# Using a tool that assesses teachers' experiences of collaborative professional development to inform and improve facilitation

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CERME 2022
TWG 27

A tool (practical measure) to support facilitators of collaborative math PD to assess improve their practice
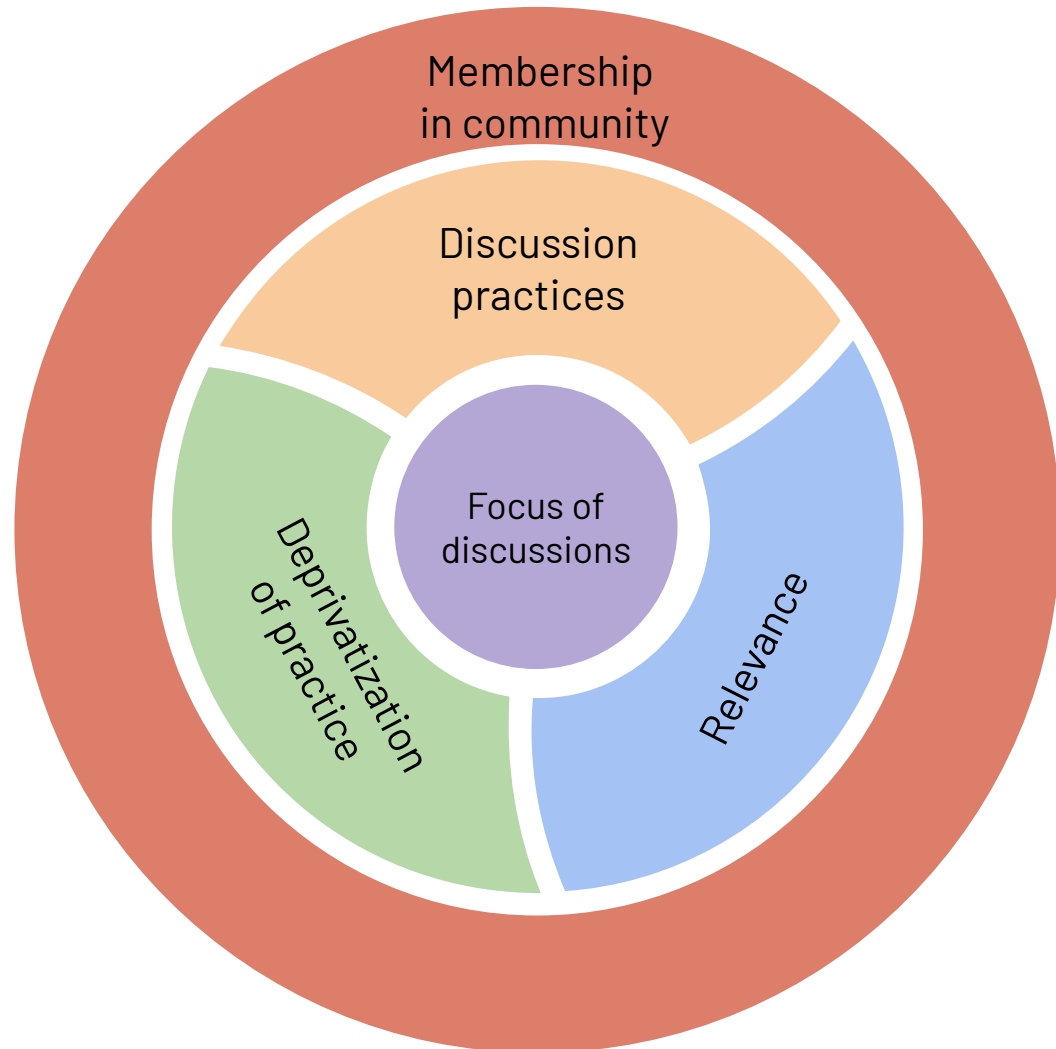
- Teacher-facing survey that takes 3-4 minutes to complete
- Designed to support facilitators to inquire into their facilitation practice
- Provides facilitators with information about teachers' experiences, in relation to features that matter for teachers' learning in collaborative mathematics PD

More about the measure here:

https://www.pmr2.org

How does a facilitator use this practical measure to inquire into and make decisions about her facilitation practice?

Update on current analysis

Findings from CERME paper: The facilitator used the practical measure of collaborative PD to...

(1) **provide insight** into critical and otherwise hidden aspects of teachers' perspectives and experience

(2) **prompt reflection** on key aspects of the PD

(3) **prompt ideas for a change** in the preparation for or facilitation of an upcoming session

(4) **assess** whether deliberate **changes** to her facilitation practice resulted in desired improvements

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  (4) **assess** whether deliberate **changes** to her facilitation practice resulted in desired improvements

Expanded focus of current analysis: What <u>conversational routines</u> appeared to support how the facilitator made sense of the resulting data?

conversational routines – "patterned and recurrent ways that conversations unfold within a social group" which are "constituted by moves, turns of talk that shape the interaction's progress by setting up and constraining the response of the subsequent speakers"

(Horn & Little, 2010, p. 184)

Identifying a generative conversational routine among facilitators

Making an aspect of teachers' responses focal ➤ Specifying and revising a problem of facilitation practice ➤ Generating a principled change idea ➤

(building from Horn & Little, 2010)

Use case

Teacher PD

- Middle grades, school-wide mathematics professional learning community (5 teachers)
- Facilitated by Reina

Conversation about teachers' responses

Reina, Sally (the PD organization's leader), and a researcher from our team

Item 1: I felt like I could share a **mathematical idea** I was unsure about...

Only in my small group (1)
Only in the whole group (1)
In both the whole group and my small group 60% (3)
In neither the whole group nor my small group

08 MAR

Item 2: I felt like I could share **an idea about teaching** I was unsure about...

Only in my small group 60% (3)
Only in the whole group (1)
In both the whole group and my small group (1)
In neither the whole group nor my small group

08 MAR

Sally: I think it's interesting that more people said they only wanted to share about teaching in their small group. 60% said math they could share in both whole and small [group], and 60% said they could only share about teaching in their small group.

Reina: That's good information for me as a facilitator. I need to focus more on giving them that opportunity to reflect publicly on their teaching practice and have those conversations.

Sally: Reina, it makes me think that it is the nature of their more confident thinking about math ideas. They're less confident being willing to talk about their teaching ideas. "I don't want to share publicly about my teaching, but I feel okay about sharing publicly about math."

Reina: I'm going to give them that opportunity [to reflect publicly on their teaching]. It may be somewhere in the middle, you know, a combination.

...

Reina: Timewise, I didn't give them enough time to talk about how they were going to … incorporate [the ideas from the PD] into their practice. In some ways, the results of [Items 1 and 2], could be based a little bit on the time that they were allotted in each of those.

Sally: Reina, I think that's really interesting information for us. When we've got these short chunks of time, which lots of what we're doing now are these short chunks of time, do we [frame it] upfront by saying, "Today we're going to spend more time thinking about math ideas, and have less time thinking about the instruction. But, next time, maybe we'll have more time to focus on instructional ideas and less time to think about math." That's just good information for us across lots of contexts.

Making an aspect of teachers' responses focal	**Sally**: I think it's interesting that more people said they only wanted to share about teaching in their small group. 60% said math they could share in both whole and small [group], and 60% said they could only share about teaching in their small group.
Specifying and revising	**Reina**: That's good information for me as a facilitator. <u>I need to focus more on giving them that opportunity to reflect publicly on their teaching practice and have those conversations.</u>
Specifying and revising	**Sally**: Reina, <u>it makes me think that it is the nature of their more confident thinking about math ideas. They're less confident being willing to talk about their teaching ideas. "I don't want to share publicly about my teaching, but I feel okay about sharing publicly about math."</u>
	Reina: I'm going to give them that opportunity [to reflect publicly on their teaching]. It may be somewhere in the middle, you know, a combination.
	...
Specifying and revising	**Reina**: <u>Timewise, I didn't give them enough time to talk about how they were going to … incorporate [the ideas from the PD] into their practice. In some ways, the results of [Items 1 and 2], could be based a little bit on the time that they were allotted in each of those.</u>
Generating a principled change idea *(tentative at this point)*	**Sally**: Reina, I think that's really interesting information for us. When we've got these short chunks of time, which lots of what we're doing now are these short chunks of time, do we [frame it] upfront by saying, "Today we're going to spend more time thinking about math ideas, and have less time thinking about the instruction. But, next time, maybe we'll have more time to focus on instructional ideas and less time to think about math." That's just good information for us across lots of contexts.

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Thank you!

Visit our website: **https://www.pmr2.org**

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Appendix

What are "practical measures"?

- provide users with **timely** and **meaningful feedback** about targeted aspects of **practice** (i.e., things that make an important difference)

- easy to administer & resulting data is easy to analyze (i.e., '**practical**')

- enable users to **set goals**, **identify changes**, and **consider whether a change in practice is moving in the desired direction**

- used for the purposes of **improvement**, <u>not</u> accountability or evaluation

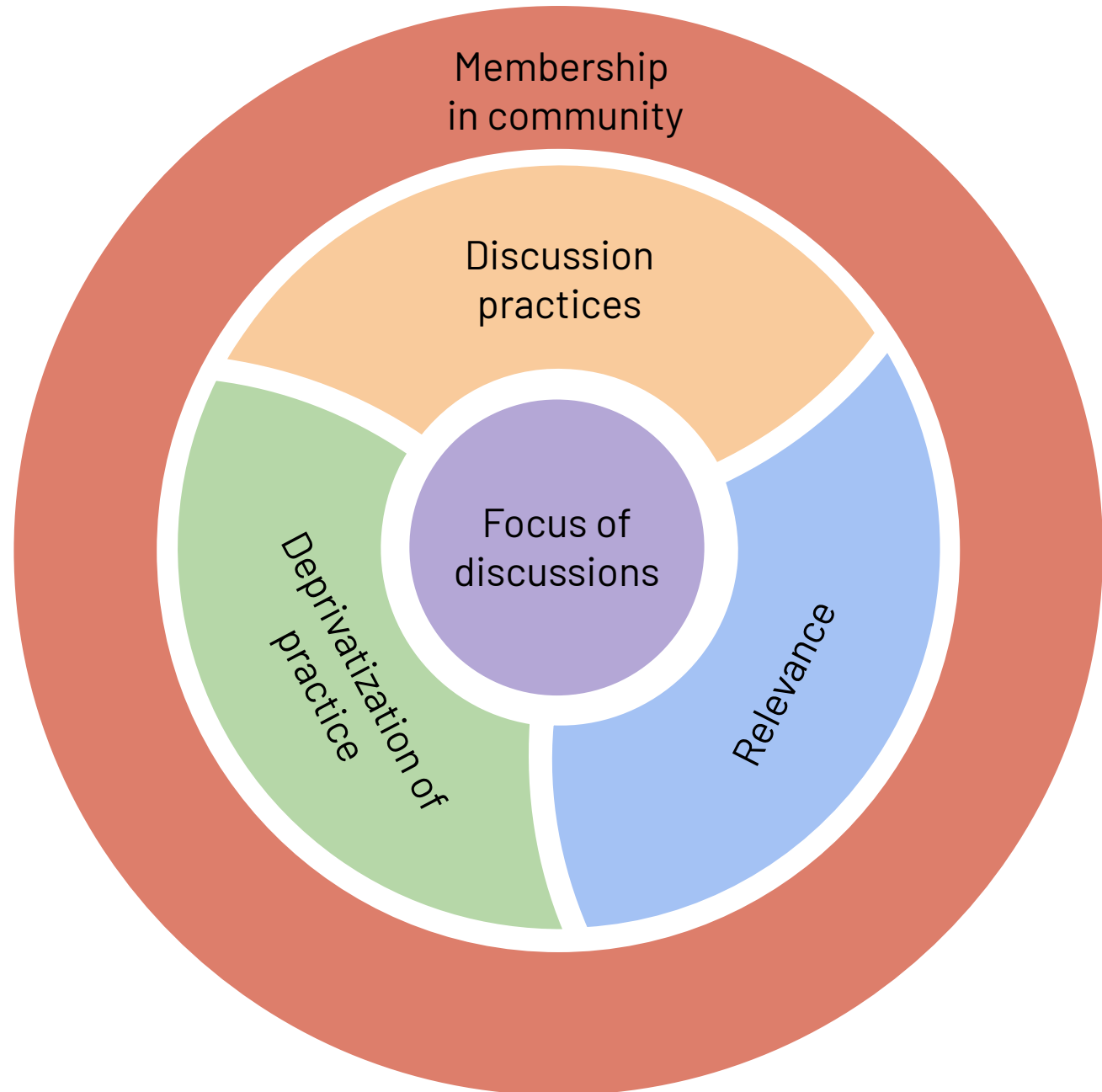Practical measures of key aspects of **classroom instruction** that research has linked to student learning
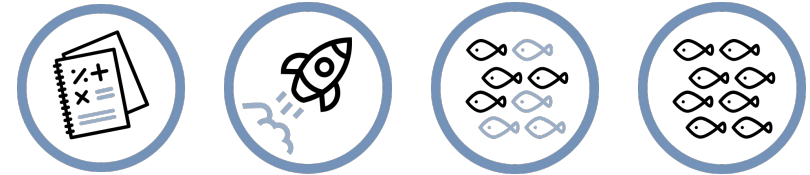
Practical measures of key aspects of **professional learning** (e.g., one-on-one coaching, collaborative professional learning) that research has linked to teacher learning

- coaching measures are in progress
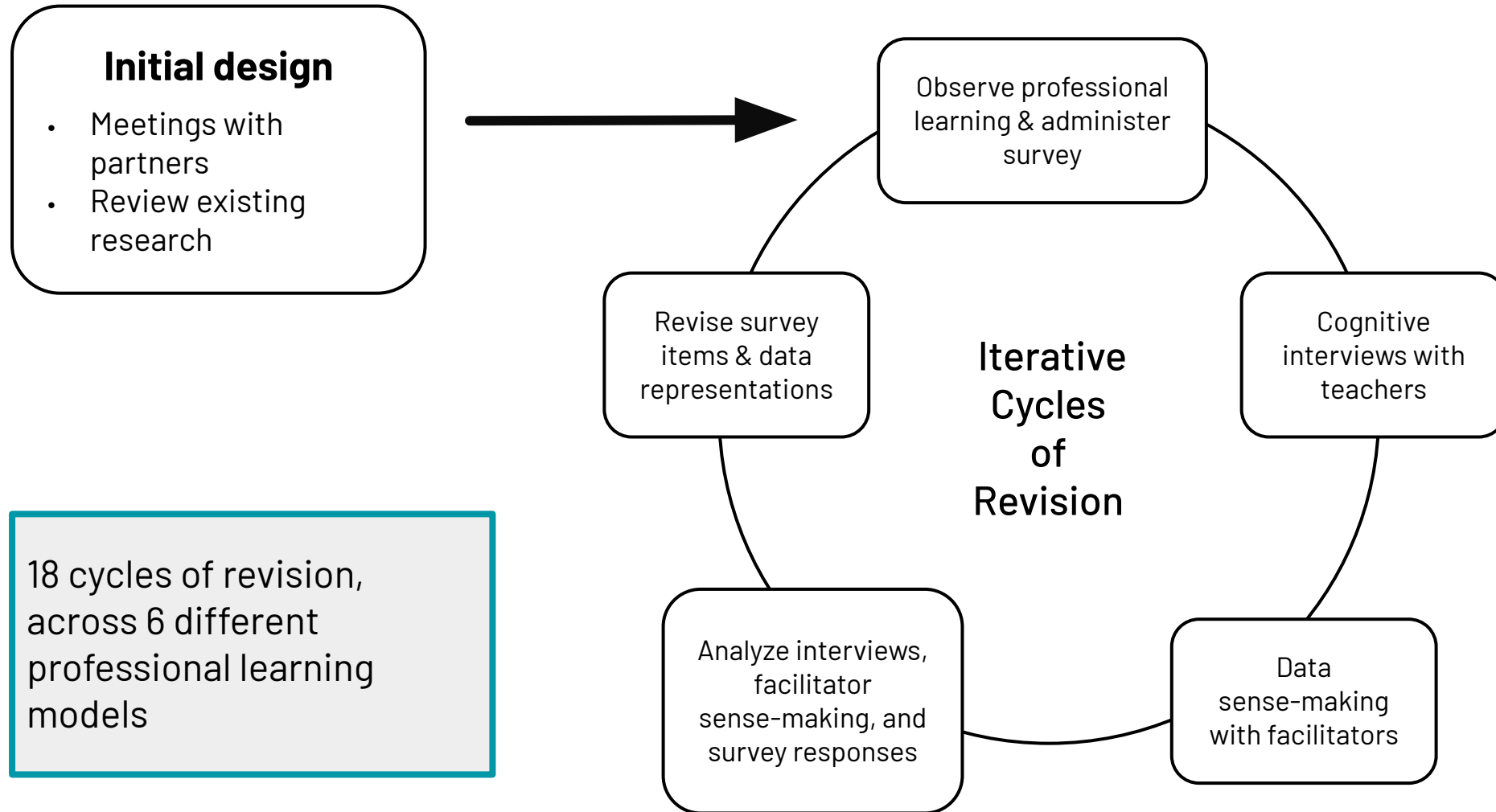- collaborative professional learning measure is ready for use

features of high-quality collaborative professional learning experiences

Membership in community

Discussion practices

Focus of discussions

Deprivatization of practice

Relevance

Development Process for Measures of Professional Learning

Initial design

- Meetings with partners
- Review existing research

18 cycles of revision, across 6 different professional learning models

Iterative Cycles of Revision

- Observe professional learning & administer survey
- Cognitive interviews with teachers
- Data sense-making with facilitators
- Analyze interviews, facilitator sense-making, and survey responses
- Revise survey items & data representations

Phase 0
Launch into Cycles of Inquiry

Phase 1
Prepare to Administer the Survey

Phase 3
Analyze Responses to the Survey & Set Goals for Professional Learning Design and Facilitation

Inquiry into Facilitation

Phase 2
Administer the Survey

add something to emphasize -- this is with colleagues

Typology of facilitators' uses of the data

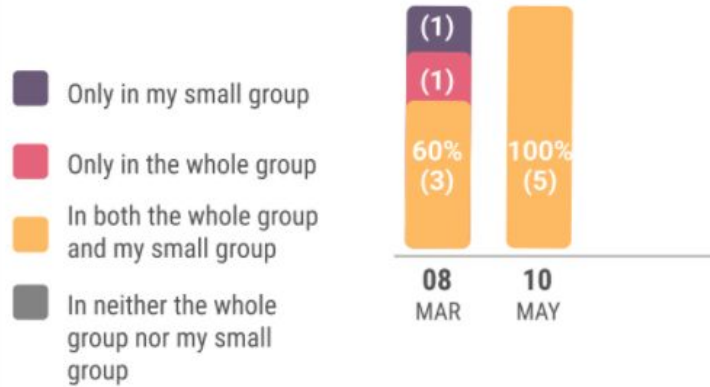|	
Gain new insight	Facilitator uses teachers' responses to specific items to provide insight into critical and otherwise hidden aspects of teachers' perspectives and experiences
Prompt reflection on context	Facilitator uses teachers' responses to specific items to prompt reflection on an aspect of the professional learning context (e.g., who is in the room; virtual vs. in-person)
Prompt reflection on facilitation	Facilitator uses teachers' responses to specific items to prompt reflection on something they have done or have not done
Prompt potential change	Facilitator uses teachers' responses to specific items to prompt plans for or an idea for a change in preparation for or facilitation of an upcoming session
Assess improvement	Facilitator tracks aggregated teachers' responses to survey items over time to assess whether changes in their experiences suggested improvements in her facilitation

Use Case

Middle grades, school-wide mathematics professional learning community
- 5 teachers
- 1 student teacher attended the March 8 meeting

Facilitated by an experienced outside professional learning facilitator
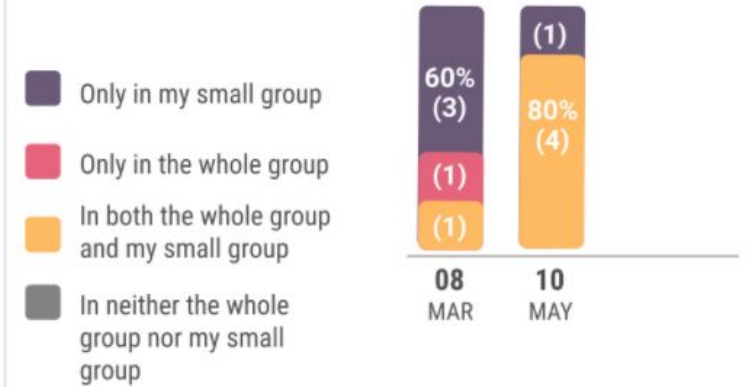
Question 1
I felt like I could share a mathematical idea I was unsure about

- Only in my small group
- Only in the whole group
- In both the whole group and my small group
- In neither the whole group nor my small group

(1)
(1)
60% (3)   100% (5)

08 MAR   10 MAY

* March 8: A teacher selected all options, so their answer was excluded

Question 2
I felt like I could share an idea about teaching I was unsure about

- Only in my small group
- Only in the whole group
- In both the whole group and my small group
- In neither the whole group nor my small group

(1)
60% (3)
(1)   80% (4)
(1)

08 MAR   10 MAY

* March 8: A teacher selected all options, so their answer was excluded

Question 3
I felt like I could ask others to elaborate on an idea

- Only in my small group
- Only in the whole group
- In both the whole group and my small group
- In neither the whole group nor my small group

60% (3)
(1)   100% (5)
(1)

08 MAR   10 MAY
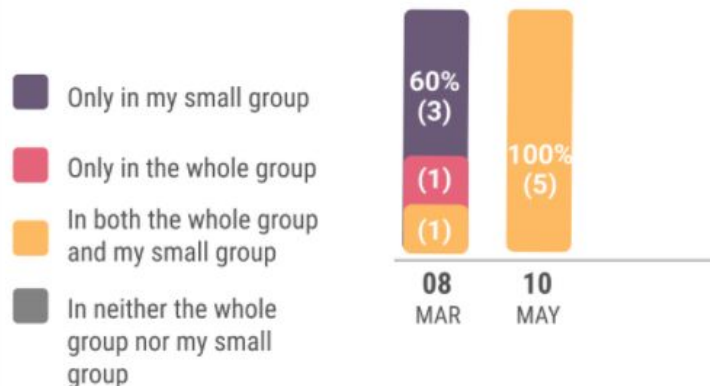
* March 8: A teacher selected all options, so their answer was excluded
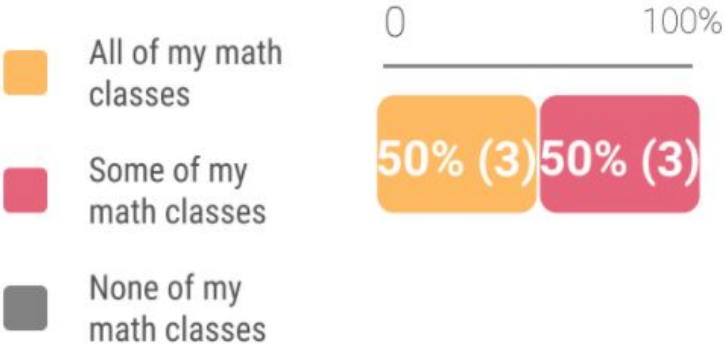
Question 4
I felt like I could push back on an idea
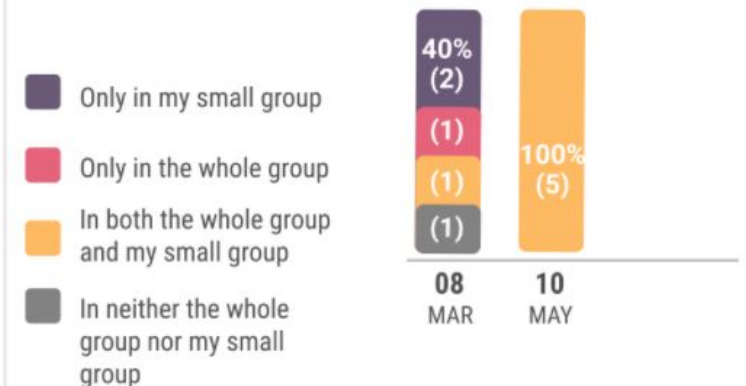
- Only in my small group
- Only in the whole group
- In both the whole group and my small group
- In neither the whole group nor my small group

40% (2)
(1)   100% (5)
(1)
(1)

08 MAR   10 MAY

* March 8: A teacher selected all options, so their answer was excluded

Question 11
I feel ready to try something I learned today in:

- All of my math classes (orange)
- Some of my math classes (pink/red)
- None of my math classes (grey)

0 — 100%

50% (3) 50% (3)

If applicable, what are you planning to try?

Using reflection

Jamboard

I plan to work with discussion frames for my accelerated 7th grade class. This class works the most collaboratively, so there are opportunities to try the new skills..

My own practice continues to focus on students making conjectures.

use frames and give them an opportunity to share their thinking

If applicable, in which classes are you hesitant to try something, and why?

None

4th period...they are so unwilling to participate openly

I do not plan to implement the tools in my other classes because they usually work much more asynchronously and independantly.

Algebra- not hesitant just not the right fit for the next three weeks or so. Maybe after that. I guess we are taking tests and studying for the final. I could maybe work on this for studying for the final but I am not sure if that is the time to learn from each other or explore what we have already learned. Then we are not doing direct learning until the second week of April. Holy crud nugget that seems like SOOO far away.

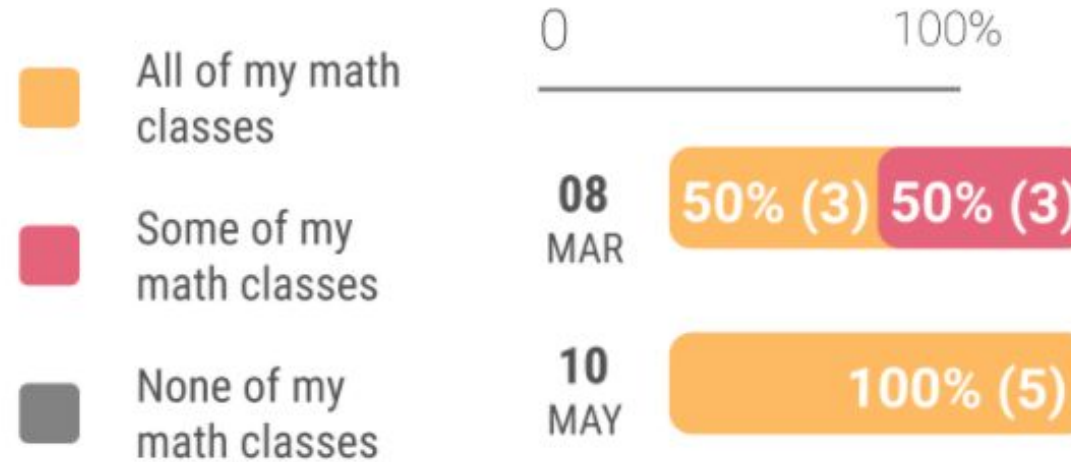"[These responses are] eye opening for me." *(facilitator, in-the-moment)*

"[Responses to this item] served as a red flag." *(facilitator, reflecting back)*

"Those comments in that bottom half **are concerning to me because apparently I haven't pressed that this is good teaching, and good teaching happens every day**. It's not something that we pick and choose. 'Oh yeah, I can engage the kids in the [high-leverage instructional practices] on *this* task, but … we've got to cover content or we've got to review content.' Kids that are unwilling to participate, those are the ones that we need to jump in and engage in and give access more than ever. [Teachers' responses to this item] was good information for me to have because **I need to focus on that with this group, that this is good for *all* [students], and we do mean *all* [students].**"

(facilitator, in-the-moment)

viewing the change between the **March 8** and **May 10** survey administrations

I feel ready to try something I learned today in:

■ All of my math classes

■ Some of my math classes

■ None of my math classes

0   100%

08 MAR   50% (3) 50% (3)

10 MAY   100% (5)

"I'm glad. Glad is not the right word. I'm almost relieved to see that change from some of my classes to all of my classes."
(facilitator, in-the-moment)

"It looks like we've reached a little more toward [my goal that] they believe that they will implement this with all students in all classes."
(facilitator, in-the-moment)

Survey items, by category

Discussion Practices: Ideas about mathematics, students' learning and experiences, and teaching are developed through authentic, generative inquiry, which involves processes of sharing and revising emergent thinking, pressing for reasoning/evidence, and challenging ideas.

I feel like I can share a mathematical idea I am unsure about… **(Select all that apply.)**

☐ in the whole group ☐ in my small group ☐ in neither the whole group nor my small group

I feel like I can share an idea about teaching I am unsure about… **(Select all that apply.)**

☐ in the whole group ☐ in my small group ☐ in neither the whole group nor my small group

I feel like I can ask others to elaborate on an idea… **(Select all that apply.)**

☐ in the whole group ☐ in my small group ☐ in neither the whole group nor my small group

I feel like I can push back on an idea… **(Select all that apply.)**

☐ in the whole group ☐ in my small group ☐ in neither the whole group nor my small group

Deprivatization of Practice: Participants open up their own practice for inquiry and see value in doing so.

I would be open to sharing the following with this group of teachers and leaders: **(Select all that apply.)**
- ☐ an anecdote about what my students said or did
- ☐ an anecdote about something I said or did when teaching
- ☐ samples of my students' written work (examples: exit tickets; photos of students' work)
- ☐ a math task or activity
- ☐ video of my students solving problems
- ☐ video of my teaching
- ☐ I would not be open to sharing any of the above.

I would be open to inviting members of this group of teachers and leaders to join a lesson of mine.

○ Yes   ○ No

In today's session, I felt like I could share something I'm wondering about my own teaching (examples: a question, a dilemma, a challenge).

○ Yes   ○ No

Relevance: Participants experience the professional learning as responsive to and possible in their own instructional contexts**.**

I found today's session relevant to my work as a teacher.

⭕ Yes   ⭕ No

If you answered yes, what did you find relevant?

If you answered no, why not?

I feel ready to try something I learned today in… **(Select the one best response.)**

⭕ all of my math classes
⭕ some of my math classes
⭕ none of my math classes

If applicable, what are you planning to try?

If applicable, in which classes are you hesitant to try something, and why?

Membership in Community: Participants both feel valued and see the value in learning with and from others in the community.

In today's session, I felt like my ideas were valued… (**Select all that apply.**)

☐ in the whole group ☐ in my small group ☐ in neither the whole group nor my small group

Focus of Discussions: Discussions are focused on mathematics, students' learning and experiences, (tasks), teaching, and relations among these elements.

Items in this category are under development.