



Linking Practices of Responding to Other Constructs

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Abstract: In this talk I'll describe how Amanda Milewski, of the University of Michigan, and I have continued our research on the framework for mathematics teachers' practices of responding as well as how we are planning to move forward. Practices of responding are defined in our work as moves teachers make in reply to students who have, during class conversation, offered their mathematical thinking (answers, explanations, etc.). In recent work we have compared the teachers' framework (TF) to one developed by linguists in the Systemic Functional Linguistics tradition. We note how the linguists' framework aligned with and benefited the TF as well as how the TF accounted for entire functions of classroom practices that the linguists had not. Finally, I'll describe efforts to develop quantitative tools for measuring and linking teachers' practices of responding to a theory developed by Herbst and Chazan that argues that in addition to beliefs and content knowledge, teachers' obligations to various other concerns can account for variation (and constancy) in mathematics teachers' practices. I'll elaborate on their work and how we hope to link our work to theirs.



Dr. Strickland's work centers on mathematics teacher education with emphases on epistemology and language in the classroom. Proving is how we know in mathematics—our epistemology—and is strongly influenced by logic and content knowledge, but also includes elements of rhetoric and language. To know something mathematically includes the ability (and responsibility) to share that with a community—with others. This is the work of teaching. To teach is to share knowledge with others and to do it well includes convincing them and to adopt the teachers' knowledge as their own. This is rhetoric.