

Public Abstract

First Name:Cynthia

Middle Name:E.

Last Name:Taylor

Adviser's First Name:Kathryn B.

Adviser's Last Name:Chval

Co-Adviser's First Name:

Co-Adviser's Last Name:

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PEDAGOGICAL CONTENT KNOWLEDGE: A CASE STUDY OF A MATHEMATICS TEACHER
EDUCATORS ACTIONS AND PURPOSES

Prospective mathematics teachers (PTs) need to develop pedagogical content knowledge (PCK) to improve the teaching and learning of mathematics. Therefore, faculty who prepare teachers of mathematics (i.e., mathematics teacher educators [MTEs]), need to help PTs develop PCK in their courses (Marks, 1990; Mason, 2008). Yet, we know very little about the practices of MTEs, especially in relation to developing PCK as these practices are not widely researched, documented, or disseminated (e.g., Bergsten & Grevholm, 2008; Floden & Philipp, 2003).

In this study, I investigated the actions and related purposes that a reflective MTE used to develop PTs' PCK in an elementary mathematics content/methods course. I present a classification of descriptive categories of the 34 identified actions and 10 core purposes based on the four components of PCK (i.e., knowledge of instructional strategies, knowledge of curriculum, knowledge of student understanding, knowledge of assessment) conceptualized by Magnusson, Krajcik, and Borko (1999).

Findings from this study contribute to the limited literature on practices of teacher educators (e.g., Murray & Male, 2005). This study is a first step towards documenting the actions enacted during instruction of MTEs, which will contribute to a shared knowledge base in mathematics teacher education and ultimately inform the design and implementation of teacher preparation programs.