LEARNING TO SEE, CONNECT WITH, AND BUILD STUDENTS’ RESOURCES

Acknowledgements to Charles E. Wilkes II, Jillian Mortimer, Peter Cipparone
All this talk about not focusing on children’s deficits—why does this matter so much? Isn’t our job to figure out what children don’t know and help them grow?

So—focusing on children’s strengths is crucial for effective and equitable teaching and for advancing social justice.

1. Learning occurs through a process of building on prior knowledge and experience.
2. Strong academic and mathematical identities are a means to developing competence. They are also instructional goals.
3. For children of historically marginalized groups, stereotype threat and other biases interfere with and impede children’s performance.
Okay, I see why this is important. But it isn’t easy. How do I learn to be more skillful at recognizing and using children’s strengths?
MY CHOICE OF VIDEO SEGMENTS FOR THIS SESSION

- Non-professional video ("home video quality")
- My own teaching, but why?
- Diverse classrooms: race, ethnicity, language, SES
- Complex mathematical work, elementary level
- Useful for the specific goals of this session: to learn to see and use students’ resources
MAKING THE SHIFT FROM A PREOCCUPATION WITH DEFICITS TO A FOCUS ON STRENGTHS

- Pausing on “apparently incorrect” answers
  - Actually not incorrect
  - Answer to a different (and reasonable) question
  - More correct than incorrect

- Seeing past “distractions” or non-mathematical issues
  - Behavior that distracts the teacher, but not the child or the other children (Noel, 2014)
  - How children talk (as they are learning; and when they are speaking academic language, or in English when that is not their first language)
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DILEMMAS OF LEARNING TO SEE AND HEAR STUDENTS’ RESOURCES

1. Feeling committed to students as sense-makers who bring many strengths and feeling pressure to make sure students get it “right”

2. Using yourself yet also suspending assumptions based on what you would mean or feel

3. Knowing mathematics well enough to see “mathematics” in children’s talk, representations, etc. while also not letting your own mathematical knowledge to overtake your capacity to see and hear what they are saying or showing
What number does the orange arrow point to? __________

Explain how you know: ________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
ANIYAH AND TONI

Who'd like to come up to the board and try to tell— And you know, it might not be right. That's okay 'cause we're learning something new.

This video and additional supporting materials are available online here.
WHAT DO YOU SEE AND HEAR ABOUT ANIYAH AND TONI IN THIS SHORT CLIP?
WHAT DO PEOPLE TYPICALLY SEE?

ANIYAH
- Wrong answer, not identifying the correct whole

TONI
- Giggling while talking
- Playing with her hair
WHAT STRENGTHS DO YOU SEE?

ANIYAH

- Her presentation skills
- Production of a mathematically well-structured explanation
- Knowing the definition for a fraction, which she uses carefully

TONI

- Her careful attention to another child’s thinking
- Her skill in asking a perfectly posed question about Aniyah’s reasoning
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  - Actually not incorrect
  - Answer to a different (and reasonable) question
  - More correct than incorrect: Aniyah

- Seeing past “distractions” or non-mathematical issues
  - Behavior that distracts the teacher, but not the child or the other children: Toni  (Noel, 2014)
  - How children talk (as they are learning; and when they are speaking academic language, or in English when that is not their first language)
SEEING STUDENTS’ RESOURCES AND ASSIGNING MATHEMATICAL COMPETENCE

A set of practices that deliberately deploy the power of teaching to:

1. Broaden and label what being competent in mathematics means
2. Intervene to position who (and what) is seen as competent in math class
3. Support individual children to develop their mathematical and academic identities and competence

Sources: E. Cohen and R. Lotan, complex instruction; J. Boaler’s work; Smarter Together: Collaboration and Equity in the Elementary Mathematics Classroom (Featherstone, Crespo, et al., 2011);
Sounds good. What does that require of me?
WHAT DOES “ASSIGNING COMPETENCE” REQUIRE IN TEACHING?

1. Broaden and label what being competent in mathematics means
2. Intervene to position who (and what) is seen as competent in math class
3. Support individual children to develop their mathematical and academic identities and competence

1. Be able to see what is “mathematical” and what is “competent”
2. Have techniques for making these moves to intervene
3. Strategically using these techniques with particular students in authentic and well-timed ways
QUESTION

Which rod is three times as long as light green?
STEP 1: WHAT IS MATHEMATICS AND MATHEMATICAL PRACTICE? WHAT IS “COMPETENCE” IN MATHEMATICS?

- What mathematics do you see in this segment?
- Who is doing mathematics, and what math are they doing?
- Identify specific examples and why you would label that “mathematics.”
WHAT IS “MATHEMATICS” AND WHAT DOES IT MEAN TO BE “COMPETENT”?
STEP 2: SEEING STUDENTS’ COMPETENCE

Select two of these five students: Langston, Madison, Lauren, Michio, Larayne, Jerone

- What does each one know and know how to do?
- What is your evidence?
STEP 2: SEEING STUDENTS’ COMPETENCE

Langston, Madison, Lauren, Michio, Larayne, Jerone

- What does each one know and know how to do?
- What is your evidence?
STEP 3: USING TECHNIQUES AND STRATEGIES FOR ASSIGNING COMPETENCE

Identify the competence to be highlighted. Consider how to disrupt hierarchies of status in class by which child is to be “called out” as competent.

- Call out an individual child’s competent move or contribution publicly (“___ just shared a very important idea”)
- Ask a child to explain another child’s contribution that the teacher highlights
- Ask the class to identify things that were part of an important contribution by one of the children
- Writing something publicly that a child or children came up with or contributed that is important
- Accord expertise to children through assigning roles explicitly in a group
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OPPORTUNITIES TO LEARN TO BUILD SKILLS IN SEEING, HEARING, AND BUILDING ON STUDENTS’ RESOURCES

- Examining challenging video clips with others
- Looking at students’ written work
- Doing the mathematics that children are doing
- Seeing children outside of school, in community settings: look not just for mathematical content but also practices
THANK YOU!
dball@umich.edu
Slides will be available on my website
(“Google” Deborah Ball)