

Apisata Juntaraprasert 2009: Using Lesson Study to Understand How Elementary Science Teachers Translate Social Constructivist Learning Theory into Practice. Doctor of Philosophy (Science Education), Major Field: Science Education, Department of Education. Thesis Advisor: Professor Vantipa Roadrangka, Ph.D. 286 pages.

This interpretive case study examines three elementary teachers' understandings and practices with respect to Social Constructivist Learning Theory. The study took place in the context of a Lesson Study professional development experience consisting of a two-day workshop, curriculum planning and practice in the classroom. Throughout the teacher professional development experience, written reactions to Social Constructivist Learning Theory vignettes, individual interviews, classroom observations, and teachers' lesson plans and focus group discussions provided the sources of data.

The analysis illustrates some of the dynamics and promise of teacher change spurred by the teacher professional development experience. Teachers' understanding and practice gradually changed from traditional teaching to practices more consistent with Social Constructivism, although there was not a complete shift. The three case teachers showed that their understandings of Social Constructivist Learning Theory influenced their translation into practice in terms of science lesson plans and pedagogical strategies. In terms of change and growth, opportunities for collaboration and reflection in the professional development experience supported teachers in constructing their own knowledge and translating their understandings of Social Constructivist Learning Theory into practice. All teachers not only perceived many advantages of teaching science in relation to Social Constructivist Learning Theory but also recognized many challenges of teaching science based on this epistemology.

The implications of this study suggest that the incorporation of reflection and collaboration in school-based professional development can encourage positive changes in knowledge, practice and attitude towards teaching science. Additionally, when provided the opportunity, teachers can become curriculum makers rather than technicians which has significant value in terms of making decisions concerning the design of classroom environments. Since teachers in this study did not fully develop their understandings of Social Constructivist Learning Theory, the relationship between teachers' epistemological beliefs and their practice should be considered for future research.

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