

Preservice Teachers' Self-Efficacy for Preparing and Implementing Mathematical
Tasks: A Case Study

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Contemporary mathematics education requires active student involvement in the process of learning mathematics through problem solving, reasoning, making connections, and communicating. In order to achieve this, teachers are responsible for providing worthwhile mathematical tasks. A mathematical task is a problem (or a set of problems) that focuses students' attention on a particular idea. Mathematical tasks determine the levels of students' understanding of mathematical ideas, as well as providing them learning opportunities. To prepare and implement tasks effectively, it is important for teachers to feel efficacious in their abilities. Since self-efficacy belief is most malleable during skill development, teacher education programs can help ensure that mathematics teachers have a high sense of efficacy. Especially mathematics teaching methods and practicum courses where preservice teachers learn and practice to prepare and implement mathematical tasks hold a crucial role.

The purpose of this qualitative case study was to examine preservice teachers' self-efficacy for preparing and implementing mathematical tasks after enrolling in a methods course, while describing factors related to this course that were responsible for any change in their self-efficacy. Data were collected through semi-structured interviews designed to elicit detailed information about participants' self-efficacy beliefs. Two senior preservice teachers (Ashley and Brad, pseudonyms used) participated after completing a two-semester-long mathematics teaching methods course. Audio-recorded interviews were transcribed and analyzed using constant-comparative method. A 92% coder agreement was reached.

Results showed that the professor, group work, peers' presentations, and feedbacks provided by both the professor and peers influenced preservice teachers' self-efficacy. The most effective component of the course on Ashley's self-efficacy was group work, whereas Brad viewed peers' presentations as the most effective factor. Even though both preservice teachers were feeling efficacious for preparing and implementing tasks, they stated the lack of real classroom experience. These

results will be discussed in the light of Bandura's hypothesized sources of self-efficacy and suggestions to improve methods course will be provided.

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