(HOW) CAN TEACHING CONTRIBUTE TO THE BUILDING OF A JUST DEMOCRATIC SOCIETY?

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THE POWER OF TEACHING

- For students’ academic learning
- For students’ sense of belonging
- For students’ sense of themselves as smart, capable, and for their perseverance

BUT—

It works both ways.

Listen to the power of teaching through the voices of students.
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Is there a teacher who had a significant impact on you?
VIDEO: IS THERE A TEACHER WHO HAD A SIGNIFICANT IMPACT ON YOU?
2,600,000,000 people under the age of 18 in our world.
Our world
June 2018
Hungary Approves Law Criminalizing Those Who Help Migrants

Hundreds Protest Family Separation Practice in Cities Across United States

Hundreds Shut Down Highway Protesting Police Killing of Antwon Rose

West Bank Palestinians Protest PA Sanctions Against Gaza Strip

Nigeria: 31 People Killed in Suspected Boko Haram Suicide Attacks

Hundreds Protest Family Separation Practice in Cities Across United States
THE SPECIAL ROLE THAT TEACHING CAN PLAY IN BUILDING A JUST DEMOCRATIC SOCIETY
MY CHOICE OF VIDEO SEGMENTS FOR THIS SESSION

- My own teaching from a summer mathematics program
- Diverse classrooms: race, ethnicity, language, SES
- Situated in the case of school mathematics
WHY MATHEMATICS IN THIS SESSION?

- Mathematics is a domain that has historically excluded groups of people, disproportionately people of color and women.

- This has left these people:
  - feeling “not good at math” and even “not smart”
  - without access to experience the beauty and power of mathematics
  - outside the construction and development of the field
  - barred from their desired fields and paths

THEREFORE—
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- Mathematics is also a domain ripe for disrupting marginalization, and what it means to be “smart” and who is smart.
- Mathematics can be a highly democratic domain with broad free access.
- Mathematics would expand and change if currently marginalized groups were actively participating in it as a field.
MATHEMATICS AND EDUCATION

1. Miah and her classmates
2. Mamadou and his classmates
3. Aniyah and Toni and their classmates

What special opportunities does mathematics offer?

What special risks does mathematics present?
VIEWING FOCUS

What are the children learning?

- In and for mathematics?
- In and for participating in a democratic society?
- In and for a more just world?
PERMUTATIONS, AND PROOF

Find all the ways to arrange the light green, purple, and yellow rods into three-car trains, using exactly one of each rod.

How are you sure you have found ALL the ways?

Prove that you have all the possible ways to arrange the light green, purple, and yellow rods into three-car trains.
VIDEO: MIAH, DEEDRAH, MICHIO, ARIANNA
BLUE-GREEN RECTANGLE PROBLEM

1. What fraction of the whole rectangle is shaded blue?
2. What fraction of the whole rectangle is shaded green?
3. What fraction of the whole rectangle is shaded altogether?
VIDEO: MAMADOU

This video and additional supporting materials are available online here.
What number does the orange arrow point to?
Explain how you figured it out.
VIDEO: ANIYAH, TONI, LAKEYA, DANTE

Teacher: Listen closely and see what you think about her reasoning and her answer.

This video and additional supporting materials are available online here.
TURN AND TALK WITH OTHERS

What **special opportunities** for learning democratic and just practices do you see in these short segments?

What **risks or threats** to democratic and just practices do you see in these short segments?
OPPORTUNITIES FOR LEARNING
DEMOCRATIC AND JUST PRACTICES

- Listening to others’ ideas
- Seeking to understand others before disagreeing
- Presenting one’s thinking for others’ comments
- Considering validity (or “truth”) using shared norms and processes, not through power
- Others?
RISKS OR THREATS TO DEMOCRATIC AND JUST PRACTICES

- Arguing one’s own point of view before understanding others’
- Narrow view of mathematical competence
- Positioning based on status (perceived “smartness”)
- Exclusion and marginalization of groups of students
- Others?
KNOWING IN TEACHING IS ABOUT OTHERS

- What is involved in knowing what someone else is thinking?
- Listening and communicating across differences of age, race, culture, gender, language, social class
- Listening with what you know, but also open to others’ ways of thinking and knowing
  1. Miah’s explanation
  2. Mamadou’s answer to a different question
  3. Aniyah’s view of the “whole” and Toni’s and Lakeya’s voices, Dante’s question
EDUCATING FOR THE INDIVIDUAL AND THE COLLECTIVE

1. What does each of the children—Miah, DeeDrah, Mamadou, Dovan, Aniyah, Toni, Lakeya, and Dante—know? And what is each learning to do?

2. What are the children who are not speaking in these short clips doing and learning?

3. What are these groups of children learning to do with other people?
CONNECTING TO AND INTERVENING ON THE “REAL” WORLD

- Teaching must connect to children’s experiences, worlds, and lives. Often in mathematics education, we think of this as situating problems in the children’s everyday worlds.

- But teaching must also create buffers from and disrupt patterns of the real world: racism, inequities, bias, and more.
THE HEAVY WORK OF TEACHING TO DISRUPT THE “REAL” WORLD

1. Miah
   ▪ Positioning Miah with humanity and agency: “see your face”; “is that right, Miah?”

2. Mamadou
   ▪ Creating space to hear and understand Mamadou’s idea before agreeing or disagreeing: “Let him explain”

3. Aniyah
   ▪ Requiring comments or questions before agreeing or disagreeing
   ▪ Children look at and speak to Aniyah
The (im)possible work of teaching entails:

- Working across and not erasing human differences
- Managing and working with paradoxes
- Using their affordances and managing their challenges
THANK YOU!

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Slides will be available on my website

https://deborahloewenbergball.com/

(“Google” Deborah Ball)
Image on slide 5:
“Oxon Hill High School Visit” by Flickr user Maryland GovPics
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Image on slide 8:
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