Editorial

Lorna Uden

Faculty of Computing, Engineering and Technology,
Staffordshire University,
The Octagon, Beaconside,
Stafford, ST18 0AD, UK
E-mail: L.uden@staffs.ac.uk

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, knowledge management, web engineering, multimedia, e-business, service science and innovation, mobile computing, cloud computing and problem-based learning.

Welcome to V8N1 issue of *IJLT*. There are five papers in this issue. The first one is 'Examining the blog use in a faculty development programme: a multiple case study'. by Shenghua Zha, Andrea Harpine Adams and Joshua Mathews-Ailsworth. In their paper, they examined the values of blog use in an annual faculty development program occurring in 2010 and 2011 at a four-year mid-Atlantic university in the USA. A framework of educational affordances of blogs was adopted to analyse the participants' behaviour on blogs over time. The study shows that blogging offered participants time and space for independent reflective thinking on their learning. They vented their problems, self-assessed their learning progress, and identified their learning needs. These thoughts, when shared with the program facilitators on the web, became formative evaluation data that helped facilitators adjust the follow-up sessions accordingly.

The study also revealed different blog use between experienced instructors who had no prior experience in online teaching. Results show that in addition to engaging participants in self-expression and self-reflection, a blog helped program facilitators to discern different behaviours and learning needs of participants with diverse online teaching experience. The limitation of the study was the small sample size, which restricted the transferability of the findings to the broader community. The study also did not examine the long-term effect of the blogging activity on participants' real teaching.

The second paper is, 'Methodological triangulation of the students' use of recorded lectures' by Pierre Gorissen, Jan van Bruggen and Wim Jochems. According to these authors, analysis shows that the survey is still an important method for collecting information from students about their use of recorded lectures. The survey provides data about the attitude, motivation and behaviour of the students. Their assessment of the importance of a course for their study, their perception of the difficulty of the course can influence their viewing behaviour. The data logged by the lecture capture system (LCS) does not provide all the information that we want and need to get a complete picture. But, methodological triangulation is a valuable step to confirm or to question at least some of the students' responses. It is not sufficient to rely on just the self-reported data by students. In this article, these authors show that triangulation of multiple data sources is

needed. Data was collected using a survey, interviews and by using the log data of a LCS used at the Eindhoven University of Technology in the Netherlands. The authors present data collections and cover areas where the data can be triangulated to increase the credibility of the results or to question the student responses. The results of this triangulation show its value in that it both shows convergence and divergence between the analyses of the individual data sets. There are discrepancies between the students' responses and the log data in particular where it concerns their perceptions of the amount of use of the recorded lectures. For example, although 70% of all students indicate that they usually watch 75% to 100% of a recorded lecture; this is actually only the case for 2.7% of the students based on the LCS log data. The vast majority of all students (69.8%), on average, only received between 10% to 25% of the video of each recorded lecture. In other areas, like the number of times that they viewed recorded lectures, there is consensus. The triangulation also shows that they lack data for a number of areas. They still need high-quality surveys, interviews combined with the log data to get a complete picture. To perform triangulation, it is important to link both data sets together based on the identification of the individual students, which might raise privacy issues if not addressed properly. The triangulation showed a convergence of results found for the number of learner sessions for this course but also showed a divergence for the reported percentage of the recording that is being viewed by the students. This is also the case for the purpose with which students watch the recorded lectures. Further research is necessary to validate the results.

The third paper is, 'An approach for supporting P2P mobile collaborative communication to suggest learning objects based on learning profile' by Pedro F. Zanetti, Luciana A.M. Zaina and Fábio L. Verdi. These authors suggested that peer-to-peer (P2P) network allows the sharing and the exchanging of hardware, software and content. The content includes not only objects such as music, texts and videos, but also data about interests of the user. In the e-learning area, this is not different and these applications potentially attract the students' attention. Considering the user preferences and interest, the application may suggest suitable content to the student, motivating him during the learning-teaching interaction. The goal of this study is to propose a mobile P2P collaborative communication approach to allow the sharing and the exchanging of learning objects comparing their metadata to the student learning profile. The learning profiles are split into dimensions based on Felder and Silverman's model to attend different student preferences. To do so, they used matching's processes to select the learning objects according to the student keywords that report the interests defined in the learner model. Upon successful connection, the student who requested the communication will view LOs of another device that he has interest in and then he can request the transference of the LOs. The proposed approach allows the adoption of widespread high level protocols and communication process, such as HTTP and RPC. In order to evaluate the proposal, a prototype of an e-learning application was developed and experimented with 20 undergraduate students. A mobile module, which connects to a cloud application database, was developed to help students to download the requested requirements of the proposal (learning objects, metadata and learning profile). The devices' P2P communication was performed without the cloud intervention. An evaluation using different message protocols was conducted to verify the proposal and suggest the best communication technology. They concluded that the implementations with HTTP are better than the ones with RPC. Further work is needed to include adding new features to the matching process to consider other context elements. Such new

features include user physical localisation and device resources as screen size, features that must be considered when choosing the most adequate learning objects.

The fourth paper is, 'Meeting learners' needs inside the educational cloud' by Russell Boyatt and Jane Sinclair. According to these authors, cloud-based services and applications are increasingly used by educational establishments to support many aspects of general and educational activity. There is also a related, growing emphasis on independent learning and open resources.

Cloud technology is being rapidly adopted by educational institutions replacing local infrastructure with cloud services. These authors argue that educational possibilities reported so far are often stated as extensions of web affordances. However, the pedagogical impact of this shift in delivery of learning resources remains unclear. There is a need to have good strategies for deploying these resources and considering effective pedagogies.

Studies are beginning to emerge which focus attention on teaching and learning in the cloud and on effective new pedagogies which challenge previous ways of thinking and take into account the ways that students and teachers actually respond to and work with the technologies now on offer. Different learning situations will require different strategies, ranging from a class with instructor supported by cloud facilities to independent learners working alone in 'cloud mode' – that is, bringing together the affordances of mobility, availability and abundance of learning resources using virtualised learning environments as discussed above. These authors argue that there is a need to match learner needs with appropriate materials. Their work investigates how user modelling based on conceptions and misconceptions can be used to represent a learner's current conceptual state and to allow appropriate recommendation of resources as the learner's understanding develops. This approach supports dynamic and progressive recommendation by the system similar to the way in which a teacher would probe a student's understanding and target misunderstandings that form a barrier to progress. These authors are currently developing a series of open educational resources related to common misconceptions identified so far. These are then incorporated into the prototype Moodle system to investigate concept-based strategies for recommendation based on the concept-oriented user model. A further innovation of their work is that, unlike previous 'concept inventories', they view a concept base as being organic and user-driven. However, further work is needed on how this can be supported in practice in an open environment. Further investigation is needed to see how the approach could be used and coordinated across different services.

The fifth paper is, 'Exploring the impact of students' motivation and self-regulation on the social nature of online learning experiences', by I-Chun Tsai, I-Pei Tung and James Laffey. These authors argue that improvements in online learning may come from understanding how better to help students be involved in the social interaction of online learning and develop relationships with other members in the virtual learning environment. According to these authors, a great amount of research has been conducted on self-regulated learning and motivation in the context of online learning. However, a gap still exists between these two lines of research. We still do not know in exactly which ways motivation and self-regulated learning influence social constructs of the human-computer interaction processes. Existing studies on hypermedia learning environments have restricted themselves to only being focused on self-regulated learning, rather than to inquiring and connecting the usage/perceived online learning of technology

to higher-level social nature, specifically, theoretical constructs. The present study was conceived to fill this gap by investigating the influence of students' academic motivation and self-regulation to their online learning experiences. The findings support system developers and instructional designers to better develop online learning tools and learning activities. This study aims to explore how students' social experience of online learning is impacted by their motivation and self-regulation. Path analysis was employed to unfold the intertwined relationships among students' academic motivation, self-regulation, and social constructs of online learning. The results show that students' academic motivation has a positive influence for students' social ability, sense of community, ease of use of social awareness notification tools, and learning satisfaction, while self-regulation was found to serve a central role between the relationships of ease of use and usefulness of notification tools to students' social ability and sense of community. Additional examination of sub constructs of motivation and self-regulation helped further understanding of how these constructs impact the social nature of online learning. The limitations of this research arise from small sample size and the lack of validity check with these 16 items. Second, due to the first difficulty, researchers reviewed the major questionnaires on self-regulated learning (i.e., MSLQ) and consulted with a professional and expert Educational Psychologist to ensure the quality of each test item. More data collection would further ensure the reliability of these test items, which increases the possibility to generalise the research questions to the majority of the study body of similar types of research context.