

4:00 – 5:30 Research findings about teacher education

4:00 – 4:45 Raven McCrory, Michigan State University, *Achievement in Mathematics Classes for Future Elementary Teachers: What Matters?*

In this talk, I will address two aspects of undergraduate mathematics courses for future elementary teachers.

1. What do these courses look like? That is, who teaches them, what is the content, how are courses organized, how do they differ across institutions, etc.
2. What systematic factors explain differences in *learning* across these courses, with different instructors and at different institutions?

Data come from a study of over 2000 undergraduate students at certifying institutions in four states, and include pre- and post-tests of students taking a mathematics course required for elementary certification; surveys of instructors of these courses; and interviews with mathematics department chairs.

Results suggest that, controlling for students' prior knowledge, two factors that matter are *use of a textbook* specifically written for a mathematics course for teachers; and teaching in a way that *engages students with doing mathematics*. These two factors have differential impact on students depending on students' prior knowledge. Models will be explained and implications of results for the design and implementation of mathematics classes for teachers will be discussed.

4:45 – 5:30 Sharon Senk and Maria Teresa Tatto, Michigan State University, *Mathematics Teacher Preparation: An International Perspective*.

The Teacher Education and Development Study in Mathematics collected data from approximately 24,000 future primary and secondary mathematics teachers in 17 countries. We will present findings and discuss implications for mathematics teacher preparation in the U.S.