

# Listening as a Fundamental Practice of Mathematics Teaching for Equity

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Universidad Arturo Prat  
27 October 2022

# Acknowledging the land I am on



# Understanding the power of the work of teaching and its role in equity

What is it to do the “work of teaching”?

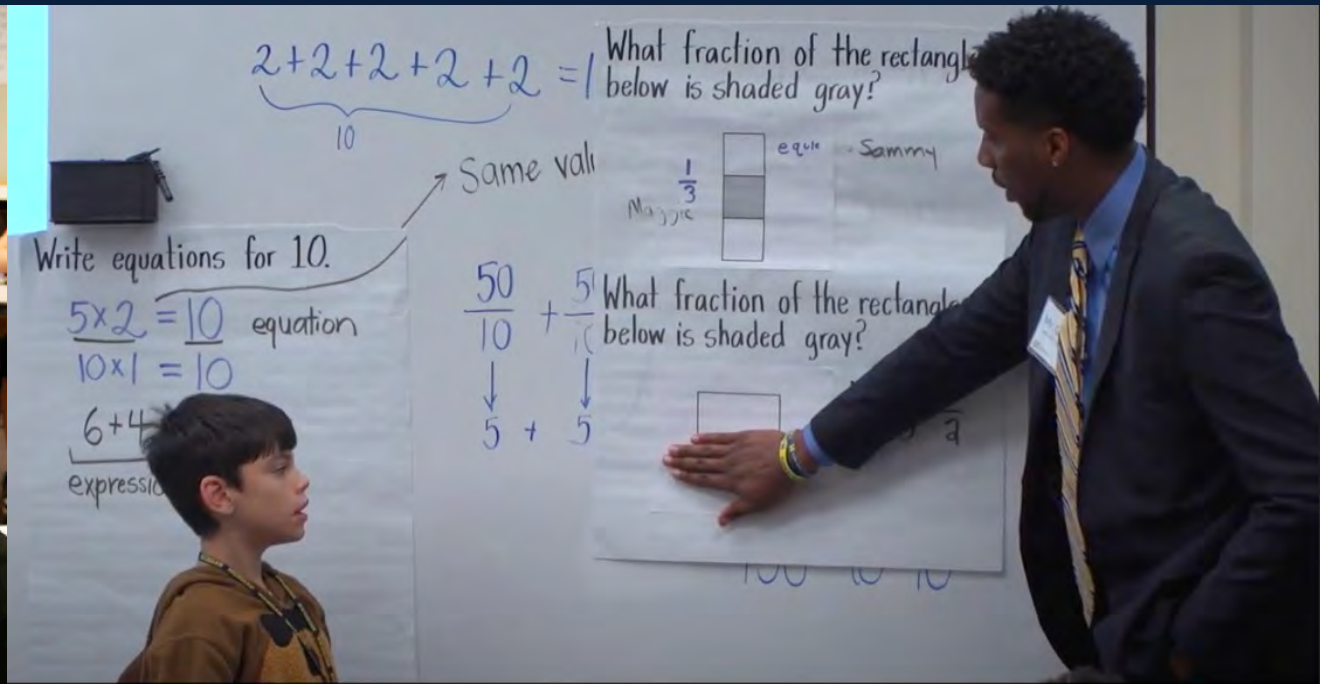
What does it mean to foreground the “power” of that work and why does it matter?

What are continuing challenges in trying to understand that work, and why should we care?

# What is it to do the “work of teaching”?



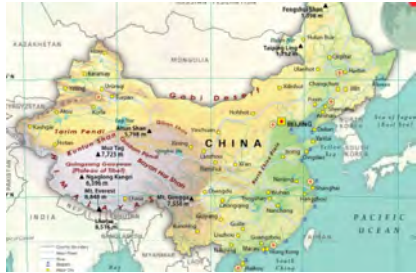
# Teaching: So common, and yet so complex



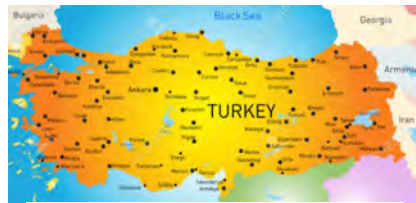


It's common

72.5 million teachers worldwide



15 million teachers



1 million teachers



756,900 teachers



179,000 teachers



410,000 teachers



8.7 million teachers



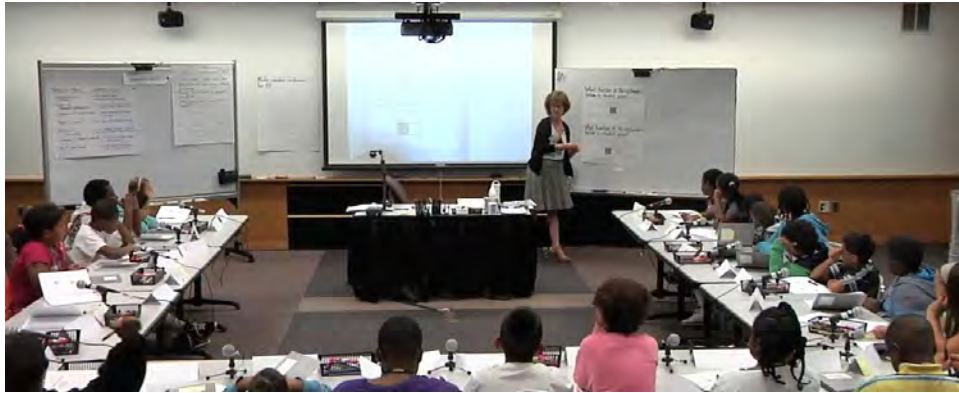
866,600 teachers



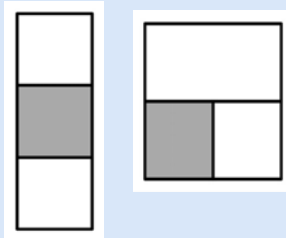
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# It's "complex"

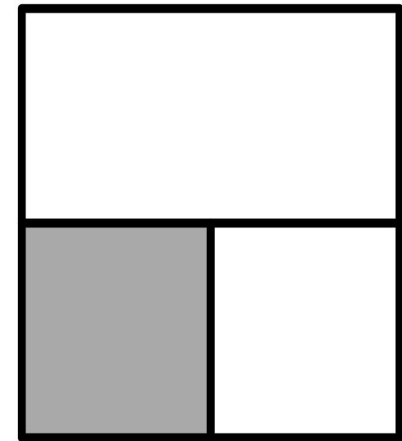


What fraction of each rectangle below is shaded gray?



What do you pay attention to?  
What is "complex" here?

# Video: Antar and Gabi





# What is meant by “complex”?



How is Antar being positioned?

What is the mathematical point of this?

What does Antar mean by "it's not a fraction"?

Should I put another example up or keep working on this figure?

Should Antar stay at the board while Gabi presents?

Shall we stay in whole group or turn and talk in smaller groups?

How shall I try to position Antar and Gabi?

What shall I say or ask next?

Should I explain or keep the children talking together?

Whom shall I call on?

Are those two students over on the side following this discussion?

Where shall I stand?

How can I get other students to build on what Antar and Gabi have said?

Is this a good moment to give Gabi the "sticky" line?

How is Antar feeling about his contribution?

# What do I mean by the “work of teaching”?



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- In part, this is the ongoing inquiry.
- It rests on trying to understand what is involved for teachers in their interactions with learners in contexts, in broad sociopolitical environments.
- It is fundamentally both a theoretical and practical question.





# What do I mean by the “work of teaching”?

- In part, this is the ongoing inquiry.
- It rests on trying to understand what is involved for teachers in their interactions with learners in contexts, in broad sociopolitical environments.
- It is fundamentally both a theoretical and practical question.

1. How to understand the power of teaching to perpetuate or to disrupt injustice, racism, oppression.
2. How to leverage its possibilities for a different world.

What does it mean to foreground the “power” of the work of teaching and why does this matter?

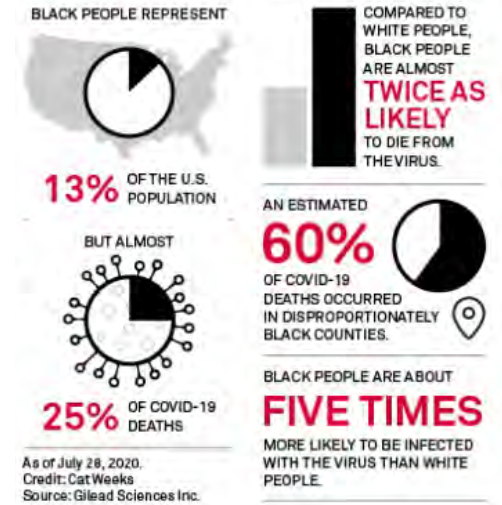


The commonness and complexity  
of teaching have powerful  
consequences for patterns of  
racism and oppression in society.





**COVID-19 inequity in the US, by the numbers**



# ECONOMIC INEQUALITY













1. **Teaching is powerful.** When it is done with care and judgment, students can thrive—learn mathematics, develop positive identities, learn to value others and work collectively.
2. Teaching also involves **enormous discretion.**
3. How that discretion is exercised can either reinforce racialized and oppressive patterns of social, personal, and epistemic injustice and harm, or it can **disrupt these patterns.**



This is the work of teaching.  
Studying its broad and powerful  
role in equity is necessary.  
But such research is challenging.

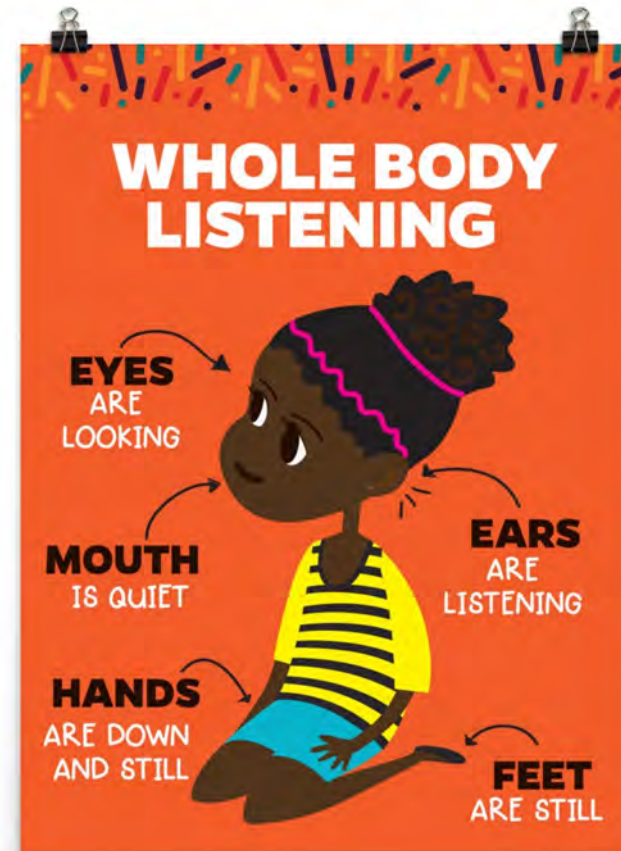


Attuned listening is a key part  
of the work of teaching.



## Why focus on listening?

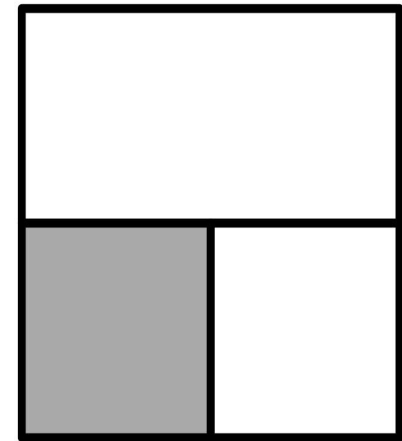
- Listening is central to teaching.
- But the why, the what, and the how of listening are left inexplicit.
- The common tendency is to focus on how to get students to listen to the teacher.
- Focused on students' compliance, such attention to listening in classrooms centers the teacher as the source of knowledge, not students.



Let's return to the classroom.



# Video: Antar and Gabi



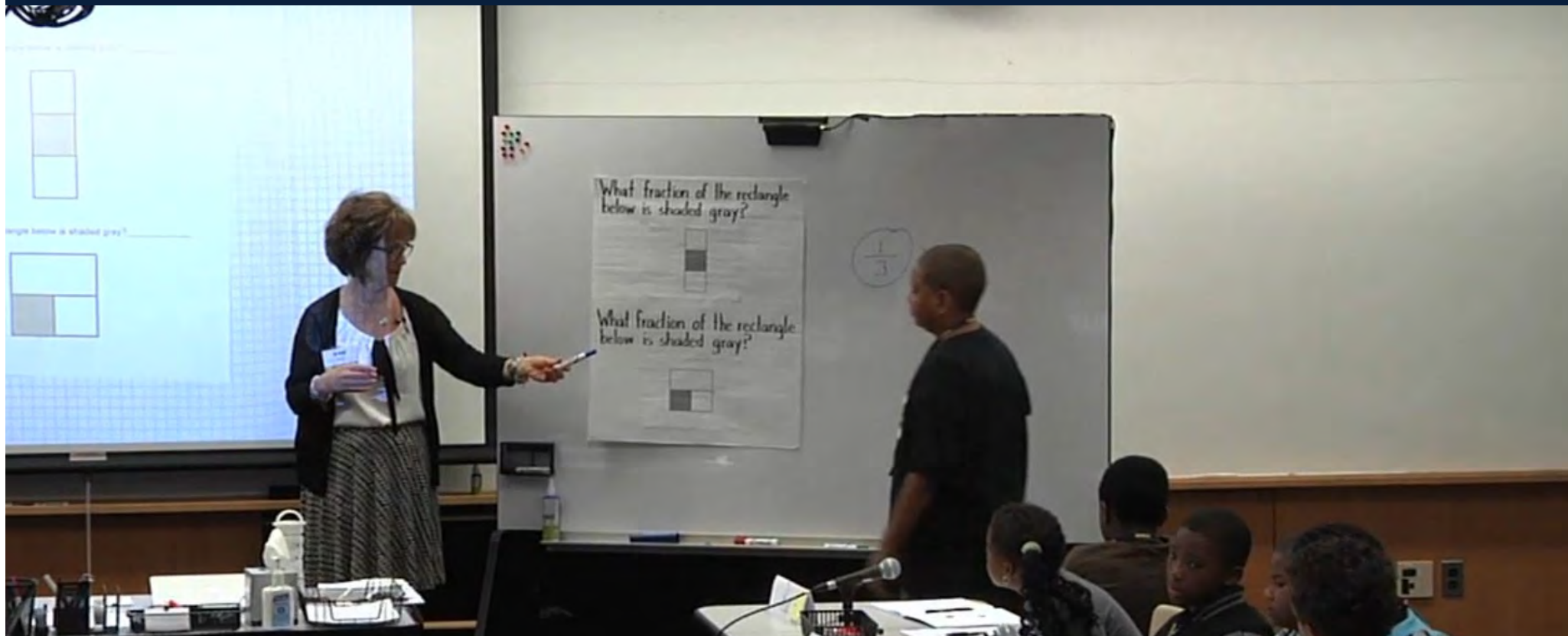


I think it's not a fraction because all of the parts are not equally the same.

What fraction of the rectangle below is shaded gray?

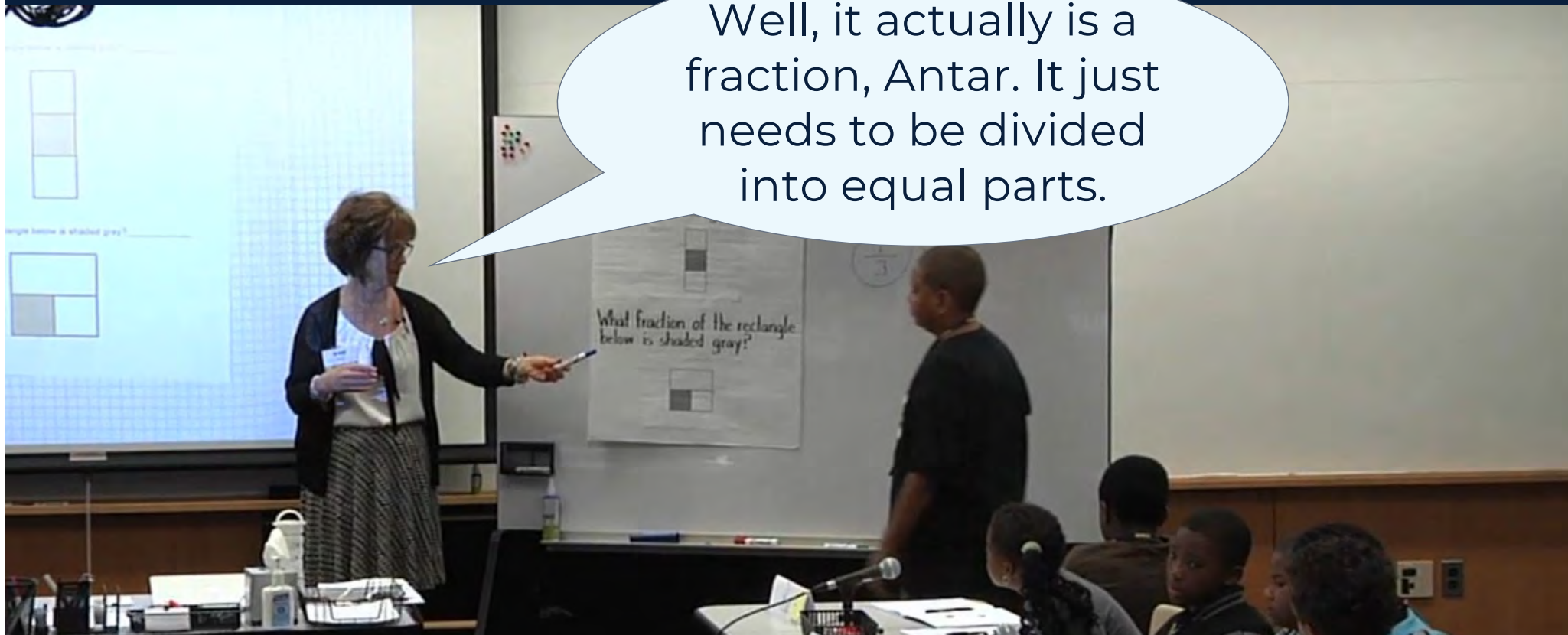


# What might be a common response?



# What might be a common response?

Well, it actually is a fraction, Antar. It just needs to be divided into equal parts.



# What does Antar's statement tell us?

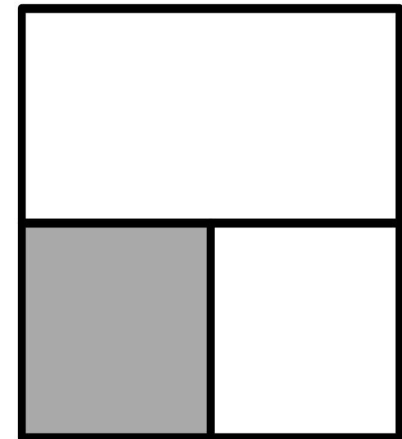
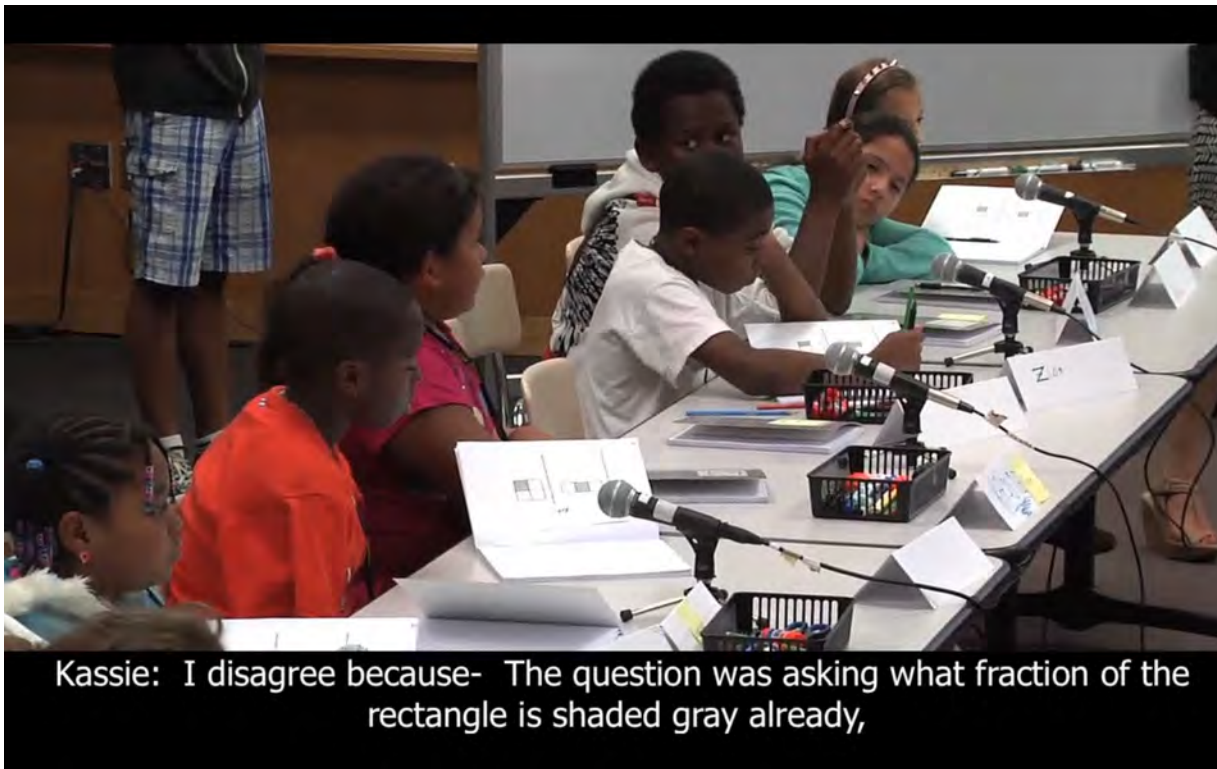
- Antar might lack an understanding of area models.
- His observation about the parts not being equal shows his attention to the key understanding of how fractional parts are named.
- He is “making sense”—appropriating and using language to describe his ideas and to participate in collective construction of shared mathematical understanding.



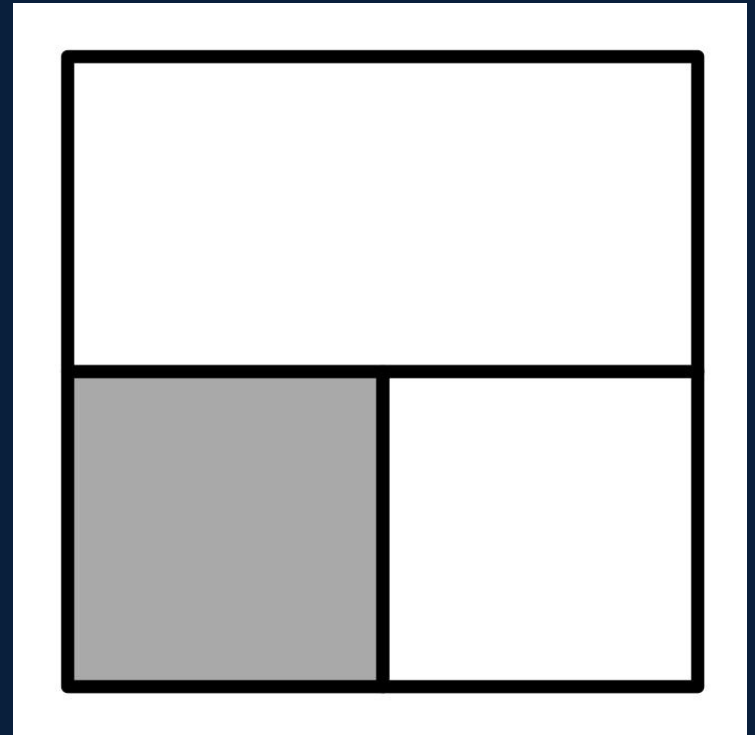
# And as the lesson is ending...



# Video: Kassie



# What is Kassie saying?



# What does all of this mean for the practice of teaching?



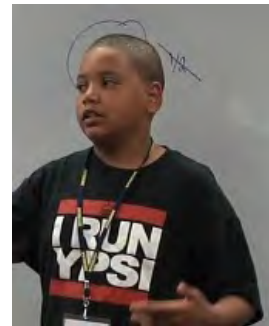


These moments: Filled with  
discretionary spaces related to  
reinforcing or disrupting  
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These moments: Filled with discretionary spaces related to reinforcing or disrupting patterns of racism and harm

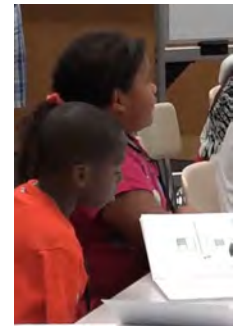
What are some of the discretionary spaces and risks?



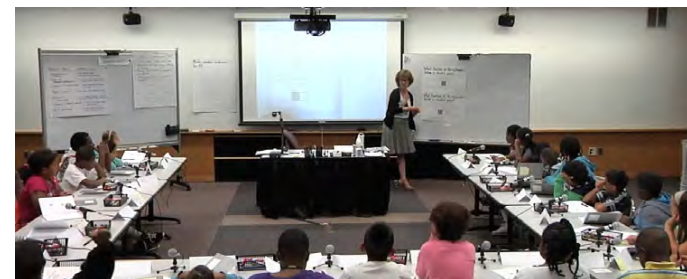
**Antar**



**Gabi**



**Kassie**

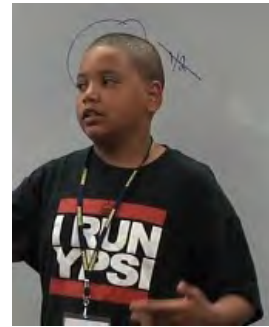
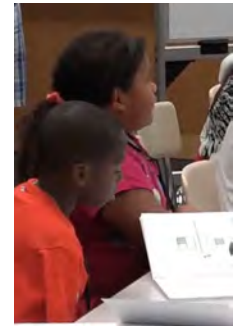
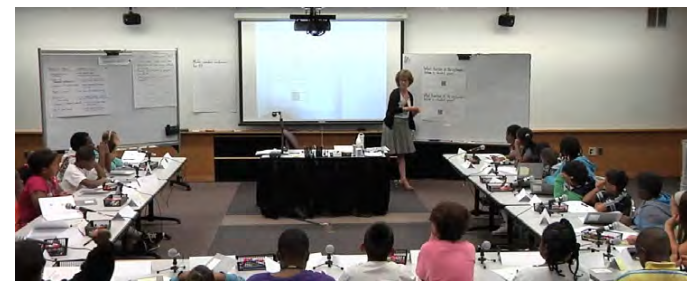


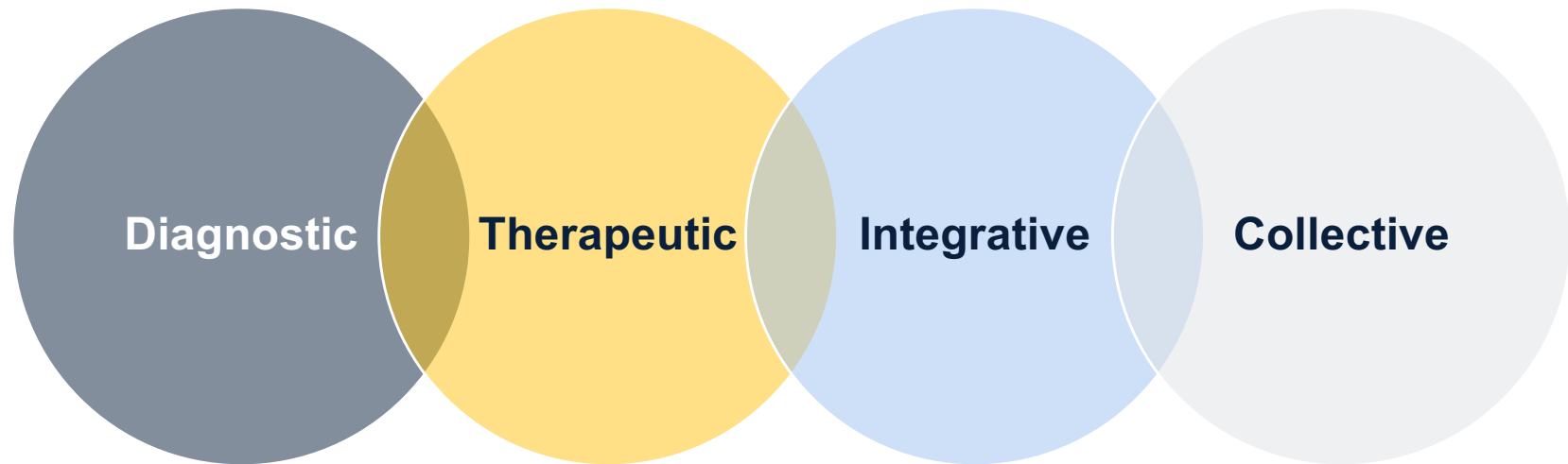
## These moments: Filled with discretionary spaces related to reinforcing or disrupting patterns of racism and harm

- How are these three different Black children—Antar, Gabi, and Kassie—positioned in front of their classmates—as contributing to the mathematics, as lacking understanding? Are their brilliance and humanity seen?
- What is signaled about being a “doer of mathematics”—both what and who?
- What mathematical understanding is developing in the class?
- How are Antar, Gabi, and Kassie experiencing their teacher, their peers, this lesson?
- What are the other children in the class learning about Black children, about who and what it means to be “smart”?

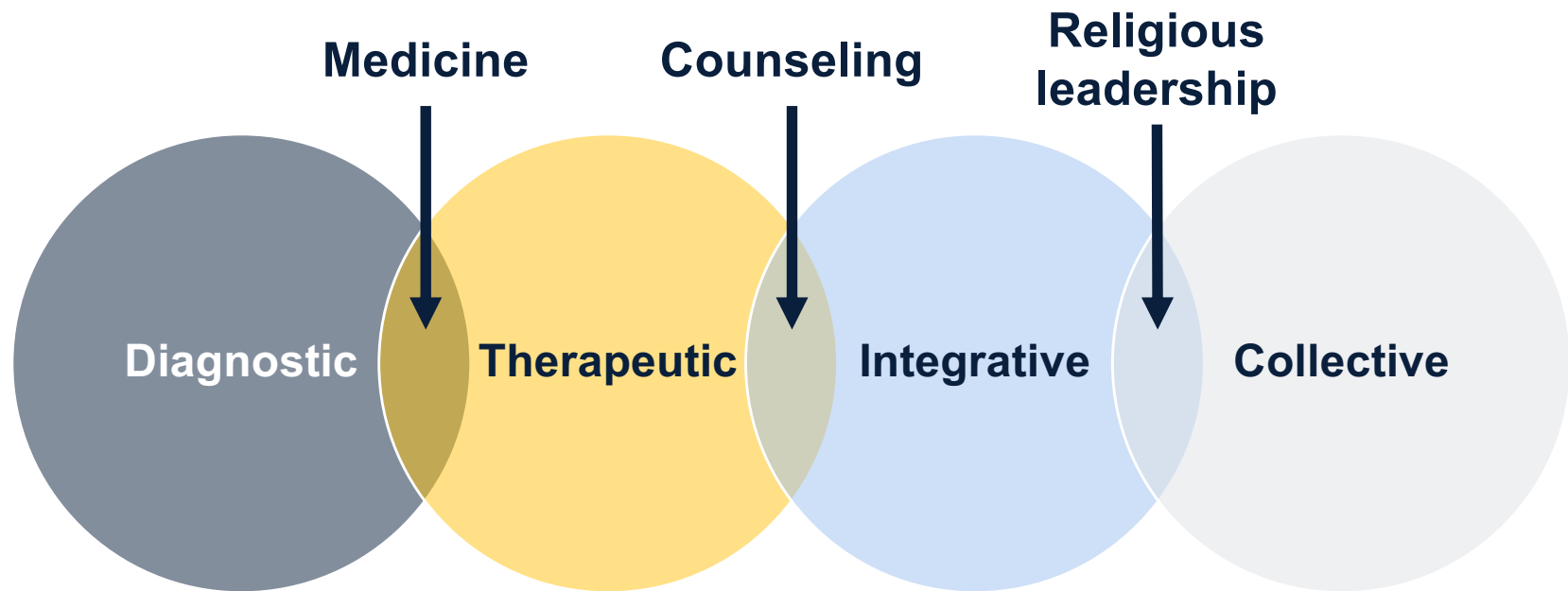
(Gholson, 2021; Wilkes, 2021; Gholson & Martin, 2014; Langer-Osuna, 2015, 2017; Leonard & Martin, 2013; Martin, 2012, 2015)

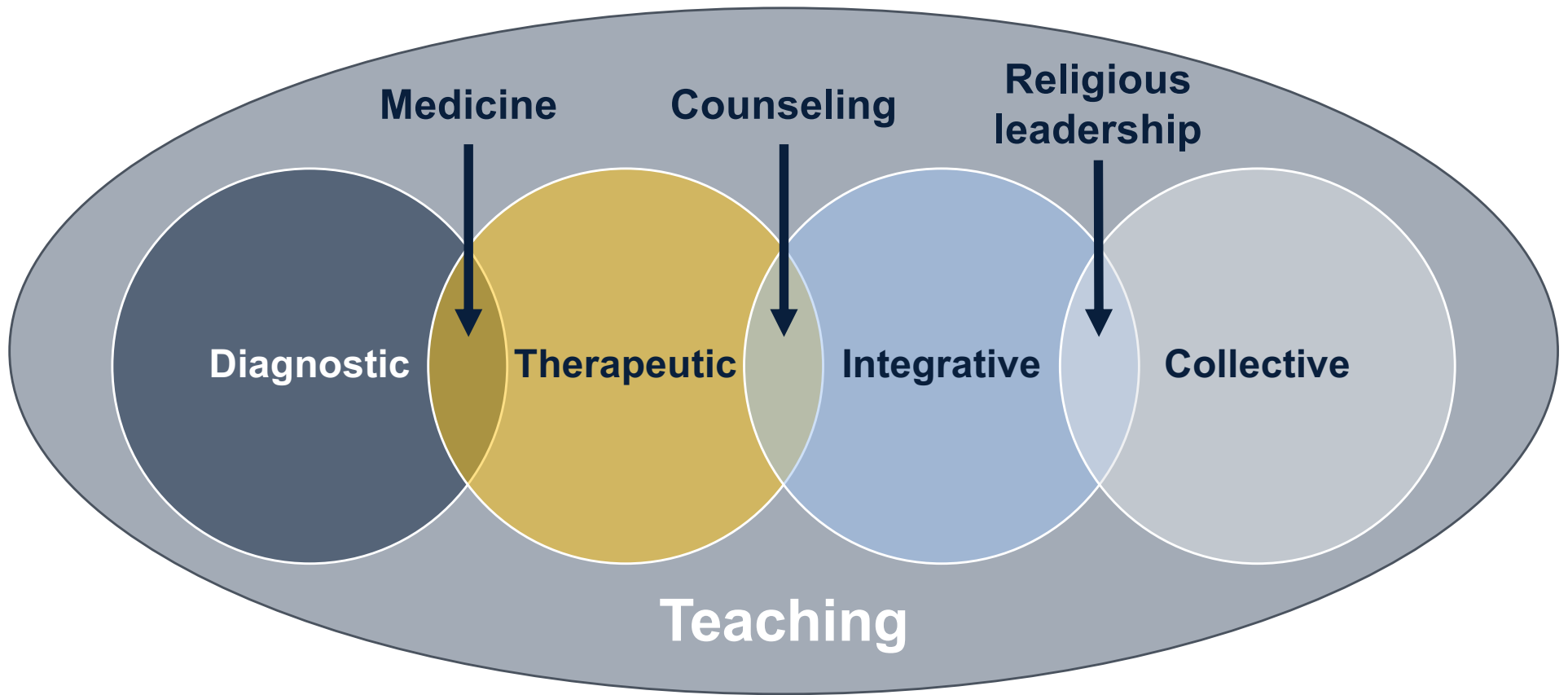
What are some of the discretionary spaces and risks?

**Antar****Gabi****Kassie**

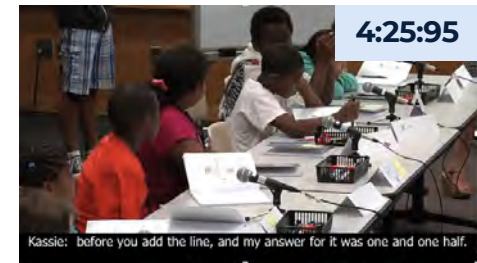
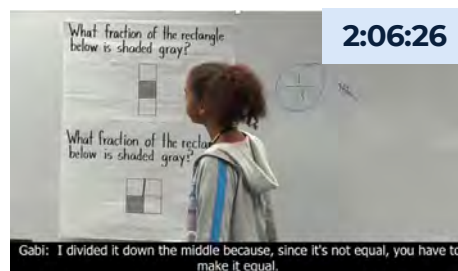
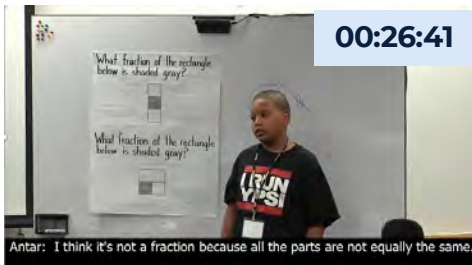




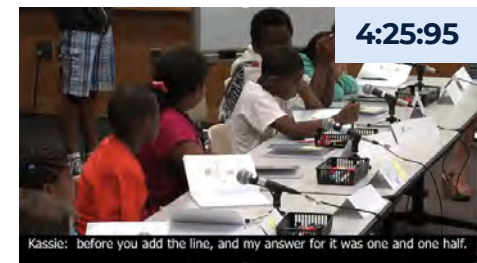
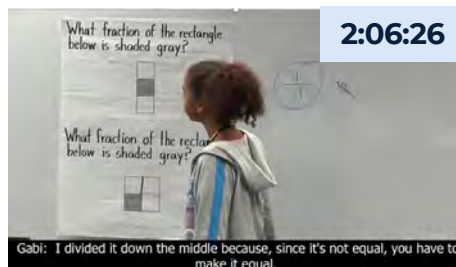
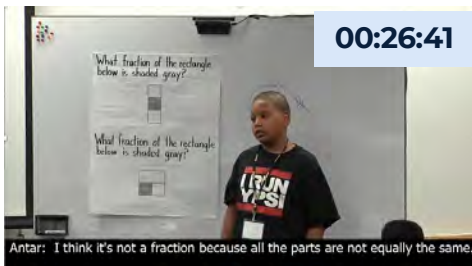




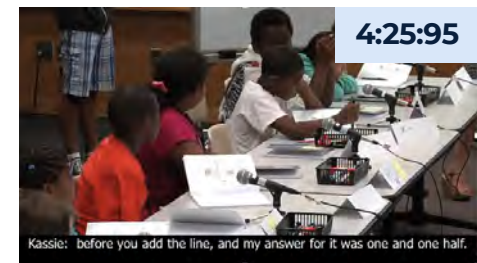
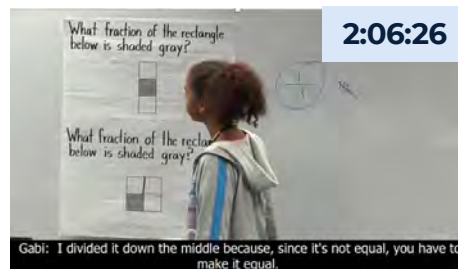
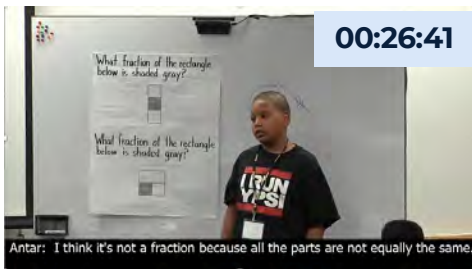
# Understanding the work of teaching and equity



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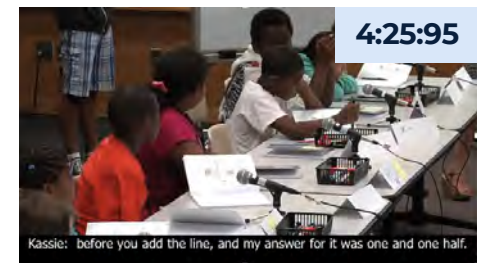
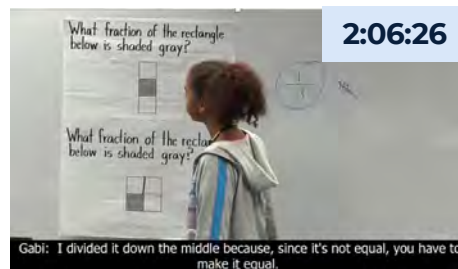
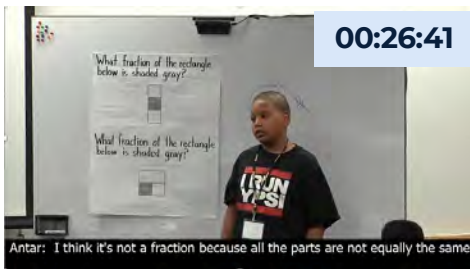


- Racial narratives about “ability” and struggling learners (Nasir & Shah, 2011; Shah, 2017)
- Patterns related to Black girls (Gholson, 2016, 2021; Joseph, 2017; Sengupta-Irving, 2020; Sengupta-Irving & Vossoughi, 2019)
- Area models with fractions
- Patterns related to being a “doer of mathematics” “while Black” (Martin)
- Views of mathematics as centered on narrow ideas about “correctness” and “errors”





# Understanding the work of teaching and equity



- Racial narratives about “ability” and struggling learners (Nasir & Shah, 2011; Shah, 2017)
- Patterns related to Black girls (Gholson, 2016, 2021; Joseph, 2017; Sengupta-Irving, 2020; Sengupta-Irving & Vossoughi, 2019)
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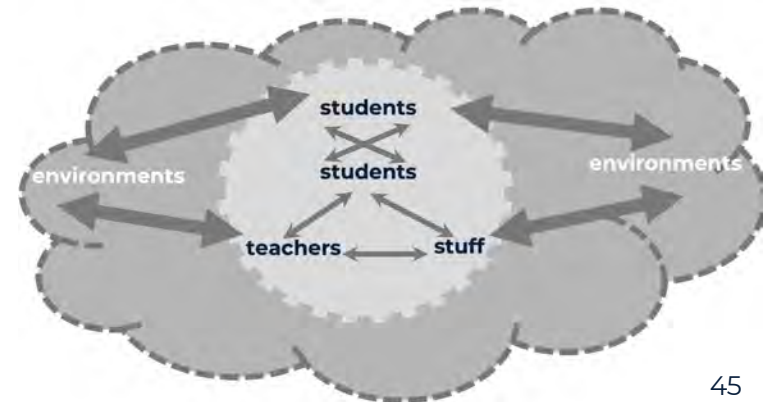
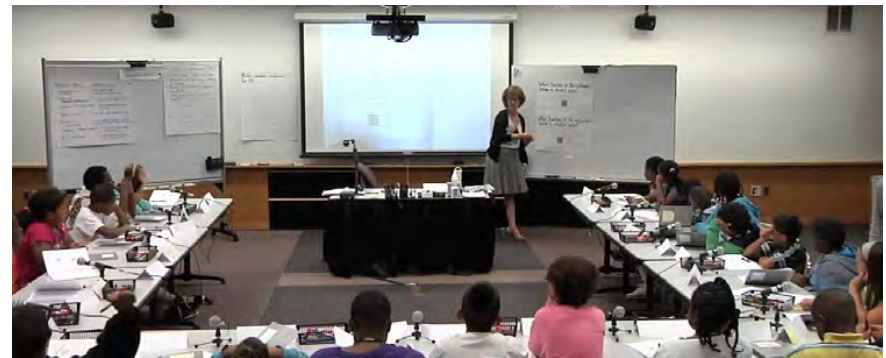


# What does all of this mean for the study of teaching?



# Challenges in studying the work of teaching for equity

- Combining the embodied and relational dimensions with the cognitive and knowledge entailments.
- Building theory and insight while contextualizing the work and centering identities.
- Connecting the dots between macro-structures and micro-interactions.
- Using care to distinguish prescription from detail.
- Representing the work in a usable discourse of practice.



# And also . . .



# 10 key asks

## Of society

1. See and value the power of teaching.
2. Stop taking skillful disruptive equitable teaching for granted.
3. Stop reinforcing conceptions of teachers as individual heroic people who figure this out on their own.





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## Of policymakers

4. Require people to demonstrate that they have entry-level capability before they teach children.
5. Support teachers to develop and improve their practice over time.
6. Change the economic model for paying for public education, especially for teaching.



# 10 key asks

## Of society

1. See and value the power of teaching.
2. Stop taking skillful disruptive equitable teaching for granted.
3. Stop reinforcing conceptions of teachers as individual heroic people who figure this out on their own.

## Of ourselves as educators

7. Unpack what this sort of teaching entails and have the professional wisdom and agency to stand up for the complexity and learnability of this practice.
8. Radically change how we compose the teaching force to create a diverse resourceful profession.
9. Identify the resources, experiences, and commitments needed to be a successful learner of this complex work.
10. Take responsibility for teaching this complex practice to people who bring the resources to learn to do it.

## Of policymakers

4. Require people to demonstrate that they have entry-level capability before they teach children.
5. Support teachers to develop and improve their practice over time.
6. Change the economic model for paying for public education, especially for teaching.



- Developing our approaches to understanding the work of teaching for equity is collective work.
- It demands diversity in who “we” are as scholars and as an educational community.
- This will broaden what we consider evidence, what we think the objects of study are, and what we value: epistemology, ontology, axiology.



# THANK YOU!

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Location map of the State of Michigan in the United States.  
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Map of treaty lands in what is today called Michigan.  
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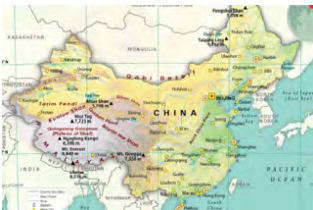


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Retrieved from <https://www.nydailynews.com/opinion/ny-oped-housing-cuts-would-exacerbate-inequality-20200623-k2gxn6btrvh6bos6sgwlijokby-story.html>

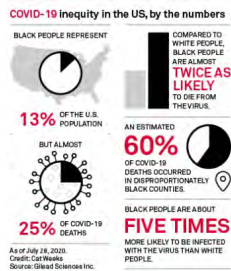


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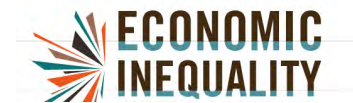


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Photo from “20 Classroom Interventions for Children with Anxiety Disorders” by Jerry Kennard, Ph.D., HealthCentral. Retrieved from <https://www.healthcentral.com/article/20-classroom-interventions-for-children-with-anxiety-disorders>



Image on slide 19:

Photo from “10 Ways Well-Meaning White Teachers Bring Racism Into Our Schools” by Jamie Utt, everyday feminism. Retrieved from <https://everydayfeminism.com/2015/08/10-ways-well-meaning-white-teachers-bring-racism-into-our-schools/>

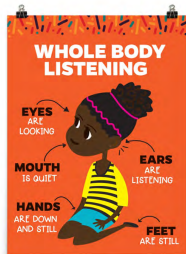


Image on slide 23:

Whole Body Listening PRINTED Reading Classroom Poster.

Retrieved from <https://www.etsy.com/listing/643462123/whole-body-listening-printed-reading>



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# Credits



Image on slide 48:

Map of the World.

Retrieved from <https://geology.com/world/world-map.shtml>



Image on slide 48:

“A Large Group Of Diverse People Standing Together.”

Retrieved from [https://www.vhv.rs/viewpic/hTmTiix\\_a-large-group-of-diverse-people-standing-together/](https://www.vhv.rs/viewpic/hTmTiix_a-large-group-of-diverse-people-standing-together/)