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

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WHY IS TEACHER EDUCATION SO IMPORTANT?

1. What is the responsibility of professional education for teaching?
2. What is the “work of teaching”?
3. What is involved in “practice-based” teacher education?
4. What are the challenges in improving teachers’ preparation?
TEACHING PRODUCES THE HUMAN RESOURCES FOR A NATION

- Large scale (for example, 237,000 teachers in Chile; 3,75 million teachers in U.S.)
- Teaching is the only occupation that works with every person in the country
- School represents for many students the opportunity for advancement in life
WHAT SHOULD TEACHER EDUCATION DO?

- Prepare teachers with the theory and knowledge of the profession
- Prepare teachers to be lifelong learners
- Prepare teachers for the responsibilities they will have from the first day, such as:
  - Explaining so that students can understand
  - Establishing a good learning environment in the classroom
  - Designing interesting and useful lessons
  - Assessing students’ progress
  - Working with families
How do other professions and occupations think about initial formation of novices?
WHAT DO THESE PROFESSIONS HAVE IN COMMON?

1. Identified the most important skills, knowledge, and requirements necessary for the practice

2. Developed ways of teaching novices to learn the practice

3. Required each person to pass performance assessments before they are “licensed” to practice

This is not true for teaching.
WHAT IS THE "WORK OF TEACHING"?
What part of the rectangle below is shaded gray?
A GLIMPSE OF THE “WORK OF TEACHING”: CHOOSING A TASK FOR A LEARNING GOAL

What part of the rectangle below is shaded gray?

1. Understanding the mathematics
2. Understanding the mathematical point of the task
3. Understanding common patterns of student thinking about these ideas
VIDEO: A GLIMPSE OF THE “WORK OF TEACHING”

Teacher: Is that what you said? Okay, would someone like to comment on that? Agree or disagree with him?
What does the video show about the work of teaching, both visible and invisible?
TEACHING: INVISIBLE AND VISIBLE

INVISIBLE WORK
- Selecting a specific student to present and to position as competent
- Working to disrupt patterns that marginalize groups of students
- Trusting the children to think, be engaged, try to learn
- Caring for students
- Making choices about how to interpret students’ behavior and answers

VISIBLE WORK
- Supporting students to present
- Honoring different students’ ideas
- Focusing on concepts and reasoning
- Expecting students to listen to one another
- Highlighting particular children displaying specific forms of competence
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Explicar y modelar los contenidos
Liderar discusiones grupales
Implementar normas y rutinas para discursar y el trabajo de la sala de clases

Son prácticas de alto impacto.
WHAT IS INVOLVED IN “PRACTICE-BASED” TEACHER EDUCATION?
ORIENTING TEACHER EDUCATION TO FOCUS ON TEACHING PRACTICE

- This is not simply about **how much time** teachers spend in fieldwork or in schools.
- It **is** about whether their program focuses on preparing teachers for the work of teaching:
  1. What is taught
  2. How it is taught
  3. How it is assessed
FOCUSING THE TEACHER EDUCATION CURRICULUM TO PREPARE BEGINNING TEACHERS FOR THE WORK OF TEACHING
COMPONENTS OF THE PRACTICE-BASED TEACHER EDUCATION CURRICULUM

- Prácticas de alto impacto
- Content knowledge for teaching
- Ethical obligations
- Critical consciousness about patterns that reproduce inequity and practices to disrupt them
HIGH-LEVERAGE PRACTICES\textsuperscript{1}
PRÁCTICAS DE ALTO IMPACTO (PAI)

1. Liderar discusiones grupales.
2. Explicar y modelar los contenidos, practices, y estrategias.
3. Elicitar e interpretar el razonamiento individual de los estudiantes.
4. Diagnosticar patrones comunes en el razonamiento y desarrollo de los estudiantes de una signatura.
5. Implementar normas y rutinas para discursar y el trabajo de la sala de clases.

\ldots

10. Construir relaciones respetuosas con estudiantes.

\textsuperscript{1}TeachingWorks, University of Michigan School of Education, Universidad del Desarrollo
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EXAMPLE: ELICITAR E INTERPRETER EL RAZONAMIENTO INDIVIDUAL DE LOS ESTUDIANTES

- Introduce practice
- Practice in simulated setting
- Practice in field
- Assess beginning teachers’ skill, at baseline and at end of program\(^1\)

@practice (Meghan Shaughnessy and Tim Boerst)
Listening to and interpreting

Formulating questions designed to elicit and probe student thinking

Posing questions

Developing additional questions

Making sense of what students know and can do
- Developing general, open-ended questions
- Choosing a focus
- Developing hypotheses to test

Formulating questions designed to elicit and probe student thinking

Listening to and interpreting

Children

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Making sense of what students know and can do

- Delivering questions in ways that are sensitive to how students might hear and respond to the question

Children
• Giving students time to speak
• Paying close attention to what the student says
• Noticing features of the student’s thinking

Listening to and interpreting

Developing additional questions

Posing questions

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Making sense of what students know and can do

Children
Children

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Listening to and interpreting

- Identifying elements that the student has said little about
- Identifying interesting aspects
- Focusing on a strategic aspect of student thinking
- Using this information to formulate questions

Making sense of what students know and can do

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Listening to and interpreting

Children

- Identifying evidence of student understanding

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Making sense of what students know and can do
TEACHER EDUCATION PEDAGOGIES

Specific methods and approaches for teaching high-leverage practices and content knowledge for teaching:

- Rehearsals
- Simulated student interactions
- Modeling
- Using video to practice (not just analyze)

1 Grossman, McDonald, Kazemi, Franke, Lampert
VIDEO: LOOKING CLOSELY AT ELICITING AND INTERPRETING STUDENT THINKING

and then two squares are not shaded in, so it would be two-thirds.
LEARNING TO ELICIT AND INTERPRET STUDENT THINKING

Two friends equally share $\frac{3}{8}$ of a ball of yarn. How much of the yarn does each friend get?

\[
\frac{2}{1} \div \frac{3}{8} = \frac{16 \div 3}{8 \div 8} = \frac{5\frac{1}{3}}{1} \text{ fraction}
\]

Division is just like flipping the second fraction and then multiplying.
To practice and get close coaching and feedback on:

- eliciting student thinking
- probing student understanding

Two friends equally share $\frac{3}{8}$ of a ball of yarn. How much of the yarn does each friend get?

\[
2 \div \frac{3}{8} = \frac{2}{1} \div \frac{3}{8} = \frac{16}{3} = 5 \frac{1}{3}
\]
VIDEO: ASSESSING BEGINNING TEACHERS LEARNING TO ELICIT AND INTERPRET STUDENT THINKING

@practice (Meghan Shaughnessy and Tim Boerst)
### SCORING

**Simulation**

**Initial elicitation**
- Asks the student what he or she did or thought about when solving the problem. *(The question must be focused on student thinking and/or process for solving the problem and must not assume information about the student's thinking that should be elicited)*

**Follow-ups to the initial elicitation (these do not need to be in this order)**
- Elicits where the 6 comes from *(2 tens + 3 tens + 1 ten)*
- Elicits where the 23 comes from *(9 + 6 + 8)*
- Elicits the sequence of adding tens first and then adding ones
- Elicits a description of the combining/regrouping

**Probes the student's understanding of the value of components of the 623**
- 6 is 6 tens
- 23 is 23 ones
- 2 is 20 ones
- 3 is 3 ones

**Probes the student's understanding of why combining is necessary** *(e.g., because the 6 and the 2 are both tens)*

**Asks the student to write**

**Attends to student's ideas in follow-up questions**
- Asks questions tied to specific things that the student **did** *(i.e., questions about the student's writing)*
  - Asks specific questions about the original written work *(e.g., "Where did the 8 come from?")*
  - Asks the student describe/explain aloud what he or she writes down during the simulation
- Attends to and takes up specific ideas that the student

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@practice (Meghan Shaughnessy and Tim Boerst)
VIDEO: AT END OF PROGRAM

Student: Then- Oh, this is a little complicated. I have to put together my tens. I have nine ones.

@practice (Meghan Shaughnessy and Tim Boerst)
WHAT IS THE PROBLEM FOR TEACHER EDUCATION?
THE PURPOSE OF HAVING SOME SHARED EXPERIENCES WITH TEACHING TODAY

1. To clarify and name what the *work of teaching* involves

2. To identify and specify the tasks that beginning teachers must be able to do

3. To challenge and change common beliefs about learning to teach, and 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.
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
¡GRACIAS!

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