Center for Education Policy Research
HARVARD UNIVERSITY

MQI COACHING

Achieving high-quality math instruction isn't easy—but we can help.

MQI Coaching provides **content-specific professional development to teachers and instructional leaders** to help them improve math instruction in their classrooms and schools.

Evidence-based Learning

The MQI Coaching model uses an evidence-based observational instrument, the **Mathematical Quality of Instruction (MQI) rubric**, as a lens through which teachers and coaches reflect on and analyze math instruction. Using classroom video and the MQI rubric in regular coaching cycles, coaches help teachers self-identify areas for instructional growth and commit to realistic and actionable next steps to improve their math instruction.

Program Components

- **Proven framework**. The MQI rubric is a math-specific instrument that provides teachers with a framework for analyzing math instruction.
- **Ongoing support connected to each teacher's own practice**. Video-based coaching cycles help teachers reflect on their own instruction and look closely at their work and the work of their students.
- **Resource library**. The MQI Video Library provides teachers with examples of a wide range of instruction, including those of students demonstrating the standards of mathematical practices.
- **Teacher-driven, personalized feedback**. MQI coaches offer teachers individualized feedback and help teachers to identify and choose their own pathway for improvement.

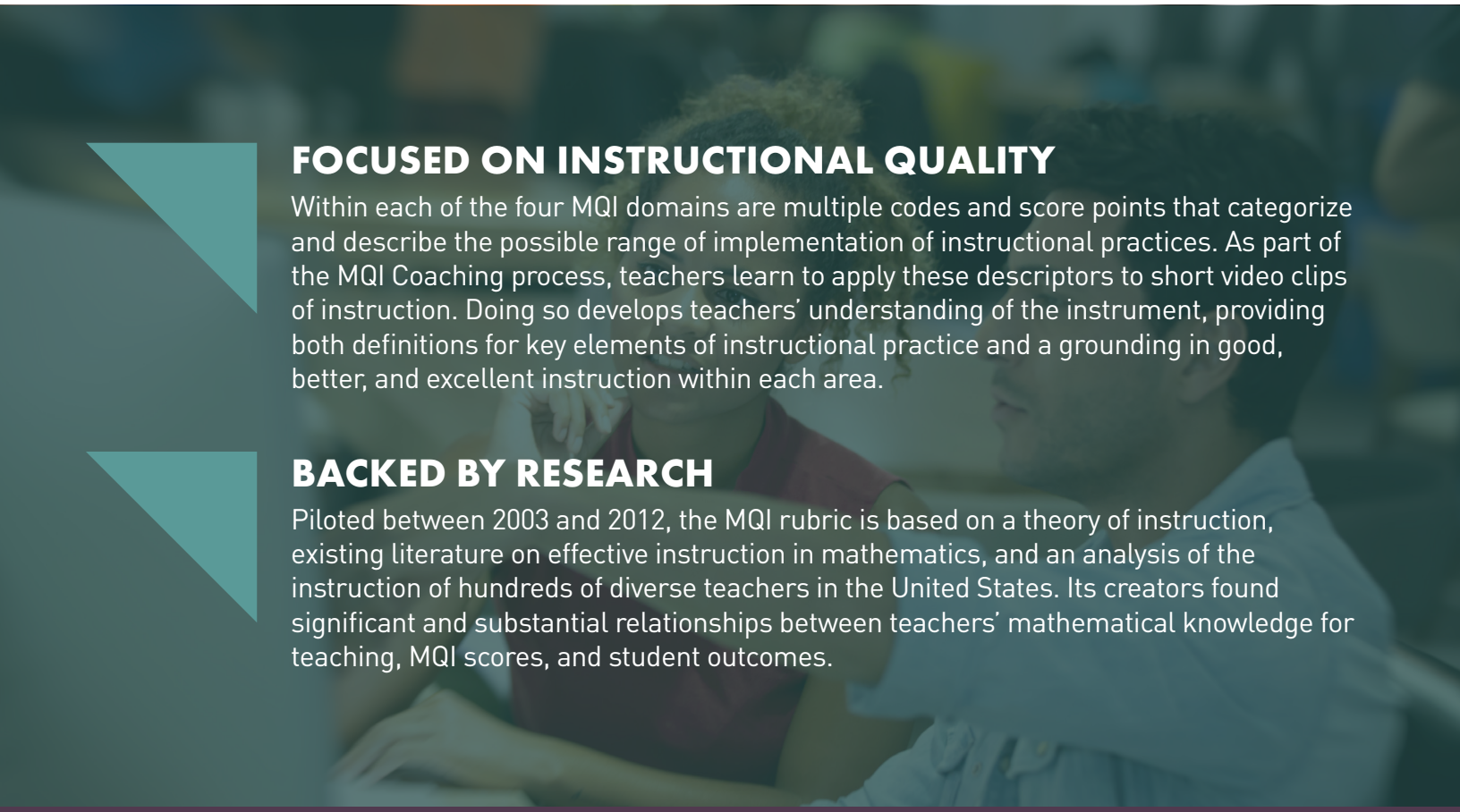
What is the MQI Rubric?

Created by researchers at Harvard University and the University of Michigan, the MQI rubric is an observational instrument that zooms in on specific instructional practices in mathematics. MQI Coaching uses the MQI rubric as a shared lens through which teachers and coaches reflect on video of instruction and as a guide to help teachers evolve their practice.

The Four Domains

The MQI Rubric captures instructional practices across four domains:

- **Common Core-Aligned Student Practices**: To what extent are the students, as opposed to the teacher, doing the mathematics of the lesson—engaging in mathematical thinking and reasoning, communicating about mathematics, and solving high-cognitive demand tasks and contextualized problems?
- **Working with Students and Mathematics**: To what extent does the teacher use student mathematical ideas or misconceptions to move the lesson forward?
- **Richness of the Mathematics**: To what extent are teachers and students making sense of the mathematics of the lesson? Are there elements of "why" and not just how?
- **Errors and Imprecision**: Is the mathematics of the lesson clear and correct?



FOCUSED ON INSTRUCTIONAL QUALITY

Within each of the four MQI domains are multiple codes and score points that categorize and describe the possible range of implementation of instructional practices. As part of the MQI Coaching process, teachers learn to apply these descriptors to short video clips of instruction. Doing so develops teachers' understanding of the instrument, providing both definitions for key elements of instructional practice and a grounding in good, better, and excellent instruction within each area.

BACKED BY RESEARCH

Piloted between 2003 and 2012, the MQI rubric is based on a theory of instruction, existing literature on effective instruction in mathematics, and an analysis of the instruction of hundreds of diverse teachers in the United States. Its creators found significant and substantial relationships between teachers' mathematical knowledge for teaching, MQI scores, and student outcomes.

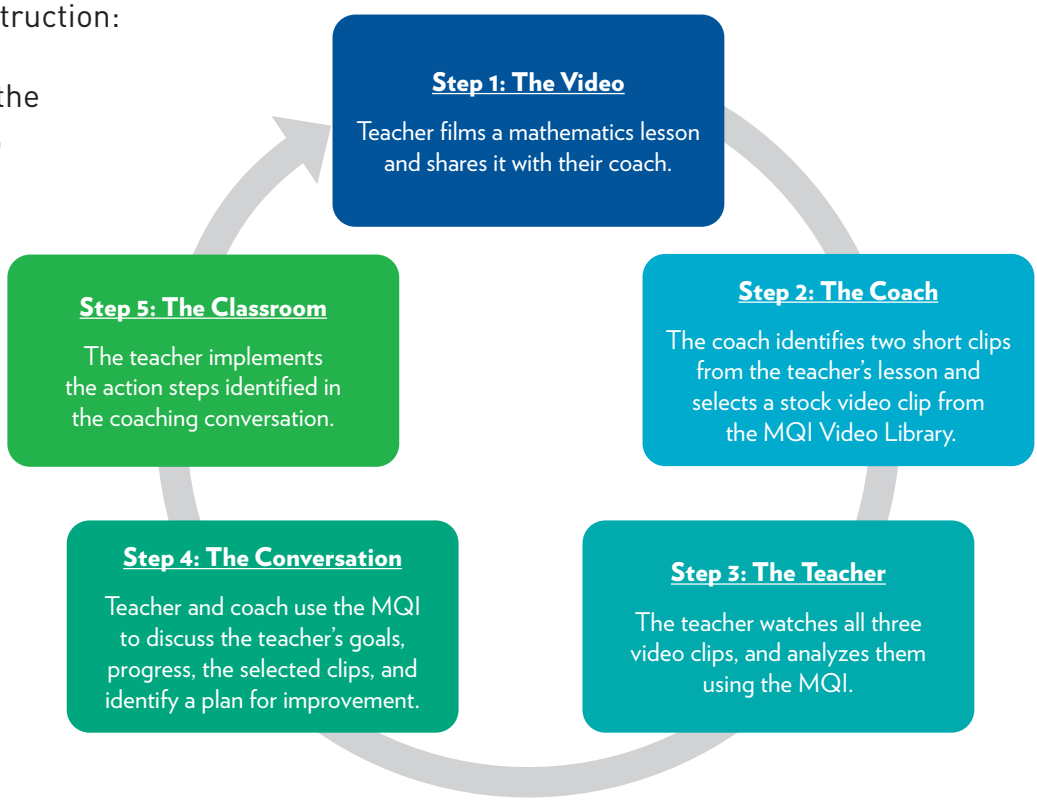
The MQI Coaching Cycle

Over a series of cycles—often over the course of a year—teachers learn to use the MQI rubric to critically analyze videos of their instruction, work one-on-one with an MQI coach to identify a plan for instructional improvement, and implement the plan in their own classroom.

Zooming in on The Conversation

When the teacher and coach meet (either virtually or in person), they use the MQI rubric as a guide for the teacher's reflection and the analysis of specific video clips of instruction:

- Teacher and coach use the MQI code(s) to describe, without judgment, what happened in the clip, focusing on one or two MQI codes.
- They elevate the instruction in the video clip, describing what this moment would have looked like if it were incrementally improved on the MQI code(s) of focus.
- The teacher identifies next steps that might lead to such elevated instruction.
- At the end of the conversation, the teacher decides on an action plan, goal(s), and MQI code(s) of focus for the next coaching cycle.



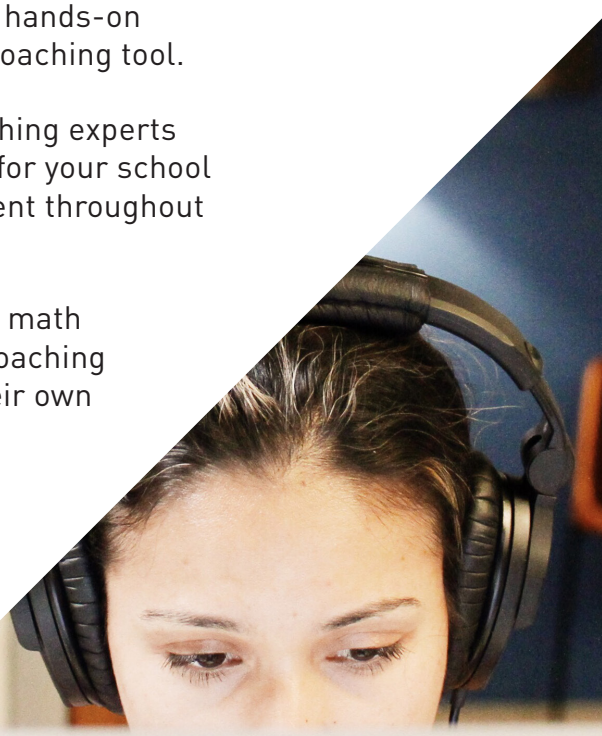
MEASURABLE RESULTS

A randomized controlled trial conducted between 2014 and 2015 revealed that MQI Coaching significantly improved the quality of teachers' mathematics instruction and that participation in MQI Coaching increased the probability that a teacher will continue to teach math in a tested grade the following year.

Join the MQI Coaching community to improve the quality of math instruction in your school or district.

We offer a range of opportunities—and they're **all available virtually**.

- **MQI Coaching online course**: Participants join experts from Harvard University for a self-paced online learning module that introduces key components of our rubric-based coaching model.
- **MQI Coaching Institute—intensive four-day workshop**: Participants join MQI Coaching experts at Harvard University for an in-depth, hands-on training on the MQI rubric and how to use it as an effective coaching tool.
- **Customized training—for your school or district**: MQI Coaching experts customize the content of the annual MQI Coaching Institute for your school or district and offer ongoing tailored professional development throughout the school year.
- **MQI e-coaching—remote, video-based coaching**: We match math teachers with an MQI expert coach for virtual, one-on-one coaching catered to their professional goals and based on video of their own instruction.
- **MQI-based professional learning communities**: MQI Coaching facilitators guide groups of teachers through video analysis using the lens of the MQI rubric and clips of instruction from the MQI Video Library. Teachers have an opportunity to create a shared language through which to discuss math instruction.



Contact us to get started.

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