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Lesson study with mathematical resources: a sustainable model for locally-led teacher professional learning.

Math. Teach. Educ. Dev. 16, No. 1, 22-42, electronic only (2014).

Summary: Teams of educators conducted lesson study independently, supported by a resource kit that included mathematical tasks, curriculum materials, lesson videos and plans, and research articles, as well as protocols to support lesson study. The mathematical resources focused on linear measurement interpretation of fractions. This report examines the resource kit content, the changes in teachers' fractions knowledge, and the lesson study processes that enabled changes in teachers' knowledge. Quantitative findings show that teachers in the experimental condition (lesson study supported by resource kits) significantly improved three of the four facets of fractions knowledge studied, including understanding the whole, unit fractions, and fractions as numbers; whereas control group teachers did not. Qualitative data, including video and written reflections, illuminate activities that supported teachers' knowledge development, including solving and discussing mathematical tasks, studying curriculum and research, and observing students during research lessons.

Classification: D39 F49 C79

Keywords: lesson study; professional learning; professional development; fractions; communities of practice; knowledge base for teaching; lesson plans; teaching methods; instructional effectiveness; lesson videos
<http://www.merga.net.au/ojs/index.php/mtd/article/view/205>