Building on Mixed Results from an Experimental Study to Inform New Development: The AWSM Project
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BACKGROUND

• Well-designed formative assessment is a promising yet underused technique for tailoring instruction to meet individual student needs (e.g., Black & Wiliam, 1998).
• RCT (Randel, et al., 2011) of a textbook-based professional development program in classroom assessment had mixed results.
  • Teacher knowledge of formative assessment and involvement of students in assessment increased.
  • Other aspects of assessment practice did not improve.
  • Mathematics achievement scores did not increase.
  • Measure of assessment practice was based on the Assessment Work Sample (Clare Matsumura, Patthey-Chavez, Valdés, & Garnier, 2002), using systematically collected and rated samples of student work.
  • Scorers learned a lot from exposure to so many examples.
  • Teachers said they wanted to learn from others’ work samples, to see more math-specific examples, and to have access to a rubric on a more facilitation.
  • Literature on formative assessment + knowledge from RCT and use of work sample idea for AWSM (Assessment Work Sample Method)

OBJECTIVES

• Leverage the power of formative assessment to improve teacher practice and increase student learning.
• Use the work sample to focus on key components of formative assessment, created through iterative design-research process with two pilot tests.
• Create professional development that
  • Is centered on authentic mathematics assessment work samples.
  • Provides a facilitator to support teachers as they move from novice to expert users of mathematics formative assessment.
  • Supports teachers in a collaborative peer review setting.
• By 2014 have fully-developed, stable professional development program
  • Consisting of a Participant Guide, Facilitator Guide, and videos of supportive peer review interactions that enable program scale-up.
  • With empirical evidence showing promise for improving teacher practice and increasing student achievement in mathematics.

METHODS

• Participants are seven middle schools and their math teachers in a large urban district in Colorado;
  • Facilitators meet with teachers during common planning time 14 times during the school year.
  • Sessions involve understanding dimensions of formative assessment, discussing and scoring anonymous samples, creating and peer reviewing work samples.
  • Facilitator helps to develop knowledge of formative assessment, models constructive criticism of the work samples.
  • Formative feedback gathered through observations, focus groups, participant questionnaires, facilitator debriefs
  • Pre-post measure of teacher assessment practice via work samples
  • Difference-in-differences model for student math achievement

RESULTS

Work Sample Pretest for Teacher Assessment Practice

- Scored on a rubric on a scale from 1-5
- Scores for pre-intervention assessment practice (N = 7) were low

Observations

Researchers rated each professional development session
- 15 items related to characteristics of highly effective PD, scale from 0-3
- Average scores ranged from 0.13 (participant feedback to one another, which has not yet happened in the PD sequence) to 3.00 (facilitators paid attention to group learning needs)

Focus Groups

- Materials and videos help to understand formative assessment and to see it in action.
- Focus on learning targets helps structure lesson content and involves students in self-assessment.
- Seeing formative assessment as a fundamental approach to teaching, not just “something extra,” and are changing classroom practice.
- Include some longer sessions for more collaboration/reflection time.

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REFERENCES


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