JETDE Preface

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One of the things that make the *Journal of Educational Technology Development and Exchange* so interesting is the breadth of issues covered in each issue. This issue, SICET's Volume 5, Number 1, is no exception. Topics range from rather "high tech," educational games and virtual worlds to the cognitive application of scaffolding and wikis to the "hands on" use of gesture-based learning and field experiences.

Yue-Xiang Zhang, Jian-Sheng Li, and Yi Li offer a study of the relationship among Educational game design feature and the academic emotional experiences associated with learning. The latter are arrayed along 4 dimensions: Positive high, positive low, negative high and negative low arousal qualities and levels. Two measures of academic emotions were used: the PAD (**P**leasure-Displeasure, **A**rousal-Non-Arousal, and **D**ominance-Submissiveness) and a galvanic skin response (GSR). An important finding is that the GSR generally validated the PAD and the arousal states. Positive emotional arousal was found to positively correlate with three of the game design features.

Jian-Sheng Li, Huan Xu, and Si-Si Chen present a study of flow and motivation in a virtual reality (Second Life) setting. Flow and motivation have become popular measures in both gaming and virtual worlds but the authors go further to include the effects of these variables on learning outcomes – in this case academic self efficacy. The article is a very good example of the importance of establishing reliability and validity for derived measures of constructs such as flow, motivation and self-efficacy when using self-reported data. The authors report positive relationships between learning motivation and learning outcomes.

Xiaoying Feng reports an investigation of inter-school collaboration using ICT, integrated into the content, as the method of interaction. The overall theoretical orientation is cognitive and the specific pedagogy/instructional methodology involves the use of scaffolding and collaborative learning. The research design used three levels of scaffolding tools/type in a computer supported collaborative learning (CSCL) environment. Data collection involved student and teacher questionnaires intended to determine how useful the teachers and students perceived the scaffolding to be. Interviews with selected teachers and headmasters were used to probe beneath the survey. The student collaborators were from both urban and rural settings and although scaffolds were found to be generally effective, adaptive scaffolds (which can be self-selected) while rural students preferred high intensity (detailed, step-by-step) scaffolds.

Another study using technology as a tool to facilitate collaboration was conducted by Chun-Min Wang using wikis as the tool with undergraduates as the participants. The students were divided into collaborative groups of 4 and instructed to study their choice of four topics. Instructions to the group varied from none (control) to a variation of collaborative learning involving each student working on each of the chapter alone for a week and then coming together the 5th week to edit the content. This allowed for individual assessment and responsibility. Both

teacher and peer evaluations were used. Content was stored on Wikis which were "opened up" in the 5th week. A questionnaire was used to get the student's perceptions of the wiki experience with follow up interviews. In general, wikis as used were not very effective at promoting collaboration but were useful to store and share the student's writing.

Yi Zhan, Jing Li, Mei Wang, Youqun Ren, and Hong Chen were concerned with how ICT could facilitate learning in the mathematics classroom. This article reports some of the results from a project funded by the Ministry of Education in China. The investigators report the prevalence of use of ICT (primarily PowerPoint and the internet) across certain schools and demographics. This use was then correlated with math achievement. Not surprisingly, the use of technology *per se* had little effect but the authors report the need to investigate specifics such as applications.

Pearl Chen analyzed field experience of graduate-level, instructional design interns from the perspective of situated cognition. Data was collected through interviews, logs, e-mails, assignment artifacts, reflections and questionnaires. The comprehensive data collection and analysis (which establishes confidence through triangulation) is used to establish the students perspective of the value and quality of their internship, the nature of the learning and engagement in the internship and the positive and negative aspects of such and experience. Not surprisingly, the time was reported as a negative aspect of internships. Somewhat surprising were the negative aspects of participating in a community of practice that are often overlooked.

Shwu-Ling Lee's study of the effects of gesture-based learning in a virtual reality environment on children with Cerebral Palsy learning to count combined games with an adaptive interface that allowed the children to use gestures to interact with the games. An A-B- A experimental method was used to establish the impact of the intervention. This methodology has been around for many years but in my estimation not used as often as it could be. This is a good example – you can see the impact of the intervention without the need for statistics and tests.

Lin, Robertson, and Lee studied whether undergraduates instructed to read for accuracy versus reading for completion. The study included a "background" video to see if it distracted or if young people really can "multi-task" such as studying while listening to music, etc. Not surprising, reading for "gist" was superior to reading for accuracy. Equally, instructions to attend to one channel or another caused attention switching. Most interesting was that, when instructed to read for accuracy, background (unrelated) video actually helped. The authors suggest that the secondary task may actually provide more focus on the primary task by giving them a target for their attention when they began to daydream.

As promised, this issue of JETDE is both broad and deep. Above all, each of the pieces report research of interest to our readership and the reports are all well written and interesting to read. I hope you enjoy reading them as much as I did.