

Editorial: A Message from the Editorial Team and an Introduction to the July-September 2016 Issue

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WELCOME to the third 2016 issue of the *IEEE Transactions on Learning Technologies*. This issue offers an interesting demonstration of inter-disciplinary research in the field of learning technologies. Most papers in the issue combine several subfields of expertise, for example, bringing novel educational methods to subjects where these had not previously been explored, or investigating combinations of two and more approaches that are rarely examined together. Enjoy your reading!

Diego A. López García, Tomás de J. Mateo Sanguino, Estefanía Cortés Ancos, and Iñaki Fernández de Viana González describe “A Debate and Decision-Making Tool for Enhanced Learning” that enables students to participate in online debates without assistance from a moderator, by submitting, discussing, and voting on proposals in order to reach group decisions about complex topics.

The “Agent Supported Serious Game Environment” proposed by Theodouli Terzidou, Thrasylvoulos Tsiatsos, Christina Miliou, and Athanasia Sourvinou incorporates AI features in an educational game, including pedagogical agents and automated tour guides, for investigating students’ collaboration, motivation, enjoyment, and performance.

In their paper “Analyzing the Impact of Using Optional Activities in Self-Regulated Learning,” José A. Ruipérez-Valiente, Pedro J. Muñoz-Merino, Carlos Delgado Kloos, Katja Niemann, Maren Scheffel, and Martin Wolpers investigate the addition of optional elements to computer-based environments for self-regulated learning. In a study with pre-university students, they found a low uptake of optional elements and that the ones most used were not directly related to the learning.

The paper “BH-ShaDe: A Software Tool that Assists Architecture Students in the Ill-Structured Task of Housing Design” by Eva Millán, María-Victoria Belmonte, Manuela Ruiz-Montiel, Juan Gavilanes, and José-Luis Pérez-de-la-Cruz focuses on both a rarely explored learning domain and a novel approach, to support acquisition of design skills by generating basic house schemas that can serve as starting points for student designs.

The paper “Designing a Secure Exam Management System (SEMS) for M-Learning Environments” by Mustafa Kaiiali, Armagan Ozkaya, Halis Altun, Hatem Haddad, and Marc Alier examines problems of mobile devices with a platform for running secure examinations and presents an elaborated solution that could be used for “mobile” exams for courses offered in the Moodle learning management system.

In “Early Prediction of Student Profiles Based on Performance and Gaming Preferences,” Gabriel Barata, Sandra Gama, Joaquim Jorge, and Daniel Gonçalves attempt to build a bridge to personalized gamified learning. In earlier work, they used cluster analysis to identify four types of student that differ in their course behavior and engagement. In this paper, they evaluate an approach that derives student type from student behavior relatively early in the course, when adapting to learners’ type can make a difference.

Petra Vrablecová and Marian Šimko focus on domain model building for intelligent educational systems. High quality domain models need semantic relationships between concepts, but these relationships are hard to elicit. In their paper “Supporting Semantic Annotation of Educational Content by Automatic Extraction of Hierarchical Domain Relationships,” the authors present and evaluate an approach for extracting these relationships from educational content.

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