Center for Education Policy Research
HARVARD UNIVERSITY

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DEVELOPING COMMON CORE CLASSROOMS THROUGH RUBRIC-BASED COACHING

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Question: What is the impact of rubric-based coaching on teacher instructional practice and student achievement outcomes?

In 2014, we began to deliver virtual mathematics coaching to teachers in two Wisconsin districts. As part of this project, we recruited 142 teachers (Grades 3–8), assigning 72 teachers to participate in our program (treatment group), and 70 teachers to a control group. Teachers in the treatment group videotaped their classroom mathematics instruction, then met with coaches to view and analyze that instruction, and to plan for improvement. Coaches and teachers used the Mathematical Quality of Instruction (MQI) protocol to structure this work. In total, 23 coaches at Harvard University worked with 68 teachers, meeting nine times, on average, over the course of the 2014–2015 year. Coaching sessions focused on helping teachers improve in several areas: increase student participation in mathematical reasoning and explanation; make more use student mathematical ideas in instruction; and enhance mathematical sense-making and meaning.

142
MATH TEACHERS

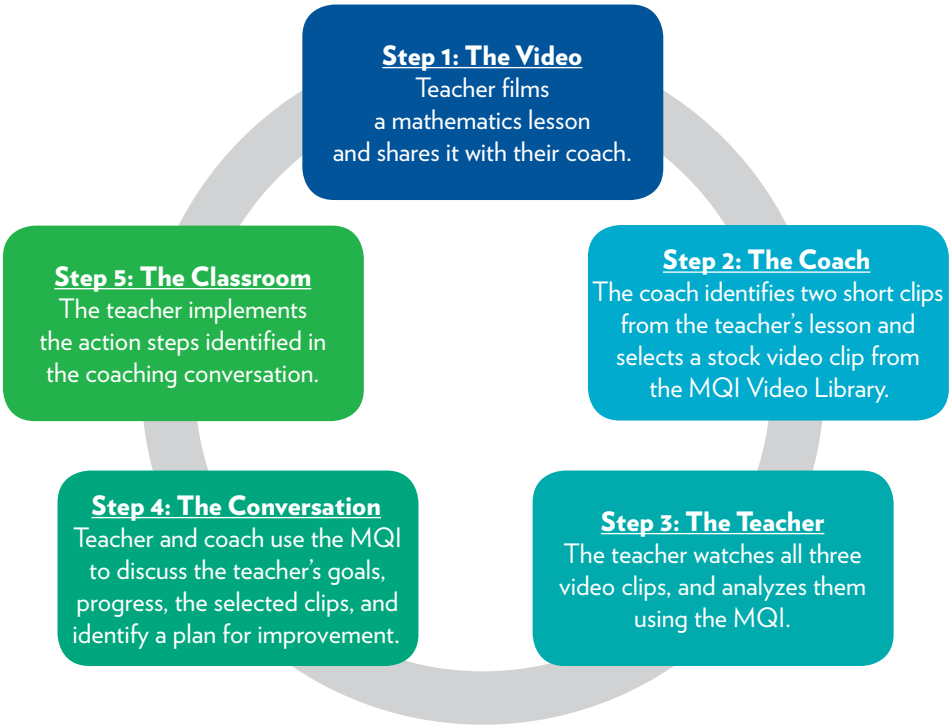
23
MATH COACHES

Early Findings: Results are Positive and Promising

We are still awaiting student test data to complete our evaluation, but this brief provides a short update on survey results from the study. Students of MQI-coached teachers report that their teachers ask more substantive questions, and require more use of mathematical vocabulary as compared to students of control teachers. Students in MQI-coached classrooms also reported more student talk in class. Teachers who received MQI Coaching tended to find their professional development significantly more useful than control teachers, and were also more likely to report that their mathematics instruction improved over the course of the year.

About the MQI Coaching Cycle

As part of a year-long experience, teachers learn about the MQI rubric, use it to critically analyze video, and then work with an MQI-expert coach to improve their own instruction.



SURVEY RESULTS

TEACHER PERCEPTIONS

MQI Coaching teachers thought that their math instruction improved significantly more than control teachers.

Teachers who received MQI Coaching tended to find their professional development significantly more useful than control teachers.

Figure 1. Improvement of Math Instruction

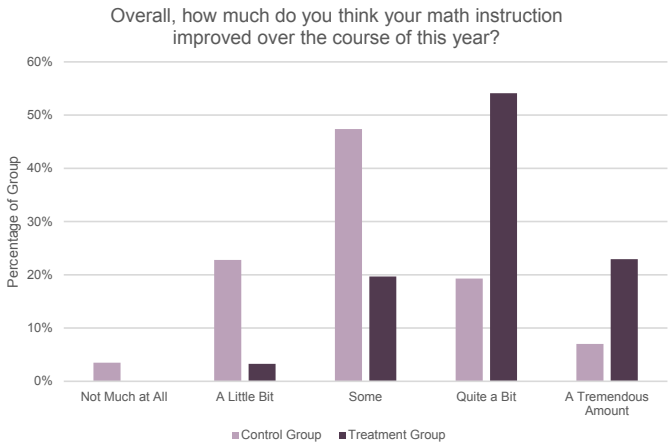
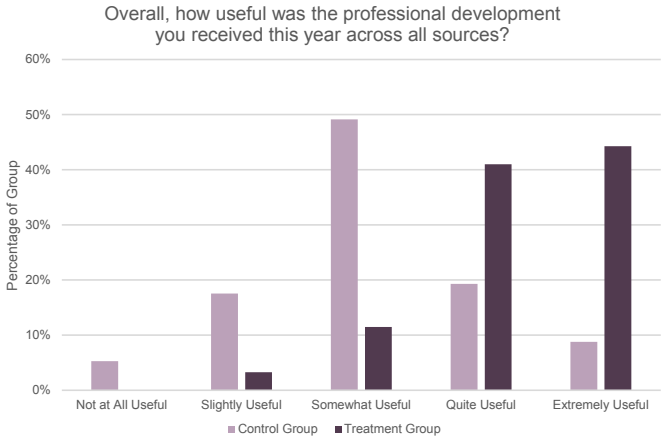


Figure 2. Usefulness of Professional Development

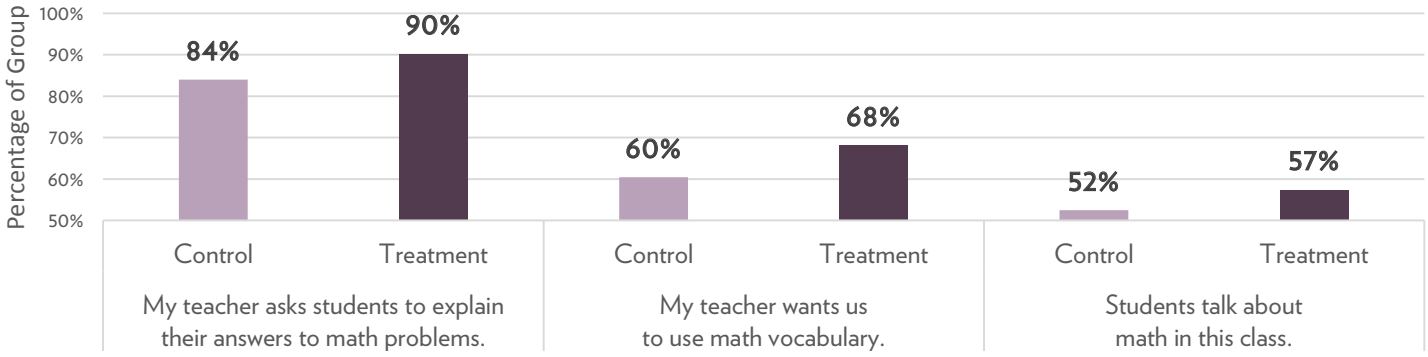


STUDENT PERCEPTIONS

Students of teachers who received MQI Coaching reported that:

- their teachers ask more substantive questions,
- their teachers require more use of mathematical vocabulary, and
- students talk more about math in class.

Figure 3. Percentage of Students Who Answered Mostly or Completely True



Note: All differences between control and treatment groups are statistically significant.

We will continue to analyze student test score data as it becomes available.
More information about this study, as well as a description of MQI Coaching resources, is available at:
cepr.harvard.edu/mqi-coaching