A FRAMEWORK FOR ACTION FOR TEACHER DEVELOPMENT

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This poster presentation provides an analysis of data taken from a four-year teacher collaboration conducted in the context of design research (cf. Brown, 1992). The analysis delineates aspects of an approach to teacher development that takes as its starting point the importance of teachers' practice being grounded in a deep understanding of the mathematics they teach while placing students' current ways of reasoning at the forefront of instructional decisions. In particular, the analysis entails a focus on iterative task-analysis cycles (cf. McClain, 2003) employed throughout the teacher collaboration in order to generate a Framework for Action. diSessa and Cobb (2004) note that Frameworks for Action "play a critical role in organizing research around instruction" (p. 82). This Framework, therefore, provides a structure for understanding and analyzing both 1) the collaborative interactions and 2) how teachers' participation in cycles of task analysis supported their development of more sophisticated ways of conceptualizing their instructional practice.

A graphic of the Framework for Action is used as the focal point of the poster presentation and supported by examples from related analyses of each aspect of the Framework. The poster presentation pushes beyond a focus on the *form* of teacher collaborations (e.g. use of student work, lesson study, use of cases) to examine the *functions* of resulting interactions, how they became constituted in interaction, and what they afforded in the context of the professional development of mathematics teachers. To this end, the visual articulation of the Framework for Action provides the mechanism for clarifying how particular features of the teacher collaboration were related to the goals of both supporting and sustaining mathematics teacher learning. Analysis of the data therefore serves to clarify the role of a focus on teacher content knowledge and students' thinking as a basis for teacher change and the importance of a framework to guide the interactions and subsequent analysis.

Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *Journal of the Learning Sciences, 2*, 141–178.

diSessa, A., & Cobb, P. (2004). Ontological innovation and the role of theory in design research. *Journal of the Learning Sciences, 13*(1), 77-105.

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