Session Title:
Strategies for Developing Teacher Content Knowledge for Teaching the Common Core State Standards for Mathematics

MSP Project Name:
Milwaukee MSP

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Feedback Session

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Summary:
We believe and expect that teachers should know the standards they are expected to teach, yet it is widely acknowledged that the Common Core State Standards for Mathematics (CCSSM) are not written in teacher-friendly language. How, then, can we ensure that teachers gain a deep understanding of the CCSSM? In this interactive session participants will learn a process that has been used by the Milwaukee Mathematics Partnership to deepen teachers' understanding of CCSSM standards and standards progressions.

Section 1: Description of product, tool, process, curriculum, or instrument:
A principal goal of the Milwaukee Mathematics Partnership since its inception has been to increase the Mathematical Knowledge for Teaching (MKT) of teachers, and especially teacher leaders, in Milwaukee Public Schools. With Wisconsin's adoption of the Common Core State Standards for Mathematics (CCSSM) in June 2010, we have reframed this goal in terms of the Mathematical knowledge needed to teach the CCSSM. A guiding principle in our recent work has been that teachers need to know the standards they are expected to teach. It follows that teachers, and especially teacher leaders, need to read the CCSSM with understanding.

In this session, we will describe various strategies and tools that we have used in professional development sessions for mathematics teacher leaders to assist them in reading and unpacking selected CCSSM content standards. They include a protocol for reading and unpacking individual standard statements, and recording sheets for participants' reactions to specific standards and standards progressions.

These strategies and tools have also been used in credit-bearing university courses for in-service teachers, and we will provide examples of participant responses from both settings.

Section 2: Question, issue, or challenge that is the primary focus of the session:
We believe and expect that teachers should know the standards they are expected to teach, yet it is widely acknowledged that the CCSSM are not written in teacher-friendly language. How, then, can we ensure that teachers gain a deep understanding of the CCSSM?

Note that this understanding must go beyond a knowledge of the specific standards the teacher will address in his or her own classroom, for much of the promise of the CCSSM lies in the progression of standards across grades. The Grade 4 fraction standards, for example, say explicitly (though not transparently to the average 4th-grade teacher) what should be taught in Grade 4; what need *not* be taught can only be fully understood by comparison with the fraction standards in Grades 3 and 5. Thus, teachers need to read and understand standards progressions across grades, and the implications of those progressions for the grade they will actually be teaching.

Section 3: Types of people who you think might be most interested in discussing this and offering feedback:
People involved or interested in teacher content knowledge; people involved or interested in faithful implementation of the CCSSM. Specifically: PIs; K-12 administrators; K-12 teachers, especially teacher leaders; higher education mathematics faculty; higher education mathematics education faculty.

Section 4: How will you structure this session? What is your plan for participant interaction?
After a brief (10 minute) overview of the challenge (teacher knowledge of the CCSSM), we will model one strategy we have used in PD sessions to help teacher leaders read and understand a progression of standards. Participants will work in small groups to solve problems selected for their relevance to a specific CCSSM standards progression (10 minutes), then will individually read the corresponding standards and record their understanding of those standards (10 minutes). We will then facilitate a whole-group discussion designed to promote deeper understanding and provide feedback (15 minutes). The remaining time will be spent in discussion of samples of teachers' responses from PD sessions or classes we have facilitated in Milwaukee.