

Department of Mathematics Colloquium

Prospective Elementary Teachers Mathematics Content Courses:

Whole Number Learning, Motivation, and Cultural/Family Awareness



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3:30 - 4:30pm
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I discuss (1) prospective elementary school teachers (PSTs) conceptions of multidigit whole numbers and the development thereof, (2) the PSTs' motivation to learn in the context of mathematics content courses and, (3) their noticing of cultural/family aspects in a teaching scenario.

(1) PSTs are often not aware of their own conceptions when entering the content course, more specifically PSTs often do not recognize that they have something to learn. And after the PSTs have learned something, they often feel that they "knew it all along" and just needed a refresher. I share one intervention (a videotaped interview) designed addressed these points. The interview helped PSTs recognize that they had something to learn, and when reviewed at the end, realize that they did learn something.

(2) PSTs often do not perceive mathematics activities as engaging and do not perceive the mathematics tasks in their university content courses as authentic or relevant for their future careers. I share two interventions (a family math night, reading NCTM journal articles) designed to address this point.

(3) Effective teachers must simultaneously attend to many facets of the classroom, including the mathematics topic to be learned, the way students think about that topic, and the cultural/family contexts in which the topic may be situated. I share a small study aimed at examining whether PSTs in a content course notice cultural/family aspects.