TECHNOLOGY SUPPORTED INQUIRY LEARNING IN MATHEMATICS AND
STATISTICS WITH FATHOM: A PROFESSIONAL DEVELOPMENT PROJECT

by

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ABSTRACT

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Technology Supported Inquiry Learning in Mathematics and Statistics with Fathom: A Professional Development Project
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This study utilized teacher development experiment methodology to support, and deeply examine, three teachers’ understandings and practices regarding content, pedagogy, and technology as they learn about and strive to integrate Fathom, data analysis software, into their curriculum and instruction. Surveys, observations, and interviews were utilized to gather data in order to research the interactions among these three factors and how they were associated with the effectiveness of the three teachers’ integration of technology. Pictures of weak, developing, and exemplary facilitation of Technology-Supported Inquiry Learning, as outlined by an effective learning environment conceptual framework, resulted from this study. Exemplary practices occurred in teachers who held strong understandings and practices in all areas; content, pedagogy, and technology. This implies that professional development must be provided in such a way that teachers can learn about, practice with, and reflect on all areas simultaneously.