

Using Rehearsal Debriefs  
with Experienced Teachers  
to Negotiate an  
Understanding of an  
Ambitious Teaching  
Practice

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Michigan  
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*Building on MOSTs:  
Investigating Productive Use  
of High-Leverage Student  
Mathematical Thinking*



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# Background on Rehearsals

- Call for learning experiences (in both methods courses and professional development) that support teachers' development of knowledge for teaching in conjunction with capabilities to enact core teaching practices (Grossman et al., 2009)
- Effective teacher preparation programs incorporate practice-based experiences that scaffold teacher candidates' learning to teach and learning from teaching (AMTE, 2017, Indicator P.3.4)
- Approximations of practice are opportunities for enacting core components of teaching in contexts and situations of reduced complexity (Grossman et al., 2009).

# Background on Rehearsals

- Rehearsals – “Approximation of practice” where preservice or inservice teachers lead a defined activity, with their peers and/or teacher educators acting as students
- Coaching – providing in-the-moment feedback, responding to questions, opening up conversations around problems of practice
- Rehearsal Debriefs - collectively analyzing the rehearsing teacher’s instruction in relation to how it supports student thinking

# Guiding Principles for Rehearsals

- Not an oversimplification of practice; include complex instantiations of practice, with the goal being to understand what teacher actions support student learning
- Focus on interactive practices; student thinking is an important part of the context and the rehearsals require teachers to consider how to best support student thinking

# What's known about rehearsals?

- There is a growing body of research that rehearsals with preservice teachers support their
  - capability to enact instructional activities (Kazemi et al., 2009)
  - development of adaptive expertise (Anthony et al., 2015)
  - vision of mathematics instruction (Arbaugh et al., 2020)
- Research with inservice teachers (ISTs) is in its early stages
  - Rehearsal time outs and debriefs allow for rich analysis of rehearsal events in relation to ambitious mathematics teaching & learning (Baldinger & Munson, 2020; Wage & Fauskanger, 2020)
  - ISTs often introduce additional complexity into rehearsed events by connecting to their own practice (Munson et al., 2021)

# What's not known?

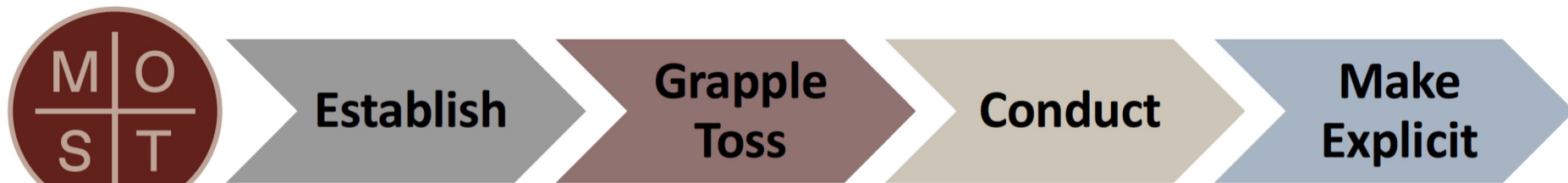
How rehearsals can support the negotiation of an understanding of an ambitious teaching practice with experienced teachers

# Context

- 12 experienced teachers working with us as teacher-researchers (T-Rs)
- Project focused on decomposing (Grossman et al., 2009) a complex teaching practice around productively using student thinking—*Building* on student mathematical thinking
- Rehearsals were used as one means of jointly constructing an understanding of Building



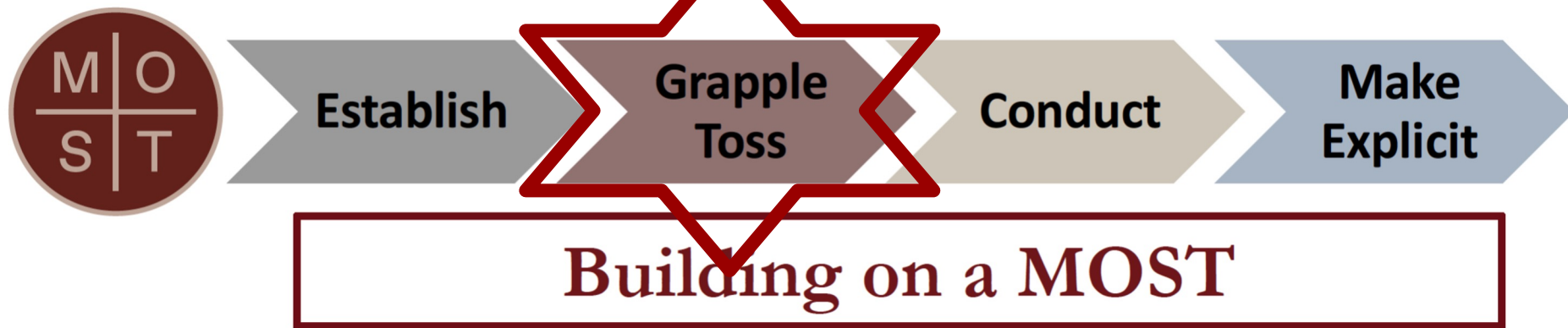
A MOST is a **M**athematical **O**pportunity in **S**tudent **T**hinking



## Building on a MOST

Building on a MOST is engaging the class in making sense of the MOST to better understand the mathematics of the MOST.

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# Our Work with the T-Rs

- First Cycle
  - Research team shared our initial conceptualization of *Building*
    - *decomposition of practice*
    - *approximation of practice, including rehearsals*
  - T-Rs enacted *Building* in their classrooms using common tasks
- Research team engaged in substantial analysis of the T-R enactments
- Second Cycle
  - Research team shared our refined understanding of Building
  - Research team engaged T-Rs in rehearsals of elements of Building to provide a context for collectively making sense of aspects of the practice

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# Motivation and Research Question

- During the Cycle 2 rehearsals we sensed that the rehearsal debrief discussions were different in nature than those with preservice teachers.
  - What these differences might be?
  - How might they need to be taken into account in the future planning of rehearsals focused on making sense of a complex teaching practice?
- Question: What does it look like for inservice teachers (ISTs) and mathematics teacher educators (MTEs) to negotiate an understanding of elements of an ambitious teaching practice during rehearsal debriefs?

# Analysis

- Transcripts of recorded rehearsals were blinded for analysis
- Identified facilitation moves
  - Facilitation moves: actions initiate or explicitly support high-quality conversations about the elements and aspects building.
  - High-quality conversations: those in which the group engaged in sustained discussions of the details of rehearsal events in order to make sense of the elements and aspects of building.
- Coded facilitation moves using an adaptation of van Es et al. (2014) framework for facilitating discussions of videos of practice
- Analyzed the facilitation moves to consider how they supported negotiation of meaning—mutual adaptation that results in the emergence of collective understanding about a teaching practice (Cobb & Yackel, 1996)

## Clip 1: How did that question work for you?

- Rehearsal was focused on Grapple Tossing an instance of student thinking—*turning that thinking over to the class for a sense-making discussion.*
- The rehearsing TR was trying out this grapple toss question: **How does that claim hold up mathematically?**



What did you notice related to the negotiation of the Grapple Toss question?



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1	MTE1: How did that question work for you?	Eliciting
4	MTE2: Yeah, please use it in advance. Don't use it for the first- Whatever question you decide on, use it before this so that it's not the first time that-	Research Directive
5	TR1: Well I'm wondering how it felt to you or others in the room?	Distributing Participation
9	MTE2: Mhm. So this is an improvement?	Pressing
10	TR2: Yes, I think when you say it like this [ <i>points to the Grapple Toss posters</i> ] that their immediate thought is going to be to come up with the evidence that either proves there- this [ <i>points to student work on the board</i> ] or disproves it. That's what they're going to come up with, is an example.	Sharing Expertise from Classroom
11	TR1: Cause I feel like for middle school if, how does this hold up mathematically, they are going to be like numbers. Doing math means using numbers. I- Let's- Let's find some.	Sharing Expertise from Classroom
13	MTE2: Is that a problem?	Pressing
23	TR1: And I feel like, I mean if that comes with, it would be in the next part. But if a kid actually worked this out and doesn't agree, they're probably going to say it's wrong.	Redirecting
29	TR4: The likelihood that the students respond to that question with, "It doesn't hold up, end of story", might- might- might be higher.	Countering
31	MTE2: See we were hoping that "How does this hold up?" might position them to look for ways in which it's correct. But that you're- I'm hearing you say that, it's not a norm.	Sharing Expertise from Research

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## Clip 2: Did the teacher say too much?

- Rehearsal was focused on the first teacher move after the Grapple Toss
- At the start of the debrief, the discussion became focused on Grapple Toss itself



What did you notice related to the negotiation of whether it's OK to include extra wording with the Grapple Toss question?

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6	MTE2: That, "I'm gonna give you time to think about it: seemed like maybe you could just give them time to think about it. Like, I'm wondering how you feel about that about giving them time because it's not like we're giving them a lot of time. It's a really short amount of time.	Wondering
17	MTE2: I'm trying to keep it as clean because we're finding that clarity is really helpful and if, you know, so like when you were doing that set up uh and then saying okay we're gonna think about this. We want to know how it holds up mathematically. I'm gonna, I'm gonna pause and then we're going to start the conversation.I think that would probably be okay the first time.	Sharing Expertise from Research
18	MTE1: I was going to say,It seemed like it, this is, I think we maybe disagree, I know you like clean crispness but I also want them to do what is natural for them as a teacher what feels right. So I..	Countering
19	MTE2: But I do know that we, a natural productive teaching mode in a lot of solution, or a lot of situations is to give a task, have the students work on it individually, do a think, pair, share, in a lot of situations that is, is the best thing to do. And think that it gets in the way of a MOST. So I just want to encourage you not to move in that direction.	Sharing Expertise from Research
22	TR3: Are you saying that it like runs the risk, that in that five seconds they're gonna be like, "What did you say?"	Countering
24	MTE2: No, no I don't think so I just am thinking, I'm, I'm, I know what you're telling me and I should probably be super careful. I don't want to hamper you or make you do anything unnatural so what I'll just put out there is be cautious about falling into comfortable patterns that don't fit with the MOST. Let's just put it that way. So you're trying to keep the conversational bubble.	Research Directive
26	TR3: I do think though the way I don't know like that little bit of talking right before you grapple toss	Countering
28	TR3: Might provide just that like you were saying, that needed clarity, cause in our district our administration's new thing is 'clear is kind' 'clear is kind'	Countering
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# Key Facilitation Moves Across the Rehearsal Debriefs

<b>Facilitation Move Types</b>	<b>MTE</b>	<b>TR</b>
Sharing Expertise from Research	X	
Sharing Expertise from Classroom		X
Alternative Move	X	X
Countering	X	X
Pressing	X	
Wondering		X

# Discussion

- How do these ideas resonate with you?
- What might be some considerations for using rehearsals as a mechanism to engage in joint sense making with experienced teachers?
  - What structures might need to be in place to allow them to bring their classroom expertise into the discussion?
  - How the rehearsal debrief might be positioned as a venue for negotiating meaning?

# Elements that may support rehearsal debrief negotiations with ISTs

- Highlighting the complexity of teaching, even for experienced teachers
- Creating a dilemma/something to be made sense of
  - relatable dilemma that is connected to their work in the classroom
  - opportunity to rethink a “routine” practice
- Shared expertise
  - elevating the teacher’s expertise—situating them as teacher-researchers
  - not situating ourselves as “the experts”—able to draw on data, but not have a definitive answer



[BuildingOnMosts.org](http://BuildingOnMosts.org)

Thank you!

# The MOST Analytic Framework

