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**Critical factors in the adaptation and implementation of Japanese lesson study in the Australian context.**

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Summary: Worldwide interest in Japanese Lesson Study as a vehicle to improve mathematics teaching practice through professional learning has left largely unanswered questions about the extent to which it can be replicated elsewhere. This paper reports on a small-scale research project, Implementing structured problem-solving mathematics lessons through lesson study, carried out in three Australian schools during 2012, and continued in a modified form during 2013 and 2014. Two major aims of the project were to investigate critical factors in the adaptation and effective implementation of (1) structured problem-solving mathematics lessons, and (2) Japanese Lesson Study as a model for teacher professional learning in the Australian context. This paper discusses the specific affordances that contributed to both the implementation of structured problem solving and to teachers' professional learning as a result of their participation in this project, as well as the constraints encountered, and the implications of these for the sustainability of lesson study in the Australian context. Critical factors identified by the teachers as contributing to the success of the project included the opportunities for in-depth lesson planning, the presence of large numbers of observers at the research lessons and the post-lesson discussions, and the insight provided by the "knowledgeable other". Major constraints included the difficulty in finding suitable problem solving tasks to match the Australian curriculum, and the teaching culture that emphasises small-group rather than whole-class teaching.

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