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Preface to the Inaugural Issue

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Computer Science and all the related technological subfields started as lab projects at universities. It was developed by universities and for universities. Gradually the potential of automating tasks attracted attention in commercial organizations and gave rise to its application to automating bureaucratic aspects of business life. It also encouraged the emergence of companies, e.g. Microsoft and Apple, which developed products for mass consumption. In the last decade we have witnessed the atomization of that process with smaller computers being embedded into daily life objects and processes, e.g. Ubiquitous Computing.

Meanwhile this decade has seen the application of computers to education flourish outside of the lab while universities have been busy supporting commercial, industrial, and medical innovation. However, despite the massive advances computing research has achieved, innovation to support teaching and learning activities have not changed much within the university itself and it remain mostly as it has been for the past few decades. There have been some explorations on transforming classrooms to provide more creative spaces (Augusto 2009), as well as opening up the idea of a learning context through distance learning (Teall 2014) (Peña-Rios 2014). Sadly, these high-tech developments are not the standard, rather they are recent and many are at an experimental stage.

Given the variety of technology that that is emerging from research labs and the variety of ways that it can be used to inspire and support learning activities, we believe there is an opportunity, even an obligation, for academic organizations to explore and apply technologies to upgrade themselves and stay at the forefront of knowledge transfer. This is the purpose of this new journal, to act as a portal to expose the opportunities that emerging technology and pedagogies can collectively offer to 21st century education. As such we hope this inaugural edition will be the first of a series providing some inspiring and useful insights to research in this important and growing area of education.

Papers in this Inaugural Issue

We are very proud to present in this Inaugural Issue a wide range of contributions which attest to the current state of the art and the current explorations in our scientific area.

The Immersive Education Laboratory: understanding affordances, structuring experiences, and creating constructivist, collaborative processes, in mixed-reality smart environments by M. R. Gardner and J. B. Elliott, provides an overview of the work being developed in the iClassroom and with other technologies are providing the testbed for research on immersive learning environments and their role to materialize the concept of intelligent learning spaces.

Helping Moms Learn Online: Leveraging Mobile Technology and Cloud Computing for Maternal Health by Hai Zhang and Ruixue Xiao, presents a mobile learning framework which integrates governments, kindergartens, schools, hospital and users into a learning ecology, which can create better learning environment for pregnant women.

Providing Adaptations for Special Education Mobile Learning by M.J. Rodríguez-Fórtiz, A. Fernández-López, T. Ruiz-López, C. Rodríguez-Domínguez, M. Cabrera-Cuevas and M.L. Rodríguez-Almendros, provide an overview of their project developing a mobile learning platform for students with special educational needs.

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"Multi-screen in One" System Design of Education Video Oriented U-learning by Xiao Jun, Wang Lamei, and Zhu Xiaoxiao, presents key elements of the video technologies underlying the ubiquitous learning (U-learning) concept within the Shanghai Lifelong Learning Network. Their "multi-screen in one" concept strengthens the Continuous blended learning model within U-learning environments. Their article explains the intelligence behind the system which makes the concept work in practical situations.

Application Scenarios of Interactive Science Fiction Prototyping in Virtual Worlds for Education by Johanna Pirker, Christian Gütl, and Patrick Weghofer explores recent trends on using Science Fiction Prototyping as a vehicle to guide the design of systems, in this case this idea is applied to the design of learning environments.

We believe this selection of papers offers both a good sample of the state of the art both in terms of addressing fundamental problems in the area (e.g. improving infrastructure and relating infrastructure to pedagogical objectives) as well as of cutting edge applications which illustrate how new technological advances are being assimilated by academia. We hope our readers find them as stimulating as we did when reading them and that they trigger a new wave of innovation in our field.

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