

WELCOME!

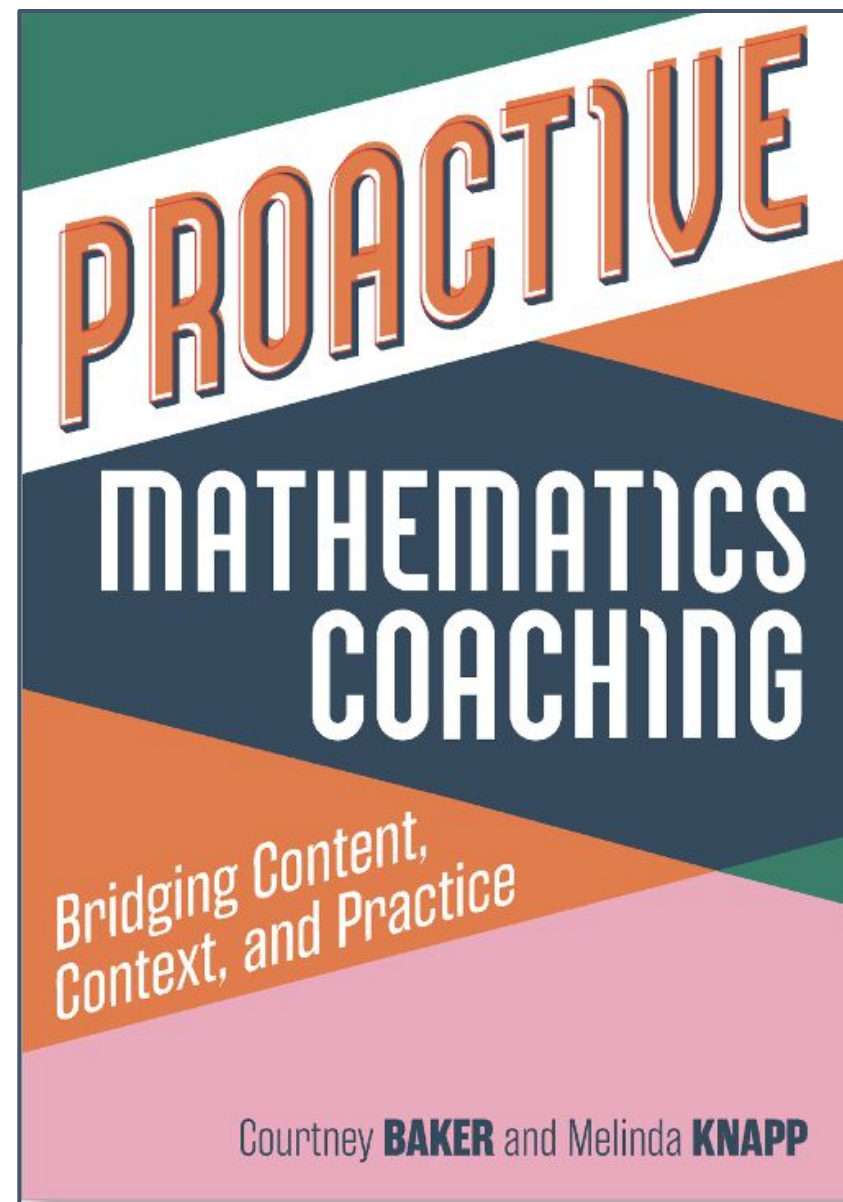
NCTM Book Study

Proactive Mathematics Coaching

Modeling Instruction

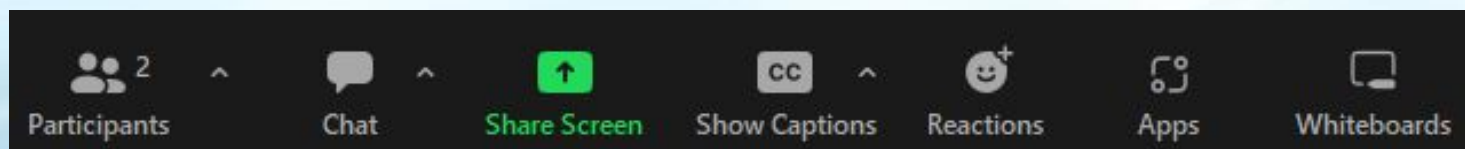
Courtney Baker, PhD

Melinda Knapp, PhD



Welcome!

- **Please keep your microphone muted!**
- **Chat box:** Comment, chat with other participants, and ask questions.
- **Video:** Be mindful that everyone can see your video unless you choose to stop sharing.
- **Show Captions:** Use to hide or view subtitles.



Welcome!

- A recording will be available to registered attendees for 30 days after the session.
- We will provide a certificate of participation within a few days of the session.
- Follow us on Twitter @NCTM and share your thoughts about today's session using the hashtag #NCTMPD.

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Proactive Mathematics Coaching

Today's Agenda

Part I: Welcome & Overview

Part II: Exploring The Case of Kamala

Part III: Modeling Instruction as a Mathematics Coaching
Practice

Part I: Welcome & Overview

Introductions

Mathematics Coaches At Heart

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Understanding Our Influence

Questions At The Core of Our Practice

Is what I am doing
actually effective? And
who is it effective for?

Understanding Our Influence

Developing A Proactive Practice



Our Book Study Goals

Connecting Research & Practice

- Explore a specific MCP through example cases that provide broad exposure to instructional practices and leadership approaches.
- Analyze cases that recognize a range of coaching contexts, focus on math content, and empower school communities to surmount obstacles.
- Gain insights into what it takes to plan professional learning and/or coaching interactions that advance leadership agendas for both long- and short-term goals.

Our Book Study Goals

Connecting Research & Practice

- Bring transparency to decision making and illustrate how the use of the PCF advances the vision of teaching and learning mathematics described within the Catalyzing Change series.
- Engage in discussions (network and collaborate) with peers to share common problems of practice, evaluate contexts, define a content focus, establish goals, select practices, and engage in debriefs that can inform future actions.

Maximize Your Experience

Engage in Multiple Formats

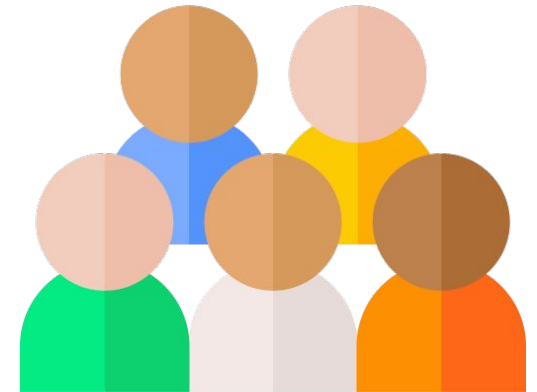
Chat &
Microphone



Jamboards &
Padlets



Breakout Rooms



Maximize Your Experience

Workshop Norms to (Re)Frame Leadership

- Assume Positive Intent
- Learn From & With Each Other
- Maintain An Asset-Based Approach
- Value Others' Experiences
- We Teach All Students & Lead/Coach All Stakeholders
- Other?



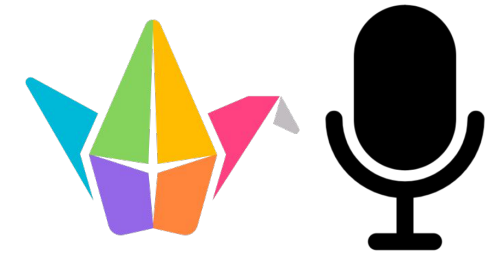
Creating Alliances

Building Your Network

 Please Share on Our
Google Sheet

- Name
- Position
- School(s)
- Coaching/Leadership Experience
- email address





Invitation to Share

Your Turn

What did you try?

- 1-2 questions?
- A specific phase?
- The entire PCF?



Part II: Exploring the Case of Kamala

Modeling Instruction As A Coaching Practice

Connecting To Your Practice

What is your familiarity with modeling instruction?

- I have never heard of modeling instruction
- I have read about modeling instruction
- I have tried modeling instruction a few times
- I regularly use modeling instruction



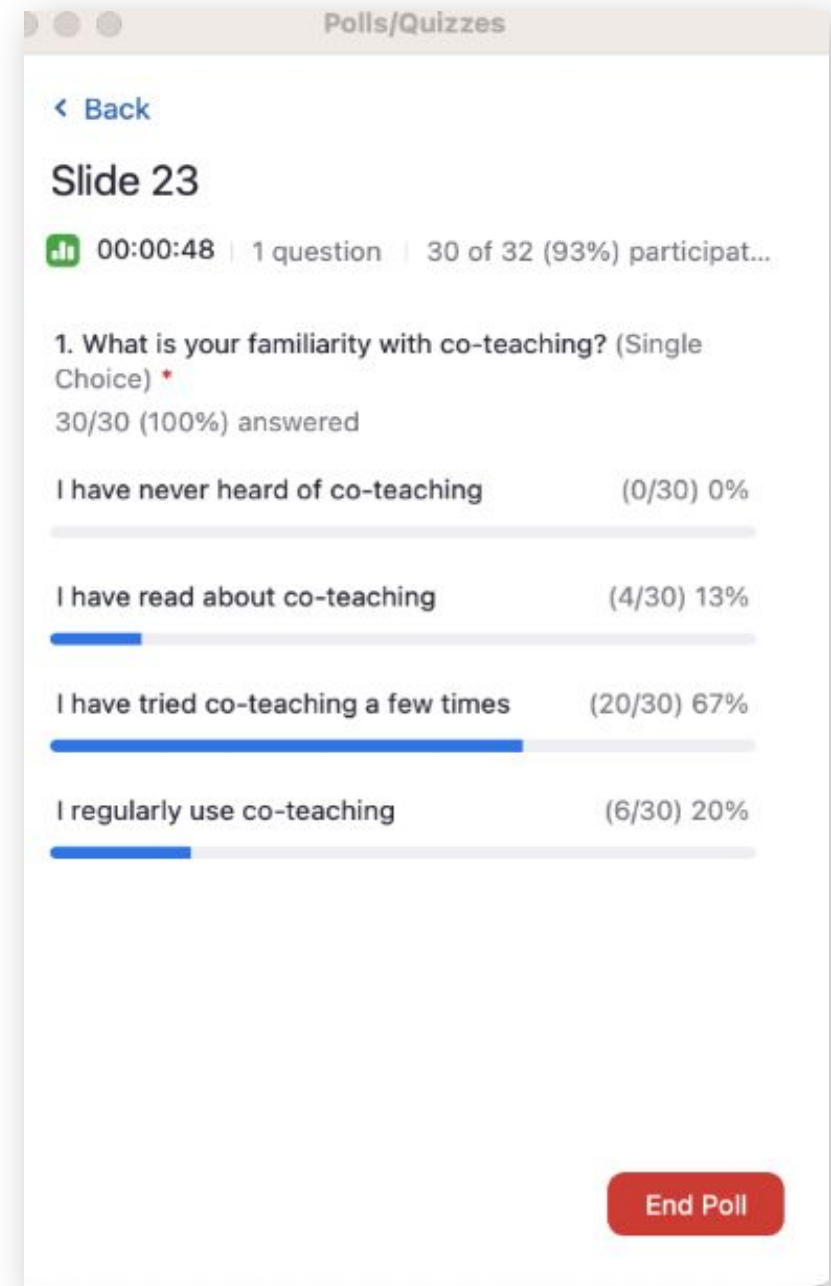
Modeling Instruction As A Coaching Practice

Connecting To Your Practice



What do you notice?

What do you wonder?

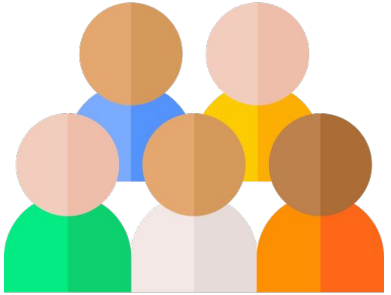


Modeling Instruction As A Coaching Practice



Pause & Ponder: Breakout Session

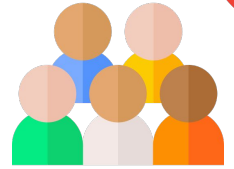
Breakout Rooms



Reflect on and discuss the questions on the next slide. You can also use the linked Jamboard to record your ideas.

Modeling Instruction As A Coaching Practice

Pause & Ponder: Breakout Session Qs



1. At times, mathematics leaders set goals that are often larger or more involved than they anticipate. How does Kamala's use of the Framework support her in developing a series of smaller goals that are more reasonable and realistic (Phase II) and influence the school community's deficit views of students?
2. Kamala has not yet anticipated Mr. Singh's possible responses (Phase IV anticipated) to her first coaching interaction in which she shares the resources Principles to Actions and Taking Action. What might Mr. Singh's responses to this initial meeting be (best-case scenario, worst case scenario, somewhere in the middle)?

Part III: Modeling Instruction As A Mathematics Coaching Practice (MCP)

Modeling Instruction As A Coaching Practice

Defining the Practice

Mathematics Coaching Practice: Model Instruction

Effective coaching of mathematics involves demonstrating for teachers the delivery of instruction in the classroom. The coach and teacher work collaboratively to purposefully highlight coach-student interactions to maximize student learning.

Modeling Instruction As A Coaching Practice

Connecting to Research

- Modeling can look like a coach taking on the role of the teacher in a classroom to demonstrate a pedagogical practice or instructional routine (Saclarides & Munson, 2021).
- Modeling can be used in professional learning settings as a way of engaging audience members and helping them experience learning as their students might.
- Modeling can be used in professional development settings where an individual models a routine (e.g., number talk) in the presence of multiple teachers to intentionally demonstrate what is possible for particular instructional practices.

Modeling Instruction As A Coaching Practice

Connecting To Practice



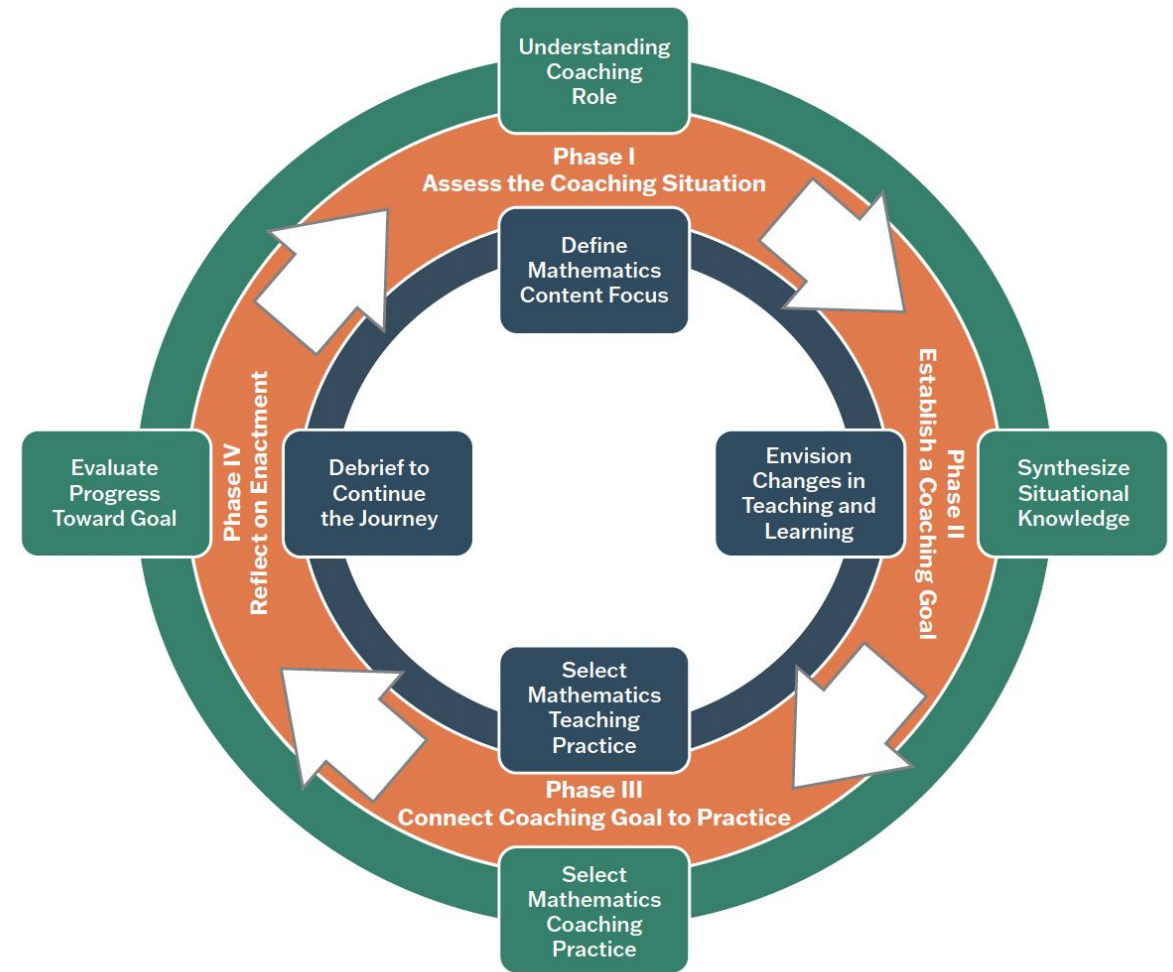
What insights or questions do you have about modeling instruction?

- From reading Chapter 6?
- From your own experiences?



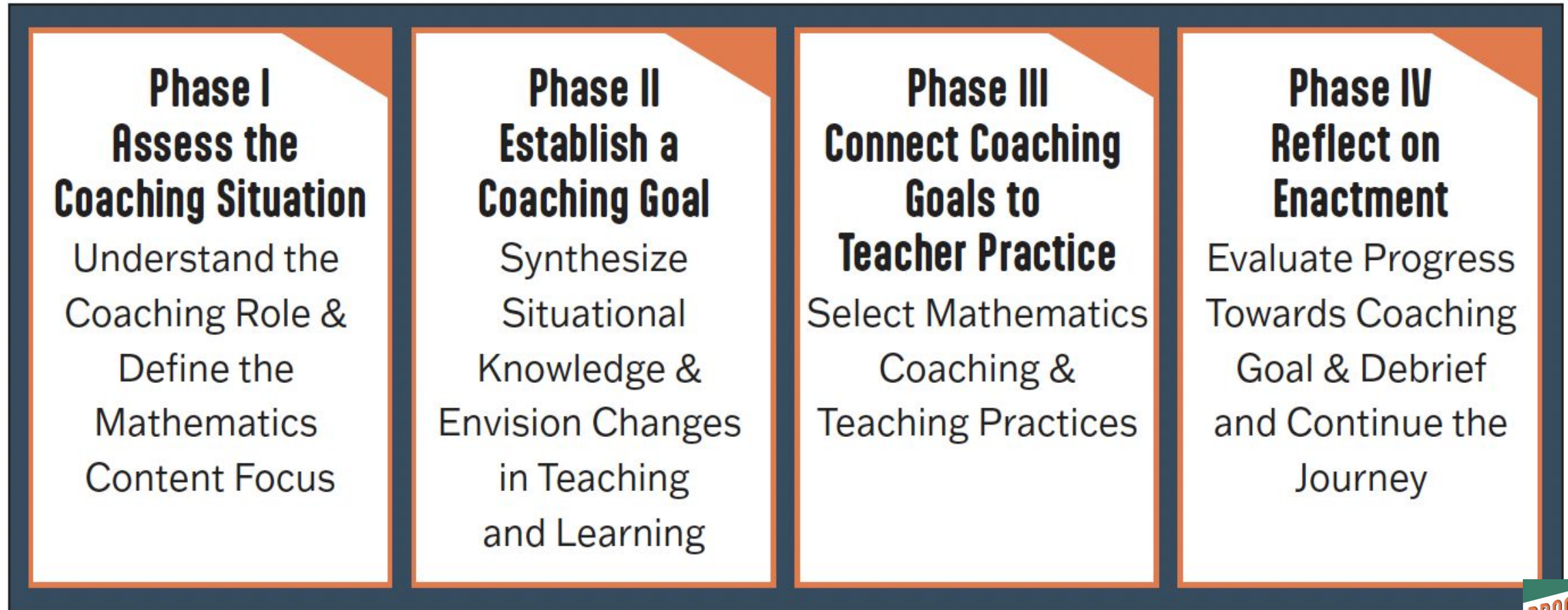
The Proactive Coaching Framework

Intentionally
Balancing Content
and Context to Make
Instructional Shifts



Modeling Instruction As A Coaching Practice

Phases I-IV



Modeling Instruction As A Coaching Practice

Phase II

Phase II
Establish a Coaching Goal
 Synthesize
 Situational
 Knowledge &
 Envision Changes
 in Teaching
 and Learning

Appendix A. Proactive Coaching Framework Guiding Questions

Check Out
 Pages
 195-196

Phase I Assess the Coaching Situation	Context Understand the Coaching Role	<ul style="list-style-type: none"> • What are the needs of your audience? • Are the stakeholders you are supporting individuals, teams or larger communities (e.g., school, district)? • What is the state of your relationship with each stakeholder? • What aspects of the school culture or strategic vision are essential to your thinking? • What programs or initiatives have been implemented or abandoned recently? • What is the level of receptiveness to coaching?
	Content Define the Mathematics Content Focus	<ul style="list-style-type: none"> • What is the mathematics content? • What is your audience's experience with this content? • What is the current state of your audience's confidence? • What is the current state of student thinking? • What instructional approaches have been tried? • What resources will support growth in teaching and learning? • What representations will support the development of conceptual understanding? • What representations will promote procedural fluency?
Phase II Establish A Coaching Goal	Context Synthesize Situational Knowledge	<ul style="list-style-type: none"> • What connections can you make between the needs of your audience, the mathematics content, and the goals for the team/school/district?
	Content Envision Changes in Teaching and Learning	<ul style="list-style-type: none"> • What are reasonable and realistic expectations for your audience? • How will you measure your audience's progress?

(continued)

Long- vs. Short-Term Goals

Why Set Coaching Goals?

- Clearly articulated and explicit goals are the foundation of learning (Hiebert et al., 2007)
- Reasonable and realistic goals can motivate learning (Marzano, 2003; McTighe & Wiggins, 2013)
- Goals guide self-assessment (Clarke et al., 2004; Zimmerman, 2001)



Long- vs. Short-Term Goals

Why Set Coaching Goals?

- Maintain a consistent vision
- Build capacity across stakeholders
- Focus on improvement of research-based instructional practice
- Monitor progress toward overall learning outcomes.
- Identify evidence that highlights the effectiveness and provides insight for possible next steps
-

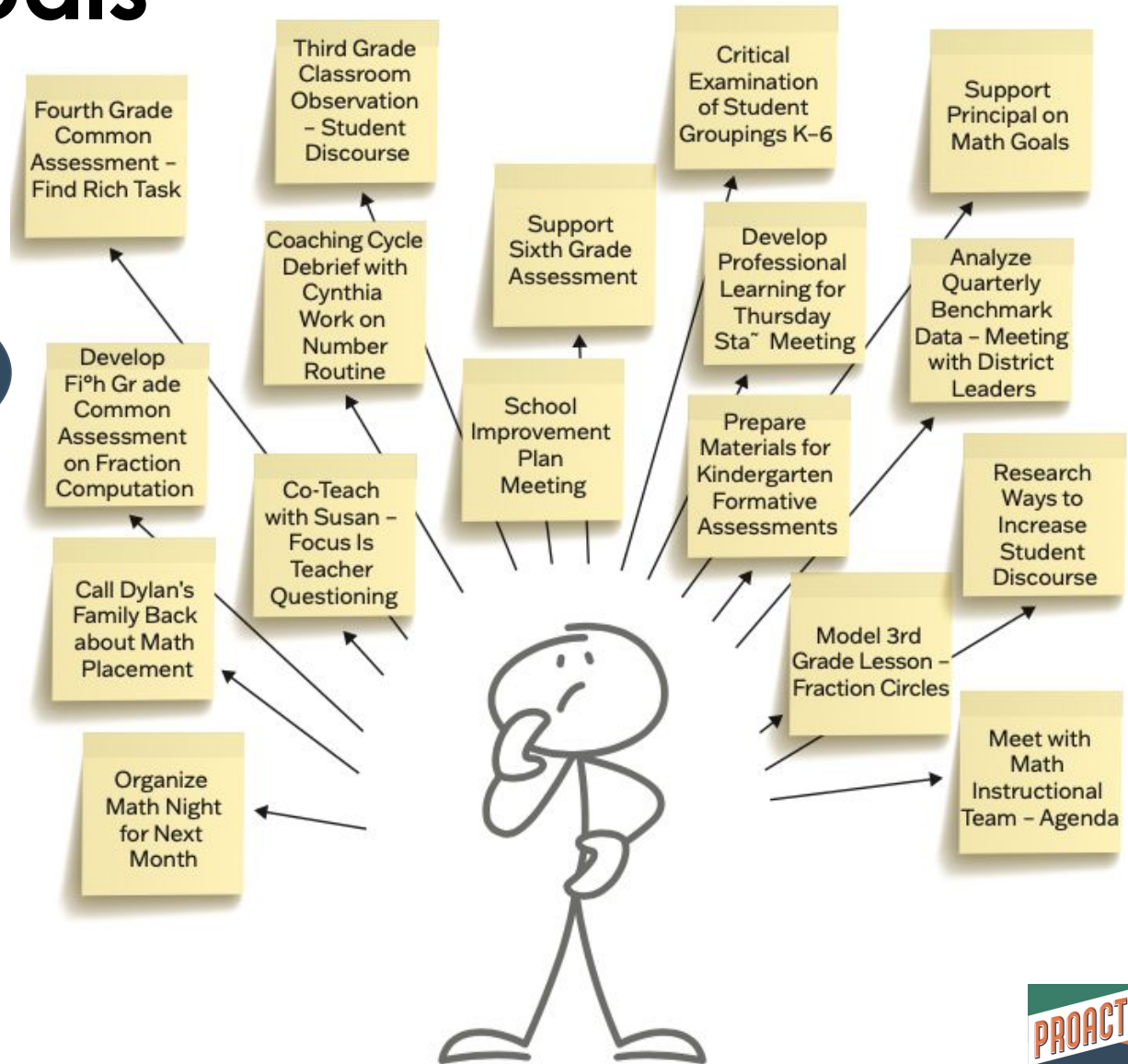


Long- vs. Short-Term Goals

Why Set Coaching Goals?

Check Out
Page 37

Reactive



Long- vs. Short-Term Goals

Why Set Coaching Goals?

Check Out
Page 37

Proactive



Long-Term Goal Example

The Case of Kamala

High School Teacher

Check Out
Chapter 6
(pages 57-74)

Long-Term

Create equal opportunities for students to have access to rigorous mathematics courses.

Short-Term

Provide resources to the mathematics coach that will build an awareness of the harm deficit language has on students and how labeling of students has led to fewer mathematical opportunities for some students.

Modeling Instruction As A Coaching Practice

Proactive Coaching Framework Questions

Check
Out
Chapter 3



Share Your Thinking!

If you were to implement the **Mathematics Coaching Practice modeling**, how would you answer these questions?

Phase II: Context

- What connections can you make between the needs of your audience, the mathematics content, and the goals for the team/school/district?

Modeling Instruction As A Coaching Practice

Proactive Coaching Framework Questions

Check
Out
Chapter 3



Share Your Thinking!

If you were to implement the **Mathematics Coaching Practice modeling**, how would you answer these questions?

Phase II: Content

- What are reasonable and realistic expectations for your audience?
- How will you measure your audience's progress?

Modeling Instruction As A Coaching Practice

Proactive Coaching Framework Questions



Share Your Thinking!

What are you inspired to try out related to the **Mathematics Coaching Practice modeling?**

What is your rough draft thinking about this?

Next Time [10/11]

Examining Student Work--Chapter 7

Check Out
Chapter 7
Pages 75-91

The Case

In this case you will meet Laila, a school-based mathematics coach working to change the prevalent use of computer programs and ensure rich and relevant mathematics for all students.

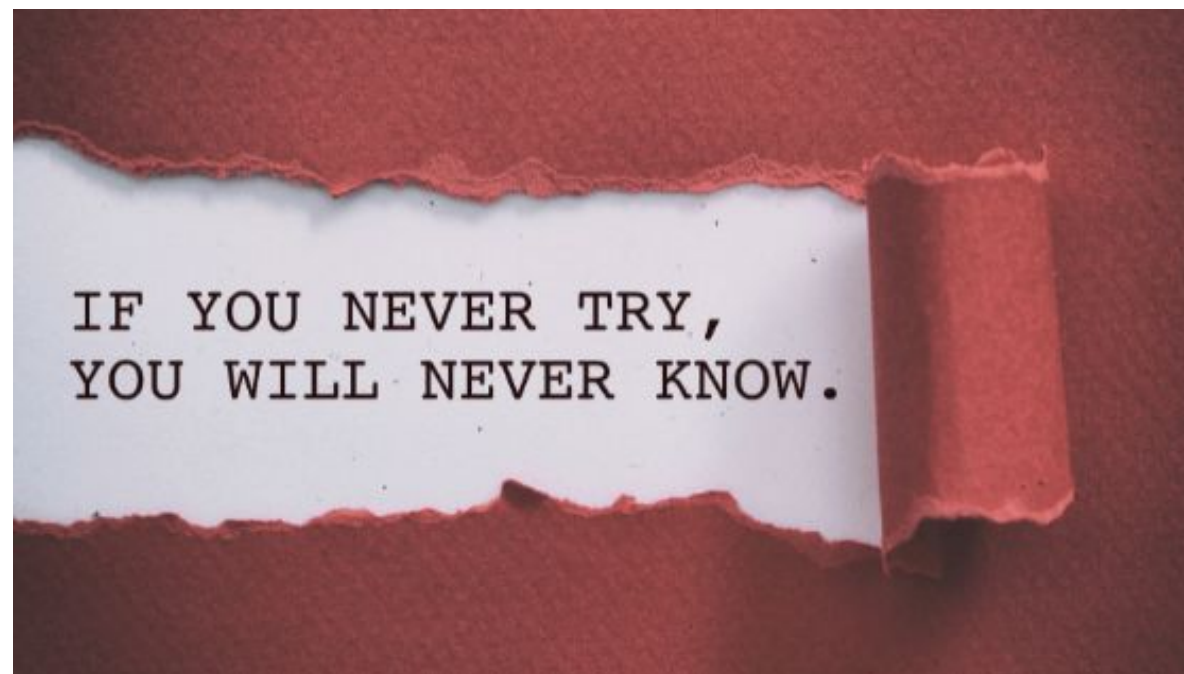
Case Summary			People		Practices		Context In Brief	
Chapter	PCF Phases Emphasized	Big Idea	Mathematics Leader and Role	Involved School Stakeholders	Mathematics Coaching Practice	Mathematics Teaching Practice	Grade-Level and Grade Band	Content Topic
5	Phase II Phase III	Balancing two roles while implementing a modified coaching cycle	<i>Michelle</i> Part-time Grade 8 classroom teacher; part-time school-based mathematics coach	<i>Mrs. Lee</i> Grade 8 teacher	Coteaching	Facilitate meaningful mathematical discourse	Middle school (Grade 8)	Counting cubes task; linear growth model
6	Phase I Phase II Phase III	A high school teacher working to reframe definitions for students	<i>Kamala</i> High school teacher	<i>Mr. Singh</i> School-based coach	Modeling instruction	Support productive struggle in mathematics	High school (Grades 9-12)	A mathematics task to promote productive struggle and reach the school year
7	Phase I Phase II Phase III Phase IV	Creating opportunities for partnering with administrators to dismantle ability grouping	<i>Laila</i> School-based mathematics coach	<i>Ms. Martin</i> School principal	Examining student work	Implement tasks that promote reasoning and problem-solving	Elementary (Grades K-6)	K-6 fraction concepts and computation

Next Time

Consider Implementing the PCF

What might you try?

- 1-2 questions?
- A specific phase?
- The entire PCF?



There will be space next session to share!



2023
**ANNUAL MEETING
& EXPOSITION**
Oct. 25-28, Washington, DC



*Creating Spaces
For Change
Through Community:
It Starts With You*

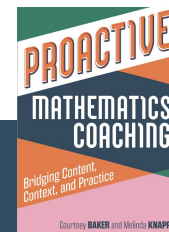
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mathematics education event of the year

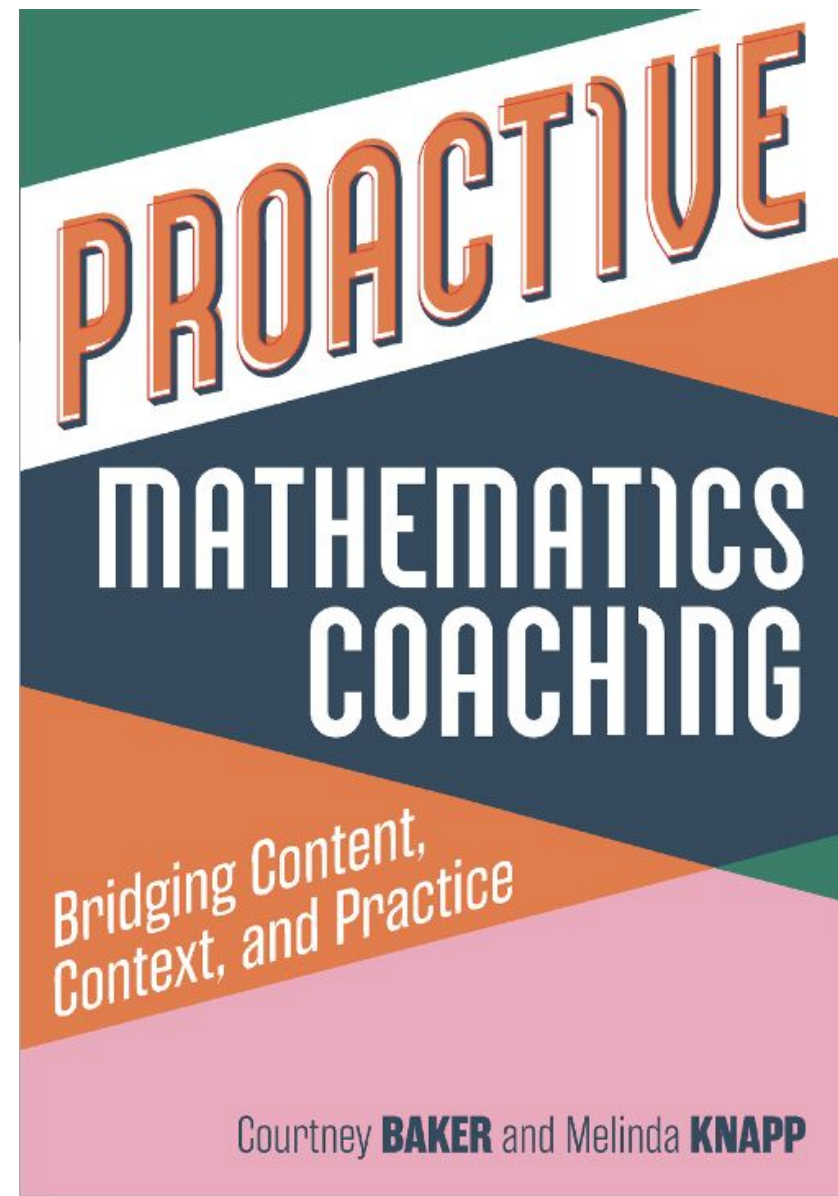
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NCTM Book Study: Proactive Mathematics Coaching

Courtney Baker & Melinda Knapp





October 11