

## **“Bland Information and Zero Relevance”: Understanding Teachers’ Pedagogical Reasoning Through Design Study**

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### **ABSTRACT**

Understanding why reform initiatives have not gained traction in the classroom is essential if professional learning is to bridge the theory-practice divide in mathematics education. This research study employed the Refined Consensus Model of Pedagogical Content Knowledge to understand the factors that influenced the pedagogical reasoning of four mathematics teachers during a professional development as design study. The teachers engaged in three cycles of professional learning, teaching application, and reflection to address a local problem of practice. However, unlike most design studies, this research adopted a *through* intervention orientation, meaning the focus was on the responses the intervention generated rather than the intervention itself. As a result, the study responded to calls for research and practice to develop bi-directional connections between theory and practice through the use of emerging research methodologies and professional learning practices.

**Keywords:** professional development as design study; professional learning; Refined Consensus Model of Pedagogical Content Knowledge; research methodology; theory-practice divide