DisCrit Noticing: Theorizing at the Intersections of Race and Ability in Mathematics Education

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Everyone has access needs - needs that we need met in order to be fully present in a given space. What are your access needs?

Choose:
- Talk to a partner.
- Share with a post-it or in the Zoom chat.
- Any other way you prefer share!

INTRODUCTION

My name is Ricardo, my pronouns are he/him, and I need to have all course materials in plain text for my text-to-speech software. My name is Emile, my pronouns are she/her, and it is important for me to have regular, short breaks in our meetings. My name is Alex, my pronouns are they/them, and my access needs are currently being met.
Challenging the ideology of normal in schools

Without explicit attention to access needs, we assume there is only one way to communicate, to learn, to take part in an activity, which maintain existing structures of power and privilege. “Even teachers of colour typically trained through teacher education programmes often construct students of colour from a deficit perspective, marking white students as the cultural standard. [We need] to challenge monolithic views of normalcy by valuing students who differ from the norm, including consideration of race, ability, language and cultural practices.” p. 1279

Common Ableist Assumptions about Participation

• That everyone has the same access and experience with technology ***
• You must sit completely still in order to listen. ***
• If you aren’t looking at the instructor you are not paying attention. ***
• That we all speak the same language as the presenter
• Not speaking/answering questions means that you are not participating **
• Everyone has the same processing speed ***
• That reading out loud is a good participation exercise***
• That taking time to mull over a question is seen as not knowing the answer ***
• That people can process a question from the instructor quickly/same pace ****
• That cold calling on people is good/supports participation *
• Presentations should be done standing up. *****
• Precision of language shows intelligence **
• The need to correct other’s language. *
Learning in and from School Communities

**Reimagining the Mathematics Classroom**
➢ 23 teachers in bilingual, suburban, urban, and inclusive settings, K–6
➢ Focus: “What are components of a powerful math learning environment that supports and sustains the identities of all students?”

**Catalyzing Change Series**
➢ Critical conversations to meet critical challenges:
(1) Broaden the purpose of school math;
(2) Dismantle structural obstacles;
(3) Implement equitable instructional practices; and
(4) Organize mathematics along a common shared pathway.

**School-Research Partnership**
➢ Co-teaching in inclusive and self-contained classrooms to examine shifts in math curriculum, pedagogy, and assessment practices to broaden student access and agency.

DisCrit Noticing: Cathery Yeh @YehCathery
Guiding Questions

1. **Racializing Ability, Disabling Race**  
   What are the ways in which both race and ability are socially constructed and interdependent?

2. **Seeds of Refusal- DisCrit & Dysfunctional Ecology**  
   What can we learn from those before and around us to imagine forms of math education beyond “appeals to white imaginaries and sensitivities” (Martin, 2019)?

3. **DisCrit Noticing - Highlight one example of this work**  
   What guidance does it offer for mathematics education and for each of us in our roles as teacher educators, and researchers?
“Human” Evolution
I. Racializing Ability, Disabling Race

A Leaking STEM Pipeline

2001
4.01 million 9th Graders

2005
2.8 million High School Graduates

Fall 2005
1.9 million College Plans

Fall 2005
Only 1.3 million College Ready

2009–2011
278,000 Majoring in STEM

167,000 STEM Graduates

www.businessandeducation.org
I. Racializing Ability, Disabling Race

Historical context for inclusion, labels, and ability construction through time

Immigration officials medically examine Chinese boys detained at Angel Island in San Francisco Bay [FoundSF/National Archive]

Segregated schooling in El Monte, CA via Tropics of Meta: Historiography for the masses.
I. Racializing Ability, Disabling Race

History is of the past and present.

Formal Schooling, Same Inequalities
Guiding Questions

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Disability Critical Race Theory (DisCrit) Tenets

(Annamma et al., 2013)

1. Focuses on ways racism and ableism circulate interdependently, often in neutralized and invisible ways, to uphold notions of normality.

2. Values multidimensional identities and troubles singular notions of identity.

3. Emphasizes the social constructions of race and ability and recognizes the material and psychological impacts of being labeled as raced or disabled, which sets one outside of western cultural norms.

4. Privileges voices of marginalized populations, traditionally not acknowledged.

5. Considers legal and historical aspects of dis/ability and race and how both have been used separately and together to deny rights of citizenship.

6. Recognizes Whiteness and Ability as Property and that gains for people labeled with disabilities have largely been made as the result of interest convergence of White, middle-class citizens.

7. Requires activism and supports all forms of resistance.
II. Seeds of Refusal- DisCrit, Dysfunctional Ecology, & Disability Justice
What can we learn from those before and around us to imagine forms of mathematics education beyond “appeals to white imaginaries and sensitivities” (also see Martin, 2019)?
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Task: What are the ways in which Emilia engages in resistance?

“When I got into special ed, they were talking about touch math and all that, I was like “...Uhh there is more than that.” And only because I taught general ed, I am putting everything that I know from my (previous) math training in here. I've worked with older kids in the juvenile hall who are being asked to complete worksheets after worksheets of basic facts with crayons, no choice, same concept again and again. and they haven't been able to experience pre-algebra and algebra. My experience has pushed me to put more...As a (district) SpEd team we are coming together to come up with a math curriculum, and we really set in place what we want each grade level (to learn) and the build up.
II. Seeds of Refusal- DisCrit, Dysfunctional Ecology, & Disability Justice

DisCrit Curriculum
- Attend to classroom materials and curriculum documents to investigate how dominant narratives and representation uphold whiteness and ability.
- Interpret notions of normalcy and neutrality that position white, able-bodied ideological assumptions unexamined in which disabled Students of Color are most at risk.
- Respond by reimagining curriculum to attend to students' multi-faceted identities and building students' capacity to recognize and act against racism and ableism.

DisCrit Pedagogy
- Attend to ableism and its intersection with other oppressive ideologies as it manifests in everyday classroom practices and interactions.
- Interpret student performance in relation to the environment in which societal inequities are (re)produced in dysfunctional learning ecologies.
- Respond through pedagogical resistance based on presumed competence, cultivate interdependence, and invites expansive, multi-modal meaning-making.

DisCrit Solidarity
- Attend to how school mathematics enact expectations framed by whiteness that lead to division and separation.
- Interpret cultural standards of good, mart, and obedient to increase surveillance and pathologization from those that deviate from what is expected.
- Respond by building solidarity and explicitly rejecting the continued focus on behavior and classroom management.

Access the framework here: https://tinyurl.com/DisCritNoticing

III. DisCrit Noticing - Highlight one example of this work

**Community Based**
- PhotoVoice Community Project
- Student/Caretaker Interview
- Community-Based Methods Component

**Integration of Social Justice Standards and Practices**
- PhotoVoice Project
- Student/Caretaker Interview
- Community-Based Methods Component

**Teaching and Learning Tools**
- Say-Mean-Matter Framework
- Lesson Analysis Framework
- Cross-pollination of CRMT/UDL Unit Plan
III. DisCrit Noticing - Highlight one example of this work

How does this case illustrate DisCrit noticing?

The Fall of the I-Hotel

“They were looking for identity at that time, and they weren’t comfortable with just...”

By Richelle Acebado
More Questions than Answers

1. How can teaching take into account the historical-political context of presumed intelligence and recognize that ability measures and results are also social constructions that may not be objective or equitable?

2. How can our questions better examine and help illuminate the interconnected nature of mathematical ideas and the nonlinear pathways students might take to mathematical understanding?

3. How do our queries and methods reflect a curiosity and respect for the varied ways that students with disabilities might engage with mathematical ideas and express their mathematical thinking?

References


