

## **Editorial: Volume 29 Issue 2**

This issue provides another diverse collection of articles that advance our understanding of educational technology. Five of the articles included are concerned with applications of technology to teaching and learning. Ronnie Shroff, John Trent and Eugenia Ng's study of pre-service teachers explores e-portfolios to support critical reflection and professional engagement. Their work is theoretically framed using the concept of 'ownership of learning' and demonstrates how a positive attitude towards learning with an e-portfolio, shaped by a student's experience and expectation, significantly affects three components of ownership of learning. The findings raise further questions about how we might shape student attitudes, which components of attitudes are most important to fostering ownership, and how ownership of learning can lead to better learning outcomes.

Jingyan Lu and Liping Deng present an application of online annotation to support secondary school students working with argumentative text forms. Based on a technique called 'reading to argue', the learners in this study used an online annotation tool to analyse texts and share their findings, enabling review by peers and revision. This case study demonstrates the successful adaptation of a freely available online tool to educational purposes.

Gregor Kennedy, Ioanna Ioannou, Yun Zhou, James Bailey and Stephen O'Leary were awarded the best paper at the 2012 ascilite conference and their paper is included in this issue. They describe an application of learning analytics that uses data mining techniques as the basis for providing feedback to students during a practical surgery task. Given the recent interest in learning analytics it is timely to consider similar approaches that can inform students about their own learning, either in real-time or reflectively.

Two further articles focus on language learning. An article by Yu-Ju Lan, Yu-Hsuan Kan, Indy Y.T. Hsiao, Stephen J.H. Yang and Kuo-En Chang demonstrates some of the challenges of integrating virtual worlds in language education. Their project evaluated the design of learning tasks in Second Life for students learning Chinese as a foreign language. Their collection of class recordings enabled them to analyse social interactions as evidence of learning outcomes. The results highlight the importance of effective sequencing of activities, and the need for additional students resources.

Mei-Mei Chang and Mei-Chen Lin's meta-analysis of online English language learning amongst Taiwanese students adds to the significant literature on computer-assisted language learning. Their systematic analysis raises questions about the extent to which positive results from early studies integrating technology may have been due to novelty, highlights the importance of robust designs, and identifies three strategies which appear to be the most promising.

Three of the articles in this issue are concerned with the challenges of technology integration by school teachers. Trudy Sweeney reports on her in-depth study of an experienced teacher integrating an interactive whiteboard into her classroom practice. Sweeney uses activity theory to frame the investigation of teaching practice in context, systematically identifying tensions that arise. Her findings demonstrate the importance of contextual factors and emotions in shaping teachers' practices with technology.

Technology integration is also explored in a paper from Joyce Hwee Ling Koh and Shanti Divaharan. In this case the focus of the study is on fostering the development of technological pedagogical content knowledge (TPCK) while developing pre-service teachers practices with interactive whiteboards. This article continues the considerable recent interest in TPCK and addresses a lack of existing literature on practical strategies to develop it. The findings show the importance of 'learning by doing' and multiple strategies when developing this form of integrated knowledge.

Athanassios Jimoyiannis, Panagiotis Tsiotakis, Dimitrios Roussinos, and Anastasia Siorenta present another application of TPCK, as the basis for a professional learning program to support teachers in effective integration of Web 2.0 technologies. Using TPCK in combination with authentic learning, the authors report on successful outcomes in developing understanding among the participants but raise concerns about contextual constraints on use. Their results prompt consideration of how their approach might be adapted for use with teachers in other countries and whether similar challenges might be detected.

This issue also includes two future-oriented articles. One of these, from Maree Gosper, Janne Malfroy and Jo McKenzie, presents the findings of a large scale survey of Australian university students' use and expectations of technology for work, social and study purposes across three institutions. The purpose of this project was to inform institutional planning by comparing students' current and preferred use of the learning management system and 25 other technologies. Similar to previous studies, the results indicated relatively limited use of technologies for study purposes and concentrated use of 'mainstream' technologies. Most interesting is perhaps the popularity of the learning management system amongst students, considering recent speculation that enthusiasm for these technologies is waning. The authors note that although a majority of students indicate they are satisfied with the technologies available for study, there still remains significant scope for expanding the range and extent of use, raising questions about how institutions might respond.

The second future-oriented paper, concerned with an even larger scale technology integration challenge, is presented by Sue Stack, Jane Watson, and Joan Abbott-Chapman in an exploration of the space between policy and practice in relation to the introduction of the National Broadband Network in Australia. Appropriately characterised by the authors as a 'wicked' problem, their rich data demonstrates the complex array of issues and perspectives expressed by school and vocational education leaders. Their analysis and discussion demonstrates how technology can provide a stimulus to think about future changes to teaching and raise fundamental issues of how education could and should be provided.

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