

The UCSD/SDSU Mathematics and Science Education
Doctoral Program Proudly Presents a Dissertation Defense:

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Sustaining Lesson Study: Resources and Factors that Support and Constrain Mathematics Teachers' Ability to Continue After the Grant Ends

Date: Monday, July 20, 2015
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SDSU, 6475 Alvarado Rd, Sowder McLeod Room Suite 218

Lesson study, a teacher-led vehicle for inquiring into teacher practice through creating, enacting, and reflecting on collaboratively designed research lessons, has been shown to improve mathematics teacher practice in the United States, such as improving knowledge about mathematics, enabling reflection on pedagogy, and developing communities of teachers. Though it has been described as a sustainable form of professional development, little research exists on what might support teachers in continuing to engage in lesson study after a grant ends. This qualitative and multi-case study investigates the sustainability of lesson study as mathematics teachers engage in a district scale-up lesson study professional experience after participating in a three-year California Mathematics Science Partnership (CaMSP) grant to improve algebraic reasoning. To do so, I first provide a description of material, human, and social resources present in the context of two school districts, as reported by participants. I then describe practices of lesson study reported to have continued. I also report on teachers' conceptions of what it means to engage in lesson study. I conclude by describing how these results suggest factors that supported and constrained teachers' in continuing lesson study.

To accomplish this work, I used qualitative methods of grounded theory informed by a modified sustainability framework on interview, survey, and case study data involving teachers, principals, and Teachers on Special Assignment (TOSAs). Four cases were selected to show the varying levels of lesson study practices that continued past the conclusion of the grant. Analyses reveal varying levels of integration, linkage, and synergy among both formally and informally arranged groups of teachers. High levels of integration and linkage among groups of teachers supported them in sustaining lesson study practices. Groups of teachers with low levels of integration but with linkage to other individuals sustained some level of practices, whereas teachers with low levels of integration and linkage were constrained in continuing lesson study at their site. Additionally, teachers' visions of lesson study and its uses shaped the types of activities in which teachers, with well-developed conceptions of lesson study supporting and limited visions constraining the ability to attract or align resources to continue lesson study practices. Principals' support, teacher autonomy, orientations to district trainings, and cultures of collaboration or isolation were also factors that either supported or constrained teachers' ability to continue lesson study. These analyses provide practical implications on how to support mathematics teachers in continuing lesson study, and theoretical contributions on developing the construct of sustainability within mathematics education research.