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Re: Application for Participation in “Designing for Distributed Regulatory Processes in CSCL” Workshop

Prior to undertaking the Doctoral Training Programme (DTP) at LMU in October 2012, I worked as a researcher under the supervision of Assoc. Prof. Dr. So Hyo Jeong, on one of the Future School@Singapore projects at the Learning Sciences Lab (LSL), National Institute of Education, Singapore, from Jan 2010 to Sep 2012. The Future School project is a collaboration with one of the eight future schools in Singapore where we research on mobile learning activities to foster critical thinking skills and In-situ Knowledge Building in Integrated Humanities. This project aligns with the overarching Future School concept of self-directed learning, collaborative learning and technology-enhanced seamless learning across various learning settings. Premised upon a design-based research framework that promotes an iterative methodology of progressive refinement, our research efforts seeks to examine and fine-tune the various aspects of activity design, participant structure and scaffolding strategies, hence, each of the four mobile learning trails sees a different focus. For the first Geography mobile learning trail, we conducted content analysis to examine the relationship between task design and discourse types (Tan & So, 2011). Video-based interaction analysis was deployed to study the interaction processes of participants in the third Fort Siloso Trail mobile learning trail (Tan & So, working journal paper). Here, we adapted Jordan and Henderson’s (1995) set of analytic foci: a) turn-taking interaction, b) participation structure, c) trouble and repair, and d) artifacts and documents to make sense of how the physical, the artifactual, the spatial and the social resources present in the physical, material and social world shape and structure collaborative learning in an outdoor learning context, and vice versa, how learners deploy and employ those resources to accomplish collective goals. To investigate students’ capacity for autonomous learning in an unstructured learning space on the fourth River Mystery Trail integrating Geography, History and Biology, we coded two groups’ discourse to examine the use of knowledge resource types, adapting Fischer and Mandl’s (2005) coding scheme for the content dimension. Analysis showed that contextual resources and the interaction with the physical affordances play a significant role in learners’ capacity to see relations between given case information and new conceptual knowledge, as well as, activating prior knowledge resources (Tan & So, 2013). Two important findings emerge from the four research interventions. One, there is a dire need to foster greater student agency and intentional learning in the process of collaborative knowledge building. Two, lesson design should engage learners in more continuously inter-related experiences of learning activities driven by own inquiries and ideas, thus bridging classroom and outdoor learning experiences.

The significant findings from the Future School research project harnesses my doctoral research interest on self-regulated learning (SRL) in the context of collaborative learning across formal and informal learning situations. Research agenda on SRL in the 21st Century sees increasing focus on three critical areas, namely, teacher agency (Levin, Azevedo, Winters & Cromley 2004; Paris & Winograd 2003), instructional scaffolds (Azevedo, Cromley & Seibert 2004; Levin et al. 2004; Mäkitalo-Siegl, Kohnle & Fischer 2011) and the notion of “other-regulation” (Kollar & Fischer 2006), “co- and shared-regulation” (Hadwin & Oshige 2011; Järvelä & Hadwin 2013). My dissertation project seeks to investigate the effects of differently structured instructional scaffolds on self-, co- and shared regulated learning process. To investigate the effects of the differently structured scaffolds (classroom script and small group collaboration script) on self-, co-, and shared regulation, contextual and task-specific data from formal and informal learning context would be collected via audio and video recording for discourse analysis. I believe the workshop would be an excellent platform to discuss probable emerging issues in analysing individual and shared-regulatory learning process and I am really keen to learn how best to analyse data for self-, co- and shared-regulation. Also, how the data analysis and findings would be able to inform the learning design for scaffolding self, co & shared regulation in the 21st century “classroom” where technology has empowered and enhanced seamless learning across various learning settings.

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