

Department of Mathematics and Statistics Colloquium

The Missing Component of Mathematical Proficiency

Abstract: The National Research Council (2001) has defined mathematical proficiency as comprised of five strands: conceptual understanding, procedural fluency, adaptive reasoning, strategic competence, and productive disposition. In a large scale study of preservice and in-service teachers, this definition served as the basis for assessing teachers mathematical content knowledge. However, only the first four strands were evident from teachers's responses. Inferences about respondents's productive disposition could not easily be made. I will discuss my first attempts to better understand "productive disposition," and I will share results from focus-group data of teachers working on a mathematical task from the large-scale study. I will also discuss preliminary results of my case studies with ten teachers who were selected because they were identified from the large-scale study to have strong productive dispositions. To conclude, I will talk about why mathematics educators and mathematics teachers should care about productive dispositions.

The speaker is a candidate for an open position in the Department of Mathematics and Statistics. For reasons of confidentiality, the speaker's name and institutional affiliation have been suppressed.

**Thursday, January 26 at 4:30 in Roop 103
refreshments at 4:15**