Teacher Learning Opportunities: changes in the framing of teacher instructional talk in collaborative meetings

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Big Picture Goal: support district implementation of high quality, inquiry-oriented math instruction

Significant reorganization of teacher practice (Cobb & Jackson, 2011)

One mechanism: teacher collaborative time (Louis & Kruse, 1995; McLaughlin & Talbert, 2006)

In teacher collaborative time: opportunity to think about, talk about, and plan mathematics and math pedagogy conceptually

Need for teacher learning
What does it take to improve middle school mathematics instruction at the scale of a large urban district in the US?

Relevant data sources:
- Interpersonal: informal advice networks and audio transcripts
Study Sample

- Case study (Yin, 2003): Creekside Middle School, 2009-2011

- Primary data sources:
  - Audio recordings of teacher collaborative time (TCT) focused on instruction
  - (Informal Advice Network Surveys)
Conceptual Frame

Framing Theory (Cress & Snow, 2000)

Diagnostic Framing:
- How to help students learn math
- How to help students succeed on tests
- Students can not learn

Prognostic Framing:
- Adjust Instruction
- Cover topics
- Other
Nature and Depth of Talk about Mathematics

(Horn & Little, 2010; Stein & Lane, 1996)

How Teachers Talked about Mathematics

1) Concepts and Explanations
   a. “Conceptual Lite”
2) Terms and Procedures
3) Topic Only
Methods: Analysis

• Qualitative Analysis of Audio Transcripts:
  o Coded in NVivo with deductive and inductive codes
  o Memos, matrices

• Analysis of District Context
  o Examined qualitative and quantitative data across all schools in the district over the same time period to contextualize the findings
Finding One: Content of Mathematics

- None
- Topic Only
- Terms & Procedures
- Conceptual Lite
Finding Two: Prognoses

- Students Can't Do It
- Pass Tests
- Learn Math
Finding Three: Diagnoses

- **Other**
- **Cover Topics**
- **Adjust Instruction**
Finding Four: Role of Administrator

Administrative Framing

Administrator Presence
Implications for Design: **Teachers**

- Kind of math mattered
  - Conceptual lite is unlikely to help students know how to apply mathematical concepts to standardized tests.
  - Given administrator (and district and federal) press on student success on standardized tests, teachers will likely revert to teaching procedures.
  - Need to build teacher capacity to concepts & explanations.
Implications for Design: Administrators

- Administrator press can shift teachers’ attention
  - Provide aligned PD for principals (and APs) as well as teachers, so that they are able to either
    - A) give substantive support in implementation (if they have deep content knowledge)
    - B) press for ambitious practices (if they don’t have deep content knowledge)
Thank you!

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