these processes [6].

The article titled “*Exploring Innovation in the Teaching of Design. A Study on the Experimental Teaching Practices in the Context of a School of Design*” by Francesca Mattioli, Laura Cipriani, Andrea Giuseppe Manciaracina, and Andrea Taverna [7] is focused on design education to map innovative teaching practices, which are strongly problem-oriented and project-based. Addressing the call for rethinking education in the design discipline [8], this article aims to foster teachers’ reflections on their practices in terms of epistemology, methodology, and impact on the learners’ development.

While the above two articles address innovation of teaching practices, the article titled “*Student experience and new media to leverage an Infocommunicational case study model*” by Maria José Fonseca and Óscar Mealha [9] explores the students’ point of view to investigate the other side of the educational process. The article proposes an “info-communicational service model” to better support students’ needs and wishes within the framework of a learning ecosystem where librarian teachers act as facilitators and agents of change [10], and the school library becomes a phygital space.

This research provides several insights into taking advantage of digital technologies to foster innovation in the educational systems.

Such innovation emerged as urgent during the COVID-19 pandemic and post-pandemic period when the contingent situation forced the educational systems worldwide to be resilient [7, 8]. The article titled “*The Italian School Ecosystems two years after the pandemic in the perceptions of schools’ principals and teachers – part 2 (a segmented analysis)*” by Carlo Giovannella, Licia Cianfriglia, and Antonello Giannelli [13] investigates the effects of the “digital shock” on the Italian school ecosystem two years after the lock-down (March 2020), as perceived by teachers and principals. This research points out both pain points and opportunities for the future at personal, organizational, and technological levels.

Another opportunity for innovation of the learning ecosystem is the one proposed in the article titled “*Designing inclusion: a smart learning ecosystem for hearing parents of deaf children*” by Alessia Pece and Patrizia Marti [14]. The article proposes a system to meet learning and communication needs of hearing parents of deaf children. The proposed system is co-designed with a group of stakeholders, and serves as an enabler for a community of practice that has the potential to promote self-actualization, relatedness, and security fulfillment [15].

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