DECISION MAKING PROTOCOL FOR MATHEMATICS COACHING

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OUR EXPERIENCE AS COACHES

ENDURING QUESTIONS FOR MATH COACHES

- How do you learn to coach?
- What goals should you set in your coaching practice?
- How do you assess your impact as a coach?
- How do you best support the range of schools, teachers, and principals you work with?

WHY DID WE DEVELOP THE PROTOCOL?

"Creating effective classrooms and learning environments in every school and district will take *principals, coaches, specialists, and other school leaders* who are committed to supporting teachers to engage students in important mathematics and who fully understand the eight Mathematics Teaching Practices for effective instruction and assist teachers in consistently planning and implementing them" (NCTM, 2014, p. 112).

WHY DID WE DEVELOP THE PROTOCOL?

- Mathematics coaches need guidance to meet the challenges of enacting the eight research-based teaching practices recommended in *Principles to Action* (*PtA*).
- The tool lowers potential barriers to implementation by asking guiding questions that mathematics coaches and teachers leaders can consider in their practice.
- The DMPMC recognizes the range of coaching experience, school and district contexts with the intent to empower school communities to surmount the obstacles identified in *PtA.*

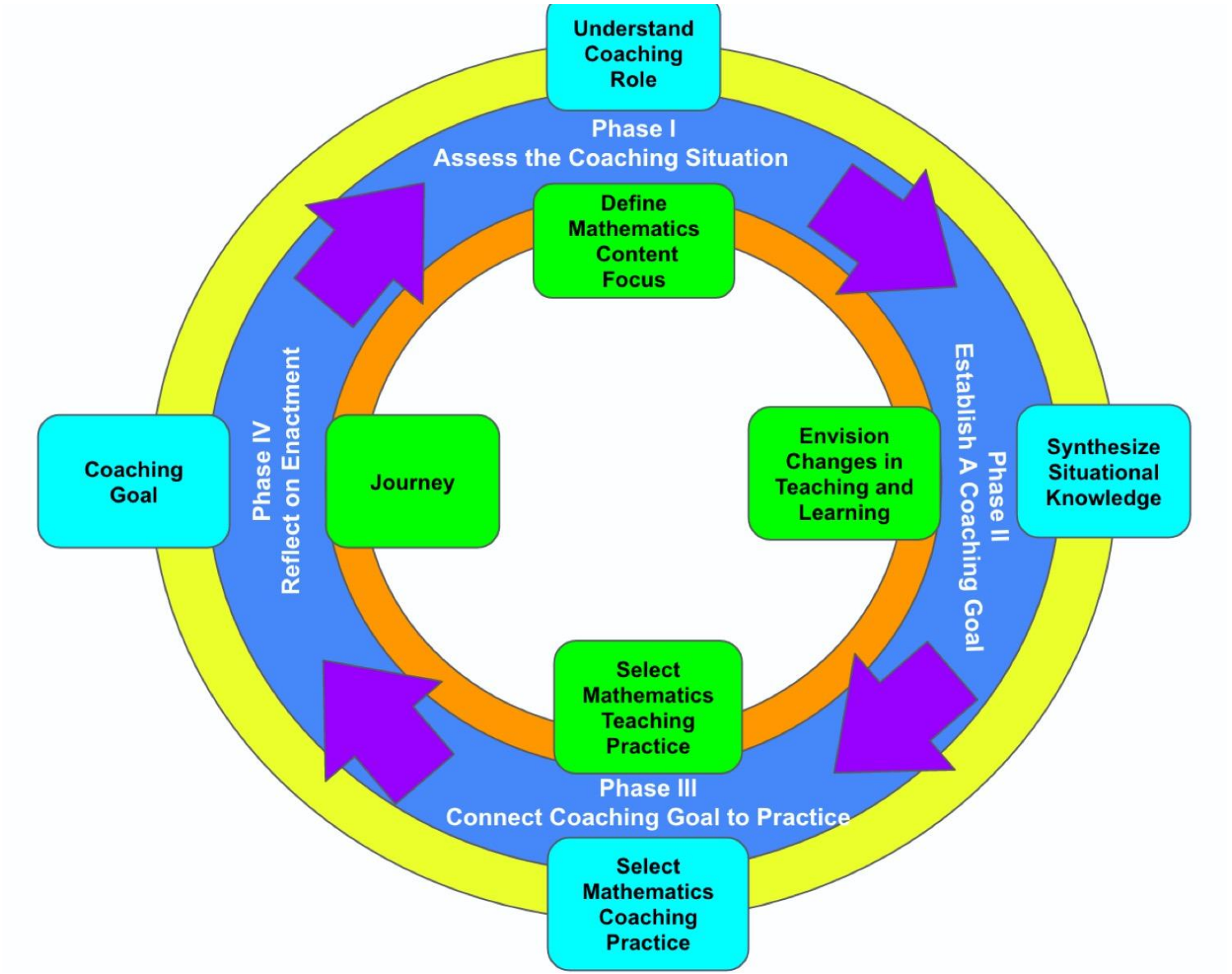
BRINGING TOGETHER HIGH LEVERAGE TEACHING AND COACHING PRACTICES

Mathematics Coaching Practices (Gibbons & Cobb, 2017)

- Engage in Mathematics
- Examine Student Work
- Analyze Classroom Video
- Rehearse Aspects of Practice
- Engage in Lesson Study or Studio Day
- Co-teach
- Model Instruction

Eight Mathematics Teaching Practices (NCTM, 2014)

- Establish mathematics goal
- Implement tasks that promote reasoning and problem solving
- Use and connect mathematics representations
- Facilitate meaningful mathematical discourse
- Pose purposeful questions
- Build procedural fluency from conceptual understanding
- Support productive struggle
- Elicit and use evidence of student thinking



THE PROTOCOL

A four-phase reflective cycle that guides coaches in supporting teachers to create a culture of effective teaching practices and learning environments for all students.

	Bridging Context and Coaching Practice	Bridging Content and Teaching Practice
Phase I: Assess the Coaching Situation	**Understand Coaching Role** *What are the needs of your audience?* • *Are you supporting individual teachers, grade-level teams, or an entire school?* • *What is the state of your relationship with each teacher?* *What aspects of the school culture or strategic vision are essential in your thinking?* • *What programs or initiatives have been implemented or abandoned recently?* • *What is the level of receptiveness to coaching?*	**Define Mathematics Content Focus** *What is your audience's experience with this mathematics content?* • *What is the current state of teacher confidence?* • *What is current state of student thinking?* • *What instructional approaches have been tried?* *What resources will support growth in teaching and learning?* • *What representations will promote procedural fluency?* • *What representations will support conceptual understanding?*

PHASE I

The guiding questions in each phase of the protocol allows coaches to purposefully bridge mathematics content considerations, research-based Mathematics Teaching Practices, and effective coaching practices to ensure equitable teaching practices.

Phase II: Establish a Coaching Goal	**Synthesize Situational Knowledge** *What connections can you make between the needs of your audience, the mathematics content, and the goals of the team/school/district?*	**Envision Changes in Teaching and Learning** *What are reasonable and realistic expectations for your audience?* *How will you measure your audience's progress?*

PHASE II

Establish a Coaching Goal

Phase III: Connect Coaching Goal to Practice	**Select Mathematics Coaching Practices (MCP)** *How will you negotiate and justify the choice of one or more MCPs?* • *Which MCP best aligns with your coaching situation and your coaching goals?* • *What is your readiness to enact the identified MCP?* • *How will this MCP support you in creating a safe, low stakes learning environment for your audience?* • *What are the obstacles to this enactment that you will need to overcome?*	**Select Mathematics Teaching Practices (MTP)** *How will you negotiate and justify the choice of one or more MTPs?* • *If the teachers are unfamiliar with the eight MTPs, how can you initiate and facilitate a conversation?* • *Which MTPs are most relevant in your coaching situation?* • *How will you gauge your audience's readiness to enact this MTP?*

PHASE III

Connect Coaching Practice to Mathematics Teaching Practices

Phase IV: Reflect on Enactment	**Evaluate Progress toward Coaching Goal** *What evidence will you analyze?* *What were your successes?* *What are your next steps?* *How can you improve in your next coaching action?*	**Debrief and Continue the Journey** *How will you support your audience in moving forward on MTPs?* • *What specific evidence will you share with your audience?* • *What words will you use when talking to your audience so that the mathematics and student thinking is at the forefront of the conversation?*

PHASE IV

Reflect on your Coaching Enactment

CAN BE USED FLEXIBLY IN A VARIETY OF ROLE RESPONSIBILITIES

- Formal Mathematics Coaching role (school or district)
- Informal Teacher Leader role (school based)
- District Leadership Teams
- Professional Development facilitators

HOW CAN YOU USE THIS TOOL IN YOUR COACHING PRACTICE?

Your task: Develop a coaching plan for Cora

- Read through the dialogue between Cora and Mrs. Smith taking note of the school context and any other details that seem important.
- Consider Phases I and II from the protocol.

EXAMINE ONE CASE FROM OUR RESEARCH

Cora

A mathematics coach in her first year as a coach in the building where she is also a mathematics teacher.

Mrs. Smith

A 6th grade math teacher Cora has just started working with.

Your task: Develop a coaching plan for Cora

- What Mathematics Teaching Practice and Coaching Practice(s) might Cora use in Phase III? Why?
- Cora struggled with identifying a plan for measuring progress in Phase II. How could she measure Mrs. Smith's progress based on the coaching and teaching practices you identified for Phase III?
- Based on Cora's initial interaction with the teacher, what goals might Cora set for their next experience together?
- What evidence might result (Phase IV)?

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Connecting Research and Practice

- Attending to Diverse Students and Diverse Settings

- Advancing Coaching Practice through Intentionality
  - Importance of Assessing the Coaching Situation
  - Goal Setting to Determine Impact
  - Moving Beyond Envisioning to Enacting

SHARING RESULTS FROM RESEARCH

Upcoming Workshops & Conferences

April 7, 2018

Mason Coaching Institute for Math & Literacy

MATH SPECIALIST INSTITUTE

April 22-25, 2018

LEADERSHIP IN MATHEMATICS EDUCATION

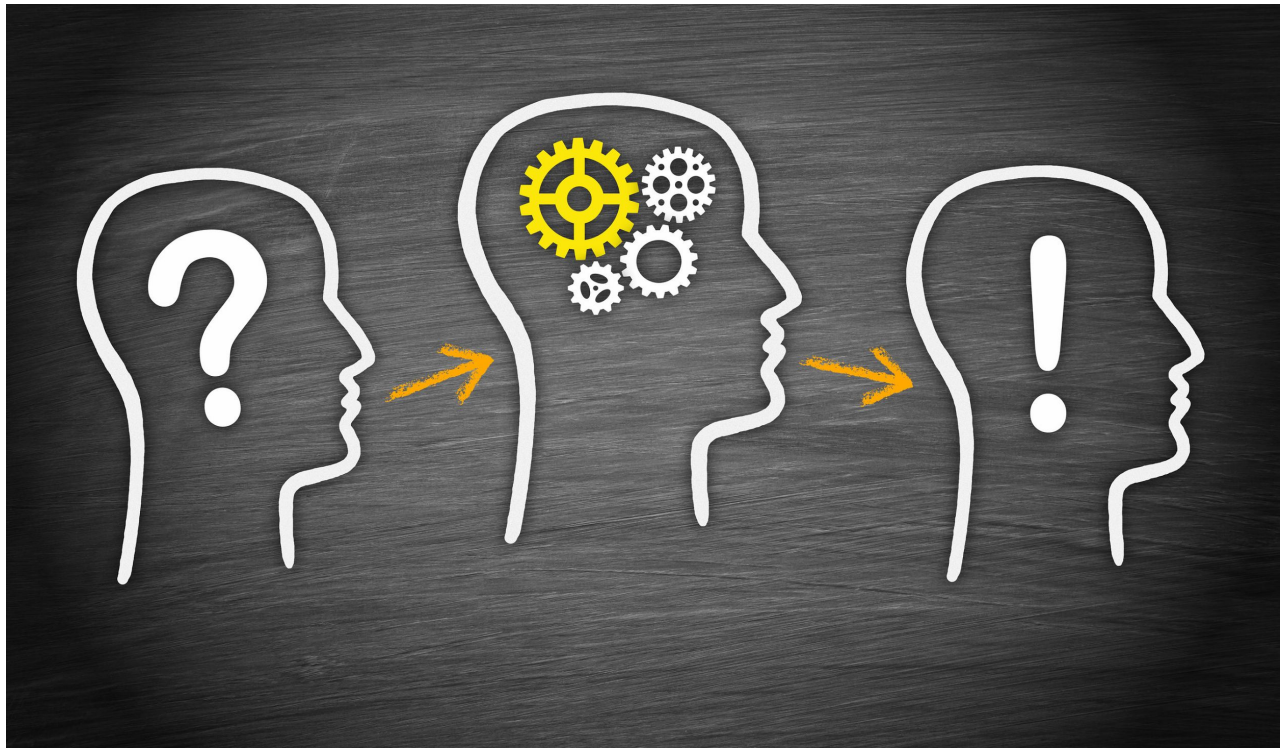
NCSM

NETWORK
COMMUNICATE
SUPPORT
MOTIVATE

SHARING RESULTS FROM RESEARCH

REFLECTION: HOW MIGHT YOU USE THIS TOOL IN YOUR WORK?

- How might this protocol guide your work with teachers and administrators?
- In your role, how could you imagine using this protocol—as a whole or in part?
- Discuss with a partner
- Record your ideas



THANK YOU!
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