



CONFRONTING DEFICIT PERSPECTIVES AND DEVELOPING AN ASSET-BASED FOCUS ON CHILDREN AND FAMILIES

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Teachers
Empowered to
Advance
CHange in
MATHematics

TEACH Math Project

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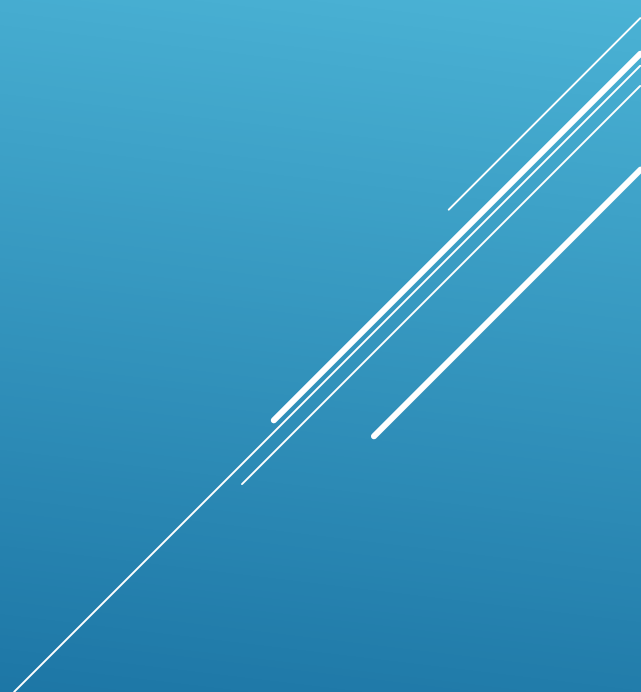
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TEACH Math Project Goals

- ▶ To design and study instructional modules for K-8 mathematics methods courses that explicitly develop prospective teachers' competencies related to *children's mathematical thinking* and *children's community/cultural/linguistic funds of knowledge*.
- ▶ To support and study early career teachers' practices related to connecting to *children's multiple mathematical knowledge bases* in their mathematics teaching.



Guiding Principles Across Projects

Our Principles	Dominant Narratives
Partnering with families and communities as integral to daily work of teaching mathematics.	Connections to families and communities around mathematics learning as add-on activity and uni-directional
Strengths-based perspective on children, teachers, families, and communities as resources for mathematics learning	Prevailing deficit views of children's mathematical learning, family support, and communities based on race, class, culture, and language
Consistent and integrated attention to children's mathematical thinking and cultural/community funds of knowledge	Strong and consistent focus on/attention to children's mathematical thinking is sufficient

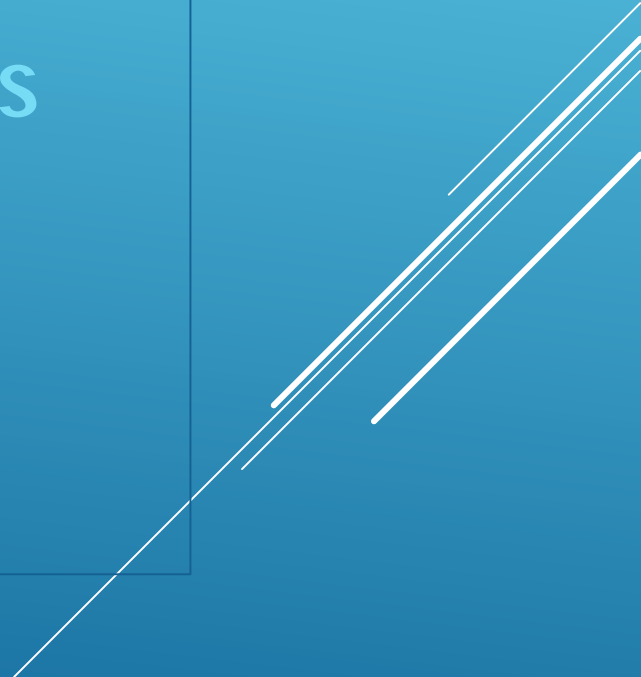
Guiding Principles Across Projects

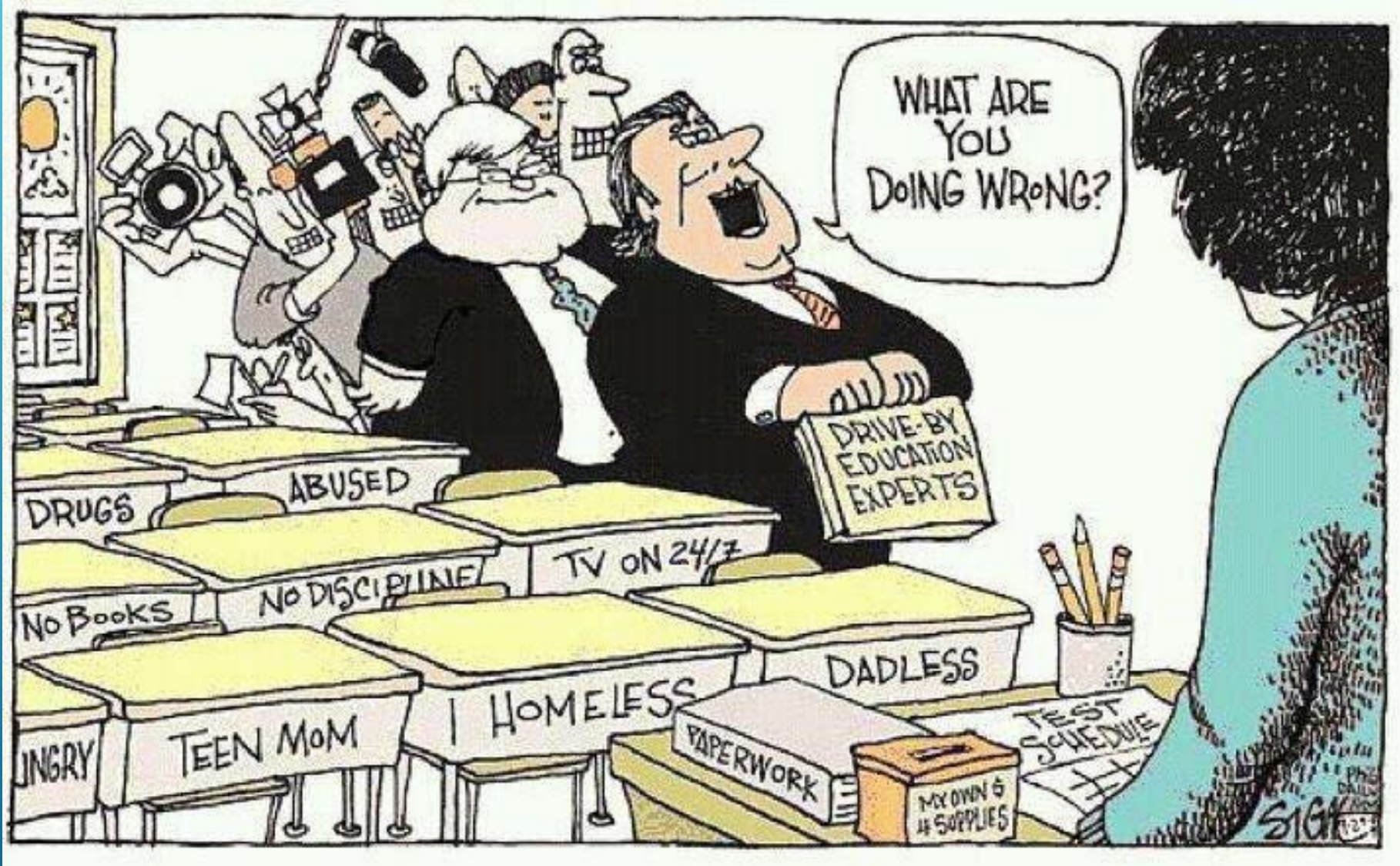
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Deficit Perspectives

Deficit perspectives attribute children's school failures to perceived deficits within the children or their families.





For Example...

Label	Deficit Discourse
TV on 24/7	<p>The sparsely decorated living room has a huge television that is playing loudly, though there is no one watching the cartoon. The only things on the wall are a couple of photos of fast cars. A well-worn sofa sits opposite the TV. There are video games on the shelf by the TV, there is an assortment of random papers on the coffee table. I look for, but see, no books.</p>
Child's Guardian	<p>Their guardian didn't come to student-teacher conferences; therefore teacher concludes that the guardian doesn't seem to care about their child's education enough to make it a priority to attend</p>

Black Boys & Mathematics

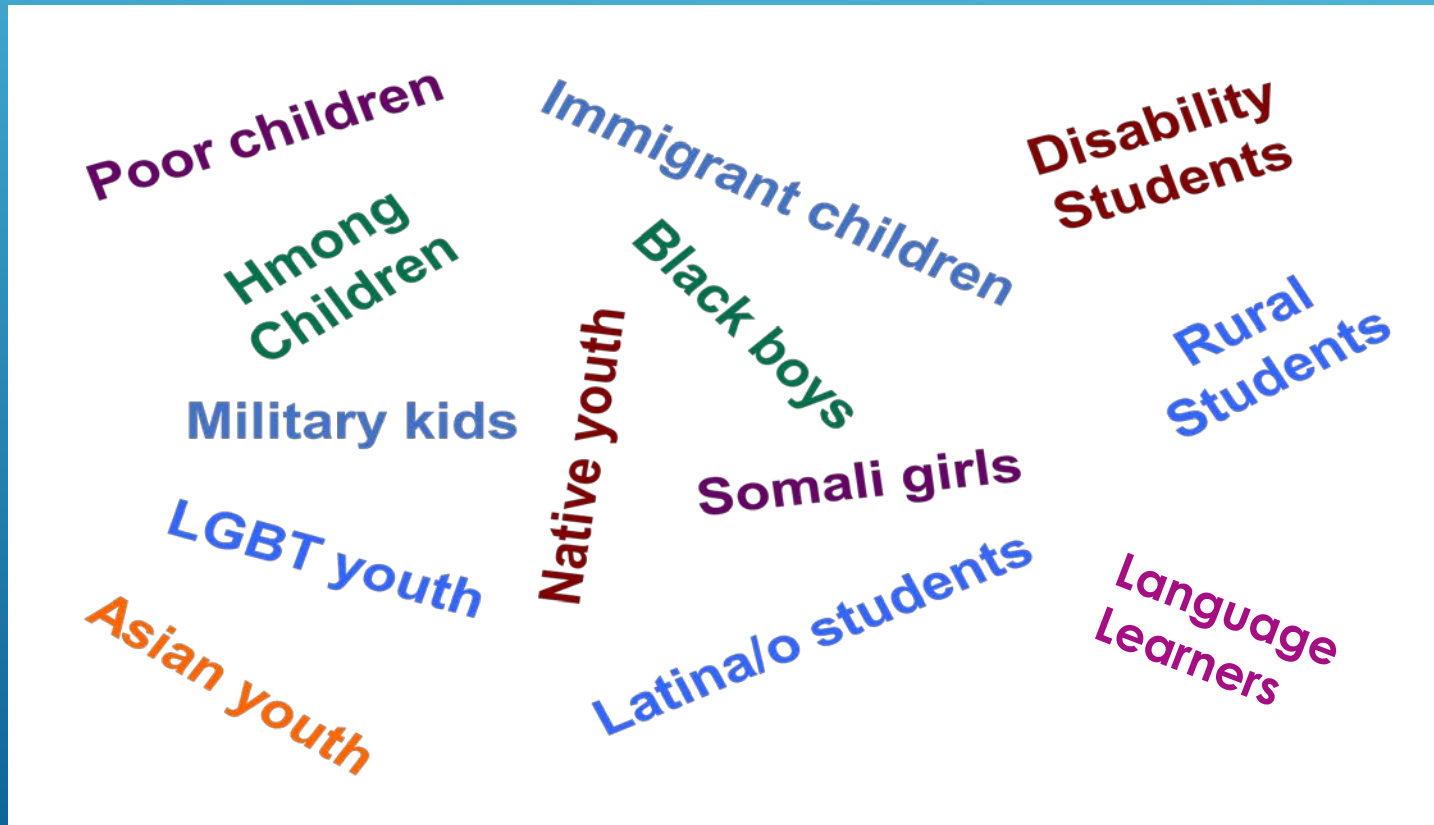
(PSTs, Aguirre 2015)

- Pipe line to Prison
- Adult-ified
- Low Expectations
- Don't feel they need math, want to be successful at sports
- Lots of energy
- Low attention
- Families don't support
- Not math people, not interested in math
- Poor math students
- Candidates for high drop out rates
- Held back
- Slow learners
- Not motivated/ambitious

**Deficit-Framed
Discourse**

AND ...

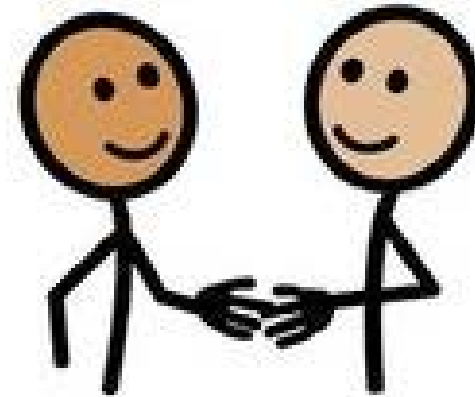
this language is often heard about students and families from marginalized groups





What language have you heard used about groups of students and their families from marginalized groups?

TURN AND TALK





Deficit Discourses Are Situated

Individual Level of Oppression: the video we watched

Institutional Level of Oppression: Black boys disciplined disproportionately compared to white peers

Cultural Level of Oppression: Narrative in media and society in general that white folks are safer, less violent, better citizens





Constructing Counternarratives

Deficit Discourse

Beliefs or stereotypes that negatively position (groups of) students and/or their families

Counter Narrative

Arguments that dispute commonly held beliefs or stereotypes about historically and systematically marginalized groups



Revised (Counter) Narrative

When we return to the living room, decorated with sports car photos, there is a TV playing loudly. I decided to ask, "Hey, Jenice, what are you watching?" She invited me to sit down on the comfy couch. She tells me about Spongebob and then next comes Ben 10. Jenice stands to act out a particularly ridiculous interaction with Patrick on Ben 10. I notice the video games, so I ask what her family's favorite video games are. Mrs. Jenkins says she tries to purchase educational games because she likes that they can have fun in the safety of their home. On the coffee table in front of the sofa, there are receipts clipped together, a newspaper, and a couple of local city and children's magazines.



Deficit Discourse

Their guardian didn't come to student-teacher conferences; therefore teacher concludes that the guardian doesn't seem to care about their child's education enough to make it a priority to attend

Toward A Counternarrative

Research documents that guardians show care about their child's education in a myriad of ways, such as helping with homework, making sure their child has good attendance, or believing that if something is not going well, a teacher will contact guardians so as best support the child.



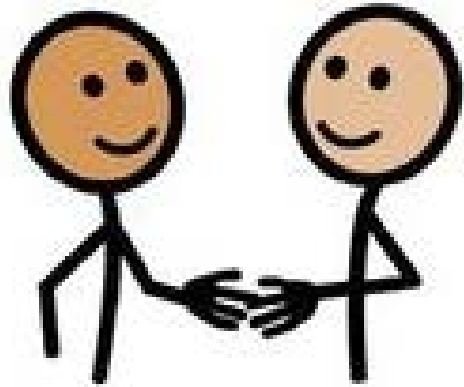
Black Boys & Mathematics

(PSTs, Aguirre 2015)

- ▣ High Expectations
- ▣ High Energy to learn
- ▣ Knowledgeable and mature
- ▣ College bound
- ▣ Loves math
- ▣ Scholar athletes
- ▣ Interested in Math
- ▣ Families Support
- ▣ Families Care
- ▣ Mathematical thinkers
- ▣ Care about learning
- ▣ Highly capable
- ▣ Leaders
- ▣ Motivated
- ▣ Successful Graduates

**Strength-Framed
Discourse**

TURN AND TALK



GENERATE COUNTERNARRATIVES

Consider the examples you discussed earlier with your neighbor. Work together to generate counter narratives.



Focus On What Kids Can Do



Implicit Racial Attitudes (BATTEY, BARTELL, & WEBEL, UNDER REVIEW)

- ▶ **Implicit racial attitudes:** unconscious beliefs and feelings, resulting from exposure to broader, stereotypical, deficit narratives of historically marginalized groups
- ▶ Demographic survey (including frequency of interactions)
- ▶ Assessed math knowledge for teaching, implicit attitudes test, and color-blind racial attitude scale
- ▶ Two videos; Same task and manipulatives; predominantly African American students or predominantly White students
- ▶ **“Please describe the strategies used to solve the problem in the video.” “What was mathematically important in the thinking that the students in the video shared?”**

A GLANCE AT QUALITATIVE RESULTS

Descriptions of White students	Descriptions of Black students
Could logically understand and fully explain their reasoning	Using just basic visualization; they were able to interpret
Capably used the rods to explain	Used the rods to see correlation
Used rods to show that he knew , not just making sense of but actually showing	Used division to solve, reasoning incorrect , tried to make sense and tried to reason out
The students looked at ... means they are the same ... noticed ... both of the boys' reasoning correct	Used manipulatives ... know by the picture ... students lacked clarity getting their ideas across



Concluding Thoughts

- ▶ We care about our students, and it is often “natural” to think about what is needed or missing with respect to a person or situation.
- ▶ This is not meant to be presented as an overly hopeful or naïve approach ... It is intricately linked to systematic oppression and thus requires **explicit and purposeful effort and work**.
- ▶ There are power differentials between teachers and students. With a strength-based approach, you are a **listener and learner**, learning from students and their families.