LEARNING TO DO THE WORK OF TEACHING:
PRACTICE-BASED TEACHER EDUCATION

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THE NEED TO IMPROVE TEACHER PREPARATION, AND THE RESULTING CONSEQUENCES FOR TEACHER EDUCATORS

What does it mean to “focus on practice” in teacher education and how is it different?
TEACHING PRODUCES THE HUMAN RESOURCES FOR A NATION

- Large scale (130,000 teachers in Israel, 3.75 million in U.S.)
- The only occupation that works with every person in the country
- School represents for many students the opportunity to get ahead
- Experience does not consistently lead to better teaching
- Beginning teaching produces less student growth (on average)
“Teaching has always come naturally to me.”

“I have learned teaching from experience; I like to pass on what I know to student teachers.”

“Teaching requires a lot of improvisation and can’t be specified in advance.”

“I have developed a style of teaching that works for me.”
WHAT ARE THEY TALKING ABOUT?

“Teaching has always come naturally to me.”

“I have learned teaching from experience; I like to pass on what I know to student teachers.”

“Teaching requires a lot of improvisation and can’t be specified in advance.”

“I have developed a style of teaching that works for me.”
WHAT IS MEANT BY “TEACHING PRACTICE”? 

1. The work of **professional teaching**—all the things that are involved in helping others learn and develop in school
   
   (NOTE: This is distinct from the informal work of teaching in everyday life.)

2. The work of teaching people to do this professional work (**teaching teaching**).
WHAT IS NOT MEANT BY “TEACHING PRACTICE”? 

- Only what happens in **classrooms** (e.g., planning is also part of teaching practice)
- Only what happens in **schools** (i.e., it is possible to work on teaching practice in many different ways and settings)
THE PURPOSE OF HAVING SOME SHARED EXPERIENCES WITH TEACHING TODAY

1. To make clearer what the work of teaching involves
2. To appreciate the demands that beginning teachers must be able to manage
3. To re-examine common beliefs about teaching
THREE EXPERIENCES WITH TEACHING PRACTICE

1. Eliciting and interpreting a student’s thinking during a class discussion
2. Choosing and sequencing examples for an instructional purpose
3. Trusting students to learn and holding high expectations of them in real time
ELICITING AND INTERPRETING A STUDENT’S THINKING DURING A CLASS DISCUSSION
BEFORE THE VIDEO CLIP

- A boy has proposed that 6 “can be both even and odd” and demonstrates this:

  ○ ○ | ○ ○ | ○ ○

- The children are agitated and one asks him to “prove it”

- A girl tries to show him that “it is not the number of groups it is” and shows that if this was right, then would he call 10 “even and odd” too?

  ○ ○ | ○ ○ | ○ ○ | ○ ○ | ○ ○
A girl named Ogechi wants to speak
Follow her and try to figure out what she is saying

What is the work of teaching here?
VIDEO: WHAT IS THE WORK OF TEACHING?
ELICITING AND INTERPRETING A STUDENT’S THINKING DURING A CLASS DISCUSSION

What is the work of teaching here?

- Encouraging Ogechi to talk
- Listening in the moment, asking probing questions, interpreting her thinking, and supporting her and her classmates to consider her idea

Teacher: You don't need to show something? What are you trying to say?
Ogechi: I just wanted to say if you wanted an odd number, you just have to take one off of it.
Teacher: Why would that work?
Ogechi: Because usually odd numbers are like this — (diagram)

Teacher: So you're saying the even numbers are the ones where you can group them all by twos, and the odd ones are the ones where you end up with one left over?

Teacher: Can we listen to her one more time? Say again one more time what you're saying the definition is of an odd number.
ELICITING AND INTERPRETING A STUDENT’S THINKING DURING A CLASS DISCUSSION

What is the work of teaching here before this moment?

- Teaching students to share their own mathematical ideas with others in class
- Teaching students to listen to one another and to see others’ ideas as part of the material for class
- Thinking about definitions of even and odd numbers and what is involved in understanding the concepts
WHAT IS INSTRUCTION?

Instruction is co-constructed

- . . . in broad socio-political, historical, economic, cultural, community, family environments
- . . . through the interpretations and interactions of teachers, students, and “content”

Cohen, Raudenbush, and Ball (2003)
WHAT IS THE WORK OF TEACHING?

Taking responsibility for deliberately maximizing the quality of these interactions . . .

- . . . in ways that maximize the probability that students learn
- . . . worthwhile content and skills
- . . . and that advance a just society
CHOOSING AND SEQUENCING EXAMPLES FOR AN INSTRUCTIONAL PURPOSE
CHOOSING EXAMPLES

Which set of decimals would be best for assessing students’ ability to arrange numbers in order from least to greatest?

- 0.5  7  0.01  11.4
- 0.60  2.53  3.12  0.45
- 0.6  4.25  0.565  2.5

- The lists are all equally good for assessing students’ ability to arrange numbers in order from least to greatest.
REASONING ABOUT STARTING POINTS & SEQUENCING

- In a whole-class discussion aimed at developing the concept and definition for “rectangle,” which figure would be good to discuss first? Why?

- How would you sequence these figures to develop the concept and definition of rectangle? Why?
TRUSTING STUDENTS TO LEARN AND HOLDING HIGH EXPECTATIONS OF THEM IN REAL TIME
MEET VIRSHAWN

10 years old, Black male

In fourth grade:

- He was often sent out of the room, to the hall or the principal’s office
- He was in trouble often
- He wasn’t doing well in math
- He was articulate and liked to write
PERCEIVING A STUDENT IN CLASS

Virshawn between 11:19 – 11:25

Paper airplane

What do you think about Virshawn?
At 11:26, the teacher says, “You know what, Virshawn, I am going to need you to come up here closer where you can see and hear and won’t be distracted.”
Over the next minute, Virshawn is raising his hand to answer questions.
At 11:27, the teacher says, “Virshawn, you get to come up and make a number because you are the closest person to the board.” “You can have two checkers and you can put them wherever you want, and make a number, and then you can call on somebody.”
AT 11:28, VIRSHAWN TAKES THE ROLE OF “TEACHER”
WHAT IS THE WORK OF TEACHING?

- Having an open mind in the moment about what counts as “engagement” or being “off-task”
- Deciding how to “read” him, and actions following those decisions
- Being able to ask an appropriate mathematical question to invite Virshawn *in*
  - “Virshawn, you get to come up and make a number because you are the closest person to the board.”
  - “You can have two checkers and you can put them wherever you want, and make a number, and then you can call on somebody.”
WHAT IS THE PROBLEM FOR TEACHER EDUCATION?
COMMON BELIEFS ABOUT TEACHING

- Teaching is not difficult.
- Teaching is best learned through experience.
- Teaching depends on creativity and improvisation.
- Teaching is a natural talent—some people are just born teachers.
THE REALITY ABOUT TEACHING

- Teaching is complex work that requires a special blend of knowledge and skill.
- Teaching involves substantial skill, reasoning, and technique.
- It is a chancy strategy for a nation to supply quality teaching to all students by relying on individual creativity, experience on the job, or innate talent.
NO PROFESSIONAL SYSTEM FOR TEACHER PREPARATION

- No common language for the work of teaching
- No shared curriculum for the formation of teachers
- No common prerequisite standard of performance for being permitted to begin teaching on one’s own
NO EQUIVALENT IN TEACHING

- Objectives for coursework and for internship teaching and other clinical experiences lack similarly precise professionally determined and agreed upon learning objectives
- Field experience often focused more on reflection than on development of actual skill and judgment
- Performance expectations for graduates of teacher education underspecified and weakly assessed
TOWARD PRACTICE-BASED TEACHER EDUCATION

1. Clear specification of knowledge, skills, capabilities, and qualities of performance necessary for independent practice

2. Detailed developmental clinical training, progressing from observing to simulations to apprenticeship to supervised independent practice

3. Performance assessment of individual competence before allowing independent practice
WHAT IS MEANT BY "PRACTICE-BASED" TEACHER EDUCATION?
FOCUSING THE TEACHER EDUCATION CURRICULUM TO PREPARE NOVICES FOR THE WORK OF TEACHING
HIGH-LEVERAGE PRACTICES

Things teachers DO—

- All the time!
- That leverage students’ learning
- That put young people at risk when done badly
- That create equitable access to learning rigorous content and skills

- That can be named at a “grain-size” that is useful for learning to do the work of teaching
- That can be illustrated, unpacked, and practiced
- That support the development of more advanced teaching skills
- That can be assessed
EXAMPLES OF HIGH-LEVERAGE PRACTICES

- Explaining and modeling content, practices, and strategies
- Leading a group discussion
- Eliciting and interpreting students’ thinking
- Establishing norms and routines for classroom discourse and work
- Diagnosing particular common patterns of student thinking and development
- Learning about students’ cultural, religious, family, intellectual, and personal experiences and resources for use in instruction
- Setting up and managing small group work
- Building respectful relationships with students
- Checking student understanding during and at the conclusion of lessons
- Providing oral and written feedback to students on their work
- Setting long- and short-term learning goals for students
- Talking about a student with parents or caregivers

1TeachingWorks and the University of Michigan School of Education
PURPOSE OF THE HIGH-LEVERAGE PRACTICES

The high-leverage practices:

1. Decompose the work of teaching into **learnable chunks** that support learning to do that work (and teaching it to novices).

2. Intertwine central aspects of instructional practice:
   - developing students’ academic and social-emotional skills;
   - valuing diversity (e.g., learning and using students’ funds of knowledge and resources) and promoting and advancing equity and inclusion (e.g., building respectful classroom communities, connecting with and also extending and supporting students’ possibilities, interests, and agency).
MEDICAL SCHOOL EXAMPLE
PRACTICING DEFIBRILLATION
TEACHER EDUCATION EXAMPLE
PRACTICING A GUIDED READING LESSON
ASSESSING PRACTICE

- Need to assess actual skills of teaching not just written reports and reflections
- Create common assessments to assess candidates’ progress equitably on key knowledge, skills, and dispositions
CHALLENGES TO DEVELOPING PRACTICE-BASED TEACHER EDUCATION

- Lack of common language and resistance to specification of teaching ("too technical")
- "Academic freedom" and complexity of higher education (professors and supervisors are independent)
- Connections to schools and developing partnerships for field placements
THANK YOU!

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