Lesson Study for Professional Development and Research

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In this paper we demonstrate that ‘lesson study’ may be adapted from its primary use as a professional development strategy for use as a research strategy, especially to identify principles of good lesson design. We report on a project undertaken in two Australian secondary schools where lesson study research was used to investigate the design of lessons using new technology. Using lesson study in this context required adaptation to allow for the local teaching context and culture. This was done very successfully in one school and moderately successfully in the other. As a research strategy, lesson study provided rich data from teachers, other expert observers and students. The data were suitable for the thematic analysis of lesson design and secondary analysis for other purposes. Lesson study also supported the refinement of lessons so that they can successfully transfer to other classrooms.

Key words: Lesson Study; Secondary school mathematics; Lesson design research; Classroom culture; Technology; Computer Algebra Systems (CAS)