

COACHING THE COACHES: SUPPORTING UNIVERSITY SUPERVISORS IN THE SUPERVISION OF ELEMENTARY MATHEMATICS INSTRUCTION

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This study evaluated program changes that required university supervisors to attend professional development and to use an observation protocol that reflected high quality mathematics pedagogy. The study used both qualitative and quantitative data to analyze the impact of the professional development. Qualitative data consisted of background information, observations, and interviews. Quantitative data included teacher candidates' performance on the Reformed Observation Teaching Protocol (RTOP) and belief scores from the Mathematics Beliefs Instrument (MBI). This study was designed to fill in a gap in the literature to investigate the role university supervisors play in changing teacher candidates' beliefs about mathematics and their instructional practice. By examining the effects of professional development, this study provided research about the type of support university supervisors need to challenge teacher candidates' beliefs about mathematics.

The theoretical framework for this study is a combination of Fuller's (1969)'s concern theory and social constructivism (Cobb, Yackle, & Wood, 1992; Meehan, Holmes, & Tangney, 2001).

This study was designed to investigate two research questions: 1. What are the effects of training university supervisors in mathematics pedagogy and coaching practices on their supervision practices in observing mathematics lessons of elementary teacher candidates? 2. What are the effects of training university supervisors in mathematics education and coaching practices on elementary teacher candidates' beliefs and their instruction in mathematics?

A mixed-method design was necessary to fully capture the relationship between the university supervisor and the support provided to teacher candidates. The quantitative data included pre-post data analyzed using descriptive statistics & graphs using ANCOVA and Paired t-tests. Qualitative data included reflective analysis, interviews, and post-conferences. Descriptive, explanatory and interpretive coding was used to analyze the qualitative data. The sample included 11 university supervisors and 78 teacher candidates.

Analysis of the data revealed that the supervision practice of the university supervisors changed as a result of the professional development. University supervisors added paraphrasing and mediating questions to their coaching practice. They fostered reflection by allowing the teacher candidates to problem solve. Teacher candidates also experienced changes in their beliefs about mathematics and their instructional practice.

This study revealed that professional development for university supervisors does make a difference. By focusing on the university supervisor as part of the education of teacher candidates, the cohesiveness of the teacher preparation program is strengthened.

Key Words: Coaching, Mathematics Methods, Professional Development, Supervision, Teacher Education, University Supervisors