Developing A System of Practical Measures, Routines and Representations to Inform and Enhance Middle-Grades Mathematics Instructional Improvement Initiatives

Unobtrusive and minimally burdensome to users
Easy to analyze
Quick to administer (< 3 minutes)
May also serve as
Enable practitioners to assess and adjust their
Intended for improvement work, not for accountability

Measures for Improvement

● Unobtrusive and minimally burdensome to users
  ○ Quick to administer (< 3 minutes)
  ○ Easy to analyze
  ○ Enable practitioners to assess and adjust their practices
  ● Intended for improvement work, not for accountability purposes
  ● May also serve as levers for improvement

Infrastructure for Storing, Analyzing, and Representing Data

EdSight provides users with an opportunity to investigate data from the measures for individual classrooms and multiple classrooms over time.

Measures of Key Aspects of High-Quality Mathematics Instruction

rigor of the task
A rubric designed to be used by a coach or district leader with a teacher to assess and discuss the rigor of the task(s) used for a specific lesson

launch of the task
A short (1 minute) student survey designed to be administered immediately after the launch of (introduction to) a task, to assess whether students can begin to work productively on the task

whole-class discussion
A short (2-3 minute) student survey that provides information about students’ experiences with whole-class discussion in a specific lesson

small-group discussion
A short (2-3 minute) student survey that provides information about students’ experiences with key aspects of discussion during small group work

Measures of Key Aspects of High-Quality Professional Learning

This work is in progress. Our team is currently designing, piloting, and revising measures of collaborative professional learning (e.g., teacher collaborative time; collective professional development sessions) and one-on-one coaching.

Partnerships

Our team is comprised of three Research-Practice Partnerships (RPPs) between U.S. school districts and universities.

Multiple Users and Uses

The measures & representations were designed to be meaningful to users at different levels of the system:

- teachers
- coaches
- district leaders

The measures & representations have been used to inform the implementation of a range of improvement strategies in our partner districts, including:

1. Curriculum guide writing initiative
2. One-on-one coaching
3. Professional development program

Measuring Rigor

Measuring Rigor in Practice

In Design

The measures were developed through multiple rounds of design, analysis and revision:

Initial design
- Meetings with partners about the improvement focus
- Review existing items
- Identify items

In Use

Systematically investigating the inferences made and actions taken by the various users in relationship to the organizational conditions, supports, and individuals’ current perspectives and practices

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