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.

The first paper is, 'Developing personalised e-courses: tailoring students' learning preferences to a model of self-regulated learning' by Aikaterini Maria Souki, Fotini Paraskeva, Aikaterini Alexiou and Kyparisia A. Papanikolaou. According to these authors, there is a need to deliver e-courses that support learners in identifying their preferences and applying the appropriate strategies to guide their learning path. These authors have designed and implemented the framework (SR-INSPIRE*us*-learning framework) based on the cyclical model of self-regulated learning (SRL) in order to enable learners to define and manage their learning path by means of providing a set of generic strategies and customised learning activities based on their learning preferences.

A preliminary quasi-experimental study with comparison groups in pre/post tests and experimental and control groups was conducted to examine aspects of SRL (cognitive and affective domain) and learners' performance. Their findings provide evidence that the framework increases specific aspects of SRL and students' performance. However, a large sample would be required to validate the claim. Other research such as the integration of other pedagogical models in AHeLEs, will need to evaluate alternative implementations and compare the results. Further studies to consider factors such as the levels of experience, interests and prior knowledge will be useful.

The second paper, titled, 'Student assignment involving perceptual mapping via multidimensional scaling and multi-attribute models', is by Stefan Linnhoff and Katherine Taken Smith. Linnhoff and Smith argue that there is a need today for the development of learning tools that can help students overcome their anxiety of statistical applications. This paper describes an assignment involving multivariate statistics for undergraduate marketing classes. The assignment integrates aspects of perceptual mapping via multidimensional scaling and multi-attribute models.

A feedback questionnaire revealed that the assignment was well-received by students and successful in increasing their knowledge of statistics. Students felt the assignment did increase their knowledge of perceptual maps, multi-attribute models, and multidimensional scaling. Students showed an interest in learning more about statistics and marketing research. Since the assignment increased the student's interest in statistics

and willingness to learn and use statistics, findings suggest that the student's anxiety regarding statistics was reduced.

The assignment proposed in this paper integrates aspects of perceptual mapping via multidimensional scaling and multi-attribute models. Besides teaching statistics, a goal of this assignment was to reduce 'statistics anxiety' that many students possess.

The third paper, 'Exploring the effectiveness of a novel feedback mechanism within an intelligent tutoring system', is by Jeremiah Sullins, Scotty D. Craig and Xiangen Hu. This paper explores the effectiveness of a new feedback mechanism within an intelligent tutoring system called AutoTutor LITE. Participants were randomly assigned to one of three feedback manipulation conditions within the context of complex scientific material:

1   learners' characteristics curves

2   random

3   no feedback.

Results revealed that the participants receiving the new feedback mechanism (LCC) showed significantly higher learning gains when compared to the random feedback or no feedback manipulations. Additionally, there were no differences discovered between random feedback and no feedback. More studies are needed to evaluate its effectiveness.

The fourth paper is, 'Video diaries: a discussion of their use for researching the learner experience in higher education', by Amanda Jefferies. Jefferies argues that video diaries offer an effective and valuable research tool for longitudinally exploring learners' reflections on their learning and for informing the development of future learning support.

This paper considers the rationale for using video diaries as a method of qualitative data gathering for research into students' experiences of higher education (HE). In particular, the paper considers how video diaries have been employed for researching students' views and attitudes to their own learning and development. A methodology for employing video diaries as a research method for data collection is discussed within the context of three case studies with undergraduate students at a UK university and the wider recent literature. The conclusions highlight the unique value of participant-generated video diaries for researching the nature of the student learning experience in HE. More empirical data is needed to validate the results.

The last paper is, 'Fostering and supporting the coordinated use of digital technologies in mathematics learning', by Manuel Santos-Trigo, Isaid Reyes-Martínez and Francisco Ortega-Moreno. According to these authors, in students' mathematical learning, the coordinated use of several digital technologies could offer them diverse and novel ways to identify, formulate, represent, explore, and solve problems in different domains and contexts. Manuel Santos-Trigo, Isaid Reyes-Martínez and Francisco Ortega-Moreno have developed a framework that aims to characterise ways in which multiple purpose technologies and ad hoc technologies can be used in problem solving approaches. In particular, the construction of dynamic models of tasks or problems plays a crucial role in looking for mathematical relationships and novel approaches to solve those problems.

These authors use different technologies in problem solving episodes where learners engage in an inquiry process or problematising activities to think of different ways to represent, explore, and solve mathematical tasks. The initial episode involves formulating and pursuing questions to make sense of problem statements and involved concepts.

Then, learners should be guided to look for information in different sources, including online sites, to refresh or review information regarding embedded concepts and to identify a set of relations, theorems or results related to those concepts or mathematical objects. However, despite the claims, there is no evaluation of results or empirical analysis from the research.