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Tracing the development of preservice teachers' efficacy beliefs in teaching mathematics during fieldwork.

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Summary: This paper focuses on efficacy beliefs with respect to teaching mathematics; it aims at testing and validating an existing scale for measuring efficacy beliefs in the domain of mathematics, examining the development of preservice teachers' efficacy beliefs in mathematics during fieldwork, and identifying factors that contribute to the development of these beliefs. Exploratory factor analysis applied to longitudinal data collected through a questionnaire administered to almost 90 preservice teachers elicited a two-factor model, reflecting efficacy beliefs in mathematics instruction and classroom management. Using cluster analysis, we found four patterns in the development of preservice teachers' efficacy beliefs regarding these two factors. Our analysis of semi-structured interviews with eight participants representing these four patterns suggested that preservice teachers' efficacy beliefs were mainly informed by experimentation with teaching and interaction with mentors, tutors, peers, and pupils. Based on our findings, we draw implications for mathematics preservice teacher education and provide suggestions for future research.

Classification: C29 B50

Keywords: efficacy beliefs; fieldwork; measurement; preservice teacher education; empirical investigations; research

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