

The Work of Teaching and the Challenge of **Teacher Education**

Deborah Loewenberg Ball @deborah_ball

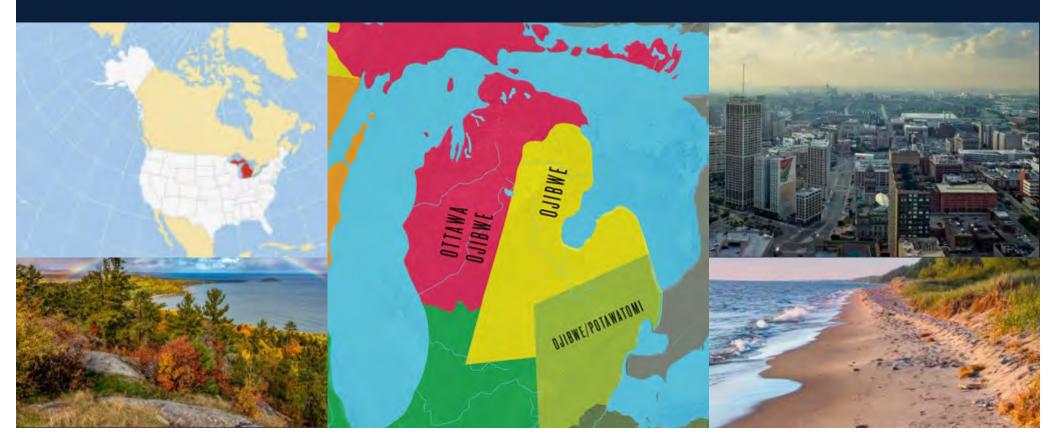
Mathematics Teachers' Association (India) 4th Annual (Online) Conference 9 September 2022

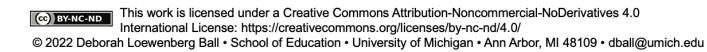
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Acknowledging the land I am on







Understanding the power of the work of teaching and its role (in)justice

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?

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What is it to do the 'work of teaching'?

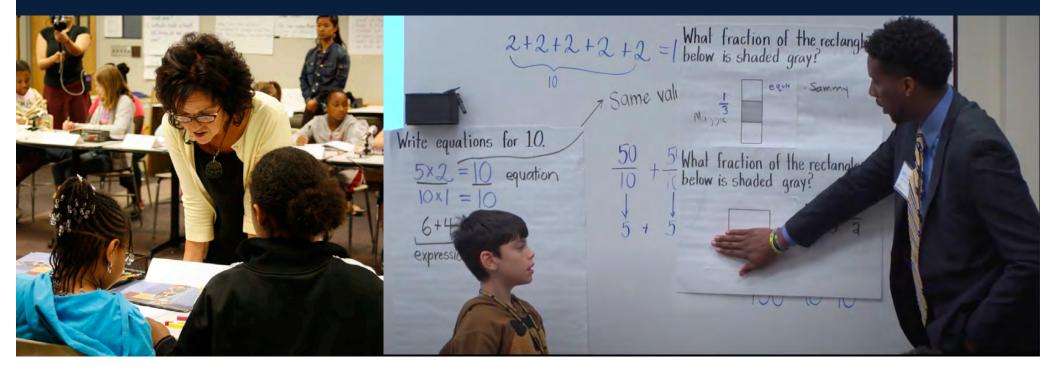
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Teaching: So common, and yet so complex



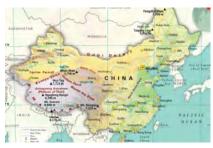
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It's common

72.5 million teachers worldwide



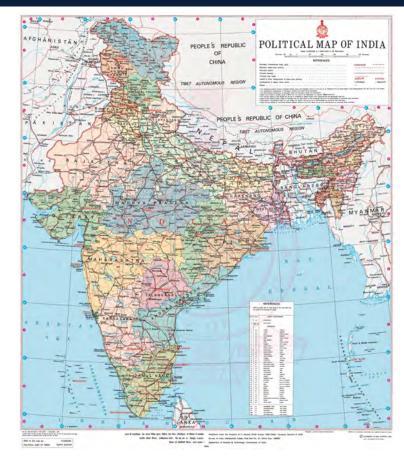
15 million teachers



1 million teachers



756,900 teachers





410,000 teachers



1.4 million teachers



8.7 million teachers

866,600 teachers



It's 'complex'



What fraction of each rectangle below is shaded gray?

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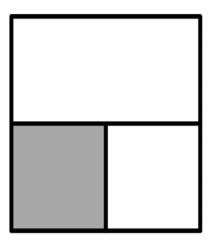
What do you pay attention to? What is 'complex' here?





Video: Antar and Gabi





Gabriella: Oh. He said that he doesn't think it's a fraction because not all the parts are equal.

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What is meant by 'complex'?

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'Using myself as the object and tool of my inquiry, I teach mathematics daily to a heterogeneous class of third graders at a local public elementary school.... I am increasingly aware that there are many resources beyond knowledge that contribute to wise practice: patience, respect, flexibility, humor, imagination, and courage, for instance.' (Ball, 1993)

The perspective that we adopt here is that curriculum materials could contribute to professional practice if they were created with closer attention to processes of curriculum enactment. Our perspective is premised on an understanding of the nature of teaching itself. While "curriculum" is often taken to refer strictly to the textbook or curriculum materials, the enacted curriculum is actually jointly constructed by teachers, students, and materials in particular contexts. Even close use of materials is a con-



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'What do teachers need to do in teaching mathematics-by virtue of being responsible for the teaching and learning of content—and how does this work demand mathematical reasoning, insight, understanding, and skill?' (Ball, Thames, & Phelps, 2008)

... the core tasks that teachers must execute to help pupils learn.... leading a discussion of solutions to a mathematics problem, probing students' answers, ... [as well as] planning for instruction, meeting with parents...' (Ball & Forzani, 2009)



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WHY "WORK" OF TEACHING"?

- To focus our attention on what teachers DO and to distinguish this from other features of classrooms, such as instructional formats, classroom culture and norms, what students are doing, how the curriculum is designed
- To honor the effortful and deliberate nature of teaching and not to leave it invisible, implicit, and taken for granted

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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.

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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.

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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.



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

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

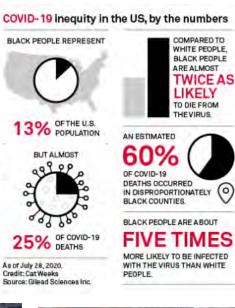
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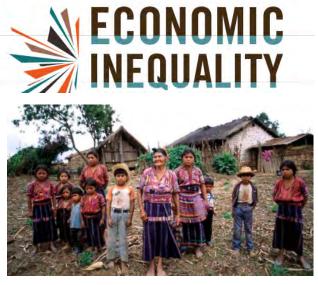


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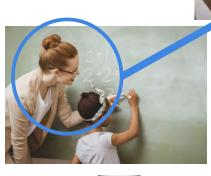




















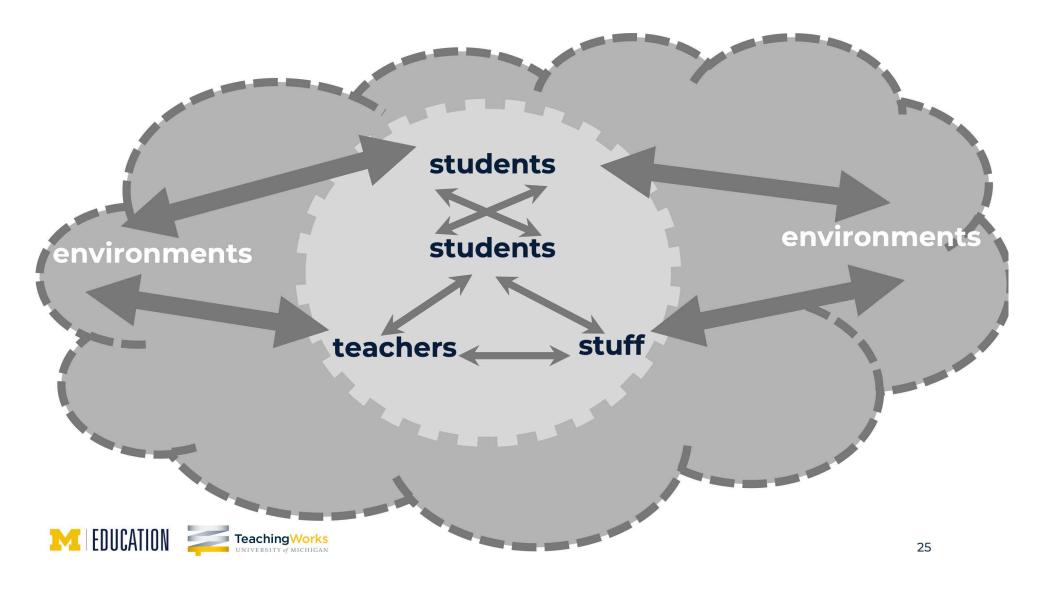
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- 1. **Teaching is powerful**. When it is done with care and judgment, students can thrive — learn mathematics, develop positive identities, learn to value others and work collectively.
- Teaching also involves enormous discretion. 2.
- How that discretion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



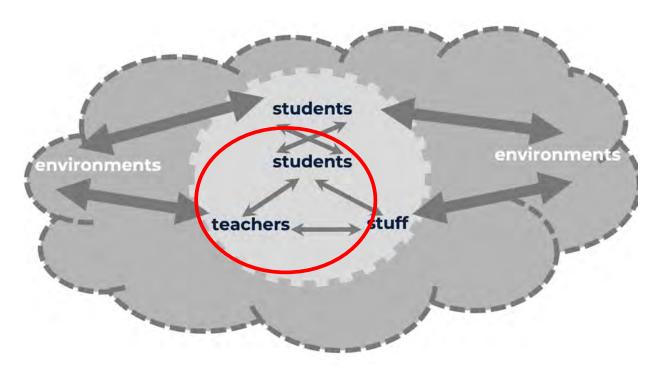




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Teacher	Who'd like to answer what you think about the second rectangle? We're only going to be able to	Launch discussion		
Teacher	talk about this briefly. We probably won't finish it. Who'd like to explain what you think? Antar, what	Choose student to call		
Teacher	do you think? Could you come up to the board and explain?	on Frame task for student		
Teacher	Thank you. I really like the way that people who are coming to the board are doing today. You are explaining really well.	who is presenting Acknowledge competence		
Teacher	Here's a marker. Can you explain your thinking?	Provide material suppor		
Antar	I think it's not a fraction because all of the parts are not equally the same shape.	Listen		
Teacher	Can you say that one more time to the class?	Support presenter		
Antar	I think it's not a fraction because all the parts are not equally the same.	Listen		
Teacher	Can someone repeat what Antar said? Very nice, Antar.	Orient students to presenter		
	Many students have their hands up			
Teacher	What did he say? Gabriella?	Choose student to call on		
Gabriella	Oh. He said that he doesn't think it's a fraction because not all the parts are equal.	Listen		
Teacher	Is that what you said?	Position first student as authority		
Teacher	Okay, would someone like to comment on that? Agree or disagree with him?	Orient students to one another		
Teacher	Okay, let's see, how about Gabi.	Choose student to call on		
Gabi	I disagree.	Listen		
Teacher	What do you think?	Pose question		
Gabi	I think the fraction is one-fourth.	Listen		
Teacher	One-fourth? Do you want to come up and say why you think it's one fourth?	Frame next step, support next presenter		
Teacher	Antar, do you want to stay there or do you want to sit down? Okay. Thank you very much. You did a good job of explaining your thinking.	Position student with agency, acknowledge competence		
Teacher	So, let's hear what Gabi's thinking.	Orient students to one another		
Gabi	I think it's one-fourth because, like he said, all the fractions aren't the same, but you can make them the same by dividing a line down the middle.	Listen		
Teacher	Here's something you can use so if someone wants to take it off again, they can. Okay, so now explain what you've done. Talk to the class. okay?	Provide material suppor		
Gabi	I divided it down the middle because, since it's not equal, you have to make it equal.	Listen		
Teacher	And so then you decided?	Probe		
Teacher Gabi		Probe Listen		





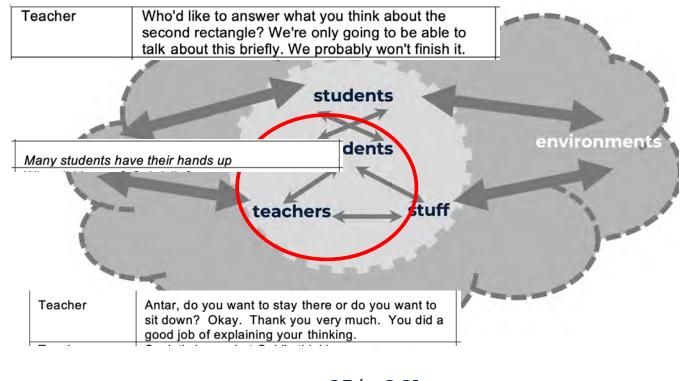
25 in 2:21

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Gabi	It's one-fourth.	Listen		





25 in 2:21

27



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acher	Okay, would someone like to comment on that? Agree or disagree with him?	Orient students to one another			eachers			1
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	Thank you.	who is presenting			1			
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Teaching is dense with 'discretionary spaces'

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Teacher	And so then you decided?	Probe					



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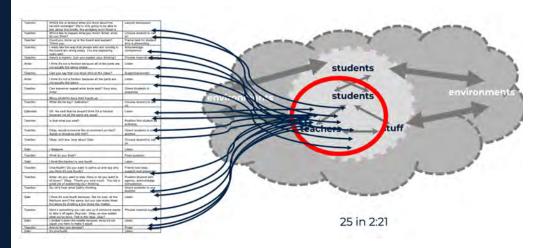
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Discretionary spaces and the power of teaching

- A discretionary space is where interpretations, next moves, comments, or questions are necessarily determined by the teacher—and not by a policy or curriculum.
- These interpretations and actions are learned through firsthand experience in society and in school.
- These interpretations and actions are also habituated. (Ngo, 2017, Noel, 2018, Sfard)

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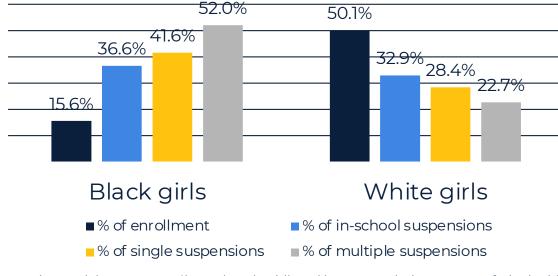




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Harnessing the power of discretion

Teacher education could work to disrupt habits that are embedded in normalized and oppressive patterns of practice.



Epstein, R., Blake, J., & González, T. (2017). Girlhood interrupted: The erasure of Black girls' childhood. Washington, DC: Georgetown Law Center on Poverty and Inequality.

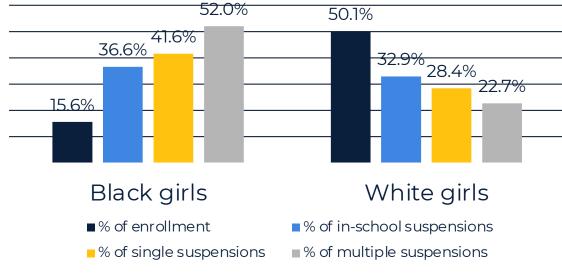




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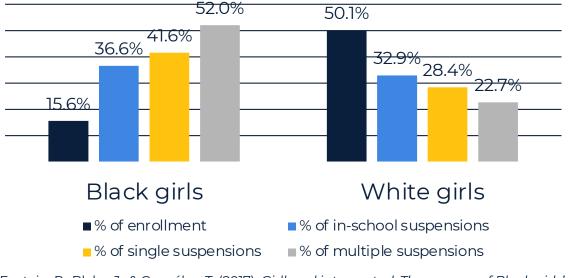




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But teachers would need more than awareness and commitment: **They** also need knowledge, repertoires of practice, and judgment.





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

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

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Let's return to the classroom.

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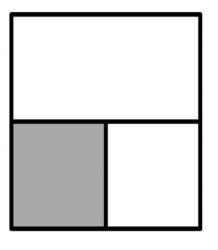


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Video: Antar and Gabi





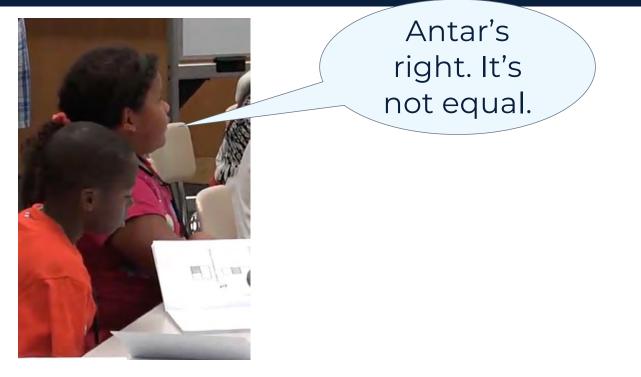
Gabriella: Oh. He said that he doesn't think it's a fraction because not all the parts are equal.

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And as the lesson is ending...



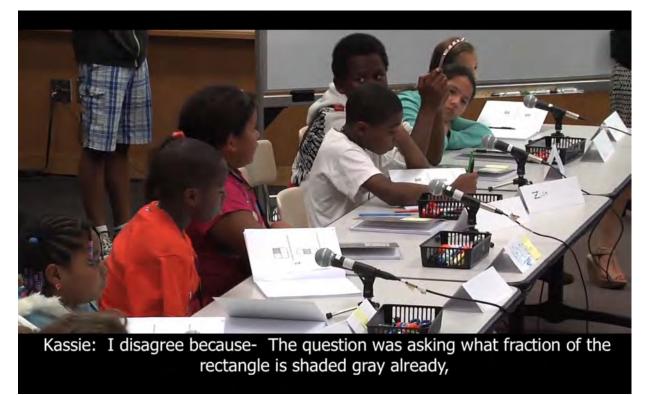
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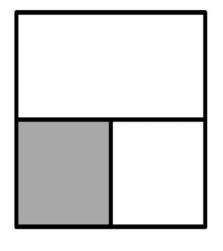


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Video: Kassie





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

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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?







Kassie

Antar



Gabi

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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)

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What are some of the discretionary spaces and risks?







Antar

Gabi

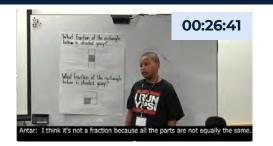
Kassie

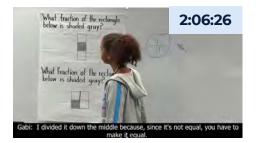


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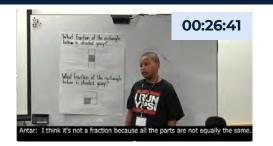


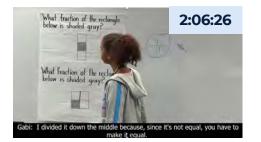


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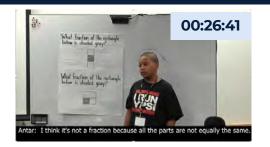
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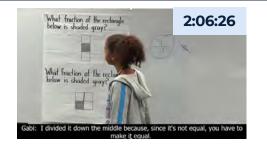
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- Racial narratives about 'ability' and struggling learners (Nasir & Shah, 2011; Shah, 2017)
- Patterns related to Black girls (Gholson, 2016, 2021; Joseph, 2017; Sengupta-Irving, 2020; Sengupta-Irving & Vossoughi, 2019)



- 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'





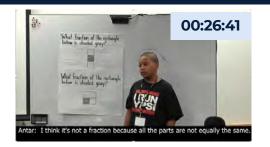
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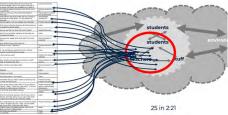
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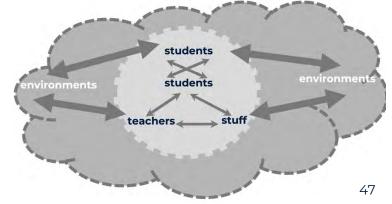




Challenges in studying the work of teaching (in)justice

- 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 macrostructures and micro-interactions.
- Using care to distinguish prescription from detail.
- Representing the work in a usable discourse of practice.





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And also . .











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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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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 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.

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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.
- Support teachers to develop 5. and improve their practice over time.
- 6. Change the economic model for paying for public education, especially for teaching.

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- Developing our approaches to understanding the work of teaching (in)justice 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.

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THANK YOU!

dball@umich.edu Slides will be available on my website https://deborahloewenbergball.com/ (Google Deborah Ball)

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Image on slide 2: Location map of the State of Michigan in the United States. Retrieved from <u>https://www.nationsonline.org/oneworld/map/USA/michigan_map.htm</u>



Image on slide 2: Map of treaty lands in what is today called Michigan. Retrieved from <u>https://theways.org/map</u>



Image on slide 2: Photo from "The Post-Post-Apocalyptic Detroit" by Ben Austen, *The New York Times*. Retrieved from <u>https://www.nytimes.com/2014/07/13/magazine/the-post-post-apocalyptic-detroit.html</u>

 Image: Second system
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 Image: Second system



Image on slide 2: Photo from "The 10 Best Places to Retire in Michigan," New Home Source. Retrieved from <u>https://www.newhomesource.com/learn/top-places-retire-michigan/</u>



Image on slide 2: Photo from "Lake Michigan Beaches," Experience Grand Rapids. Retrieved from <u>https://www.experiencegr.com/things-to-do/beaches/</u>



Image on slide 6: Map of People's Republic of China. Retrieved <u>from https://www.mapsofworld.com/answers/geography/what-are-the-key-facts-of-peoples-republic-of-china/#</u>







Image on slide 6: Political Map of India. Retrieved from https://surveyofindia.gov.in/pages/political-map-of-india



Image on slide 6: South Africa Provinces Map. Retrieved from <u>https://hansjohnnie.blogspot.com/2020/08/south-africa-provinces-map.html?m=0</u>



Image on slide 6: Map of Canada Retrieved from <u>https://commons.wikimedia.org/wiki/File:Political_map_of_Canada.svg</u>

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 Image: Comparison of the second state of the second sta



Image on slide 6: Map of Turkey. Retrieved from https://www.bespoketurkey.com/top-sights-in-turkey/



Image on slide 6: Map of France. Retrieved from https://kids.britannica.com/kids/article/France/345690



Image on slide 6: Map of Brazil. Retrieved from https://www.go-today.com/brazil-vacations.aspx

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Image on slide 20: Photo from "Mass Incarceration Is Declining — But Not For Women" by Robert P. Alvarez, Institute for Policy Studies. Retrieved from https://ips-dc.org/mass-incarceration-is-declining-but-not-for-women/



Image on slide 20:

Photo from "Housing cuts would exacerbate inequality" by Laura Mascuch, Kristin Miller, Jolie Milstein, and Barika Williams, New York Daily News. Retrieved from https://www.nydailynews.com/opinion/ny-oped-housing-cuts-wouldexacerbate-inequality-20200623-k2qxn6btrvh6bos6sqwlijokby-story.html

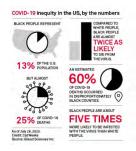


Image on slide 20:

Graphic from "Enough is enough": Gilead-Morehouse study racial, ethnic disparity in COVID-19," by Michael Gibney, S&P Global Market Intelligence. Retrieved from https://www.spglobal.com/marketintelligence/en/news-insights/latestnews-headlines/enough-is-enough-gilead-morehouse-study-racial-ethnic-disparity-incovid-19-60035253

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Image on slide 20: Graphic from "Six policies to reduce economic inequality" by john a. powell, Othering & Belonging Institute. Retrieved from https://belonging.berkeley.edu/six-policies-reduce-economic-inequality



Image on 20: Photo from "On International Day, UN spotlights indigenous peoples' right to education," United Nations. Retrieved from https://news.un.org/en/story/2016/08/536292-international-day-unspotlights-indigenous-peoples-right-education



Image on slide 20: Photo from "UN agrees to urgent debate on racism and police violence," Deutsche Welle (DW).

Retrieved from https://www.dw.com/en/un-agrees-to-urgent-debate-on-racism-andpolice-violence/a-53807879

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Image on slide 20: Photo from "Black and Hispanic women, less educated workers among those hardest hit by COVID-19 job losses" by Sara Savat, *The Source*, Washington University in St. Louis. Retrieved from <u>https://source.wustl.edu/2021/04/black-and-hispanic-women-less-</u> educated-workers-among-those-hardest-hit-by-covid-19-job-losses/



Image on slides 21–23: Photo from "Why You Need an Experienced Real Estate Agent" by Elizabeth Weintraub, the balance. Retrieved from <u>https://www.thebalance.com/experienced-real-estate-agents-1798883</u>



Image on slides 21–23: Photo from "Black doctors earn less than white peers, study reveals" by Stacy M. Brown, The Philadelphia Tribune. Retrieved from <u>https://www.phillytrib.com/lifestyle/health/black-doctors-earn-less-than-white-peers-study-reveals/article_2d359910-85c8-524b-b6d2-15d1705ad762.html</u>

 Image: Second state
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 Image: Second state



Image on slides 21–23: "Police." by Flickr user G20 Voice Licensed under a Creative Commons Attribution 2.0 Generic License <u>https://creativecommons.org/licenses/by/2.0/</u>



Image on slides 21–23: Photo from "Want to be a poll worker? Philly says it's responding to 'unprecedented' number of applicants" by Ximena Conde, *WHYY* Retrieved from <u>https://whyy.org/articles/want-to-be-a-poll-worker-philly-says-its-</u> <u>responding-to-unprecedented-number-of-applicants/</u>



Image on slides 21–23: Photo from "Trump Rioters Storm U.S. Capitol (photos)," *Variety* Retrieved from <u>https://variety.com/gallery/trump-rioters-storm-us-capitol-photos/congress-electoral-college-8/</u>





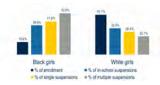


Image on slides 22 and 23:

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



Image on slide 23: Photo from "10 Ways Well-Meaning White Teachers Bring Racism Into Our Schools" by Jamie Utt, everyday feminism. Retrieved from https://everydayfeminism.com/2015/08/10ways-well-meaning-white-teachers-bring-racism-into-our-schools/



Data on slides 31–33: Epstein, R., Blake, J., & González, T. (2017). Girlhood interrupted: The erasure of Black girls' childhood. Washington, DC: Georgetown Law Center on Poverty and Inequality. Retrieved from https://www.law.georgetown.edu/poverty-inequality-center/wp-

content/uploads/sites/14/2017/08/girlhood-interrupted.pdf







Image on slides 32 and 33: Still image taken from "Teacher Caught Berating First Grader (VIDEO)," The Young Turks. Retrieved from <u>https://www.youtube.com/watch?v=yIJqbSkb5Jk</u>



Image on slide 33: Photo from "7 Ways to Build Strong Relationships with Students" by Margy Jones-Carey, Getting Smart. Retrieved from <u>https://www.gettingsmart.com/2017/02/7-ways-to-build-strong-</u> <u>relationships-with-students/</u>



Image on slide 48: Map of the World. Retrieved from <u>https://geology.com/world/world-map.shtml</u>





Image on slide 48: "A Large Group Of Diverse People Standing Together." Retrieved from <u>https://www.vhv.rs/viewpic/hTmTiix_a-large-group-of-diverse-peoplestanding-together/</u>



 Image: Comparison of the second state of the second sta