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, internet of things and problem-based learning.

Welcome to V11N3 of *IJLT*. There are four papers in this issue. The first paper is 'Using a dynamic geometry system to integrate analytic and synthetic knowledge in the solution of geometry problems' by Carolina Guerrero-Ortiz, Aaron Reyes-Rodríguez and Hugo Espinosa-Pérez. The authors of this paper document how the systematic use of a dynamic geometry system (DGS) during problem solving became a means of integrating synthetic and analytic concepts of geometric knowledge. The authors believe that using a DGS during problem solving can help learners to integrate synthetic and analytic aspects of geometry, which involves constructing meaning for algebraic expressions based on synthetic properties of geometric objects and synthetic properties. The results indicate that solving problems with the support offered by a DGS increases the opportunities that problem solvers have to interpret algebraic procedures from a geometric perspective and to construct meaning of mathematical concepts. Further empirical studies are needed to verify the results.

The second paper is 'Using learning styles as a basis for creating adaptive open learning environments: an evaluation' by Heba Fasihuddin, Geoff Skinner and Rukshan Athauda. This paper presents an adaptive framework to personalise open learning environments. The design of the framework is grounded in cognitive science and learning principles. Theories of learning styles have been considered and applied, with the technology of adaptive navigation support integrated into the design of an open learning environment, testing the use of sorting and hiding techniques. According to these authors, the adaptive framework adapts to learners' learning styles by sorting content based on learners' preferences and hiding the least preferred content. A prototype of this framework was developed and piloted on 88 undergraduate students. Subjective and objective data were collected and statistically analysed in order to evaluate the proposed framework and learners' satisfaction with the adaptive design of the open learning environment. The results and evaluations show that adapting to learning styles appears to be both helpful for learning and appreciated by learners. It would be necessary to conduct more empirical studies for this.

The third paper is 'Student engagement in massive open online courses' by Jane Sinclair and Sara Kalvala. Completion rates in massive open online courses (MOOCs) are disturbingly low. According to these authors, Existing analysis has focused on patterns of resource access and prediction of drop-out using learning analytics. In contrast, these authors argue that the effectiveness of teaching programs in traditional higher education (HE) settings internationally is increasingly assessed by surveys measuring student engagement. The conceptualisation of engagement used is much richer and more informative than the way the term is currently interpreted in the context of MOOCs. This paper considers MOOC participation, learning and drop-out in the context of this richer conceptualisation of student engagement. MOOC pedagogy and practice are examined and they evaluate how far HE engagement measures can be successfully used in the MOOC context. Sinclair and Kalvala have identified the need for a MOOC engagement model and suggest recommendations for basic initial steps which MOOC developers can make towards improving engagement. This model will need to be tested.

The last paper is 'Testing young business students for technology acceptance and learning performance' by Kenneth David Strang. In this paper, the author extended the state-of-the-art in technology acceptance research. He adopted the UTAUT model to examine mandatory technology resistance using a sample of young emerging US business entrepreneurs. The sample was taken from senior undergraduate university students enrolled in one of their last courses before graduating and entering the workforce in New York, USA. Technology was novel and mandatory in the experimental setting because the course was a new online design using only synchronous lectures. The most controversial finding was that gender did not impact behavioural intent (BI), but it was a significant predictor of actual performance and in fact young female entrepreneurs achieved better results. An interesting finding was that perceived enjoyment was strongly related to both BI and actual performance, although the perceptions were opposite: low enjoyment perception was linked to BI, but high enjoyment expectation predicted actual performance. Surprisingly, Strang did not find any support for social peer norm to impact BI or actual performance. However, it is important to verify the results by more empirical evaluations.