
Editorial

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Biographical notes: Lorna Uden is Emeritus Professor of IT Systems in the Faculty of Computing, Engineering and Technology at Staffordshire University. Her research interests include technology learning, HCI, activity theory, big data, knowledge management, web engineering, multimedia, e-business, service science and innovation, mobile computing, cloud computing, social media, and problem-based learning.

Welcome to V9N1 issue of *IJLT*. This issue consists of five papers. The first paper is ‘Designing interaction in digital tabletop games to support collaborative learning in children’ by Elise van den Hoven, Manon Spermon and Imke Schouten. Their paper describes the design of two tangible games on a digital tabletop with the goal to increase collaborative interactions among children in the Totti study and in the Flourishing Future study. In the Totti study, three degrees of collaboration were incorporated in the game to increase the collaborative interactions needed. In the Flourishing Future study two versions of the game were implemented differing in interaction style: one required cooperative gestures and the other did not. According to these authors, evaluation results show significant increases in collaborative interactions among normally developed children with both game designs. Further empirical studies are needed to validate the results.

The second paper is ‘E-learning and educational data mining in cloud computing: an overview’ by Alberto Fernández, Daniel Peralta, José Manuel Benítez and Francisco Herrera. The authors in this paper present an overview of the current state of the structure of cloud computing with regards to its application in e-learning. In this paper the authors provide details of the most common infrastructures that have been developed for such a system. They also present some examples of e-learning approaches for cloud computing that can be found in the literature. Lastly, they discuss the suitability of this environment for educational data mining, suggesting the migration of this approach. Because the use of cloud computing in educational centres is at an early stage, further research should include the simplification of the deployment of a private cloud, considering the hardware infrastructure and management issues of the system, as well as stressing the impact cloud delivery may have on greater advancements in pedagogical effectiveness.

The third paper is ‘Users’ preference for and perception of animated pedagogical agents’ by Kyle Cheney. The paper investigates the effect that ethnicity and gender have on participants’ preference for and perception of animated pedagogical agents (APAs). The author discusses the ratings of four agents, an African American male and

female and a Caucasian male and female were selected from 120 workers on Mechanical Turk. According to the author, the results indicated that users did not prefer or more highly rate agents who were identical to themselves, contrary to the similarity hypothesis. Instead, the results indicated an interaction between the ethnicity and gender of the agent and the ethnicity and gender of the participants. The findings on classroom professor evaluations and stereotyping indicate that it is much more likely that the perception of and preference for APAs is guided by stereotypes held by users rather than their own personal characteristics. Further research is necessary to examine the effects of these stereotypes on APAs and the preferences of students in selecting agents.

The fourth paper is 'Diagnosing knowledge using learning activity traces generated by various problem-solving modalities' by Sandra Michelet, Vanda Luengo, Jean-Michel Adam and Nadine Mandran. This paper presents a diagnosis model, called DiagElec. This model considers traces generated by various independent tools. DiagElec integrates a notion of uncertainty in the diagnoses using the notion of 'degree of belief' which is defined by the rules of the diagnosis. The goal was to design, develop and evaluate a model for diagnosing students' knowledge in ILEs that is capable of taking into account several contextual factors in order to make inferences. To evaluate our model, the authors have carried out a two-phase experiment, first with learners and then with teachers. Further work is required to confirm the effectiveness of the approach. It would be interesting in future to observe expert reasoning in using feedback rather than in the diagnosis process.