

The Work of Teaching and the Challenge for Teacher Education

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Vanderbilt University • September 11, 2008

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An alternative (stealth) title:

In Praise of Prescriptiveness and Training in Teacher Education

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Main argument

We need a system of initial and continuing teacher education that can reliably help prepare ordinary people for effective professional practice in teaching.

- Doing that requires
  - Basing teacher education on the *work of teaching*;
  - Focusing developmentally on the highest-leverage practices;
  - Emphasizing the *performance of teaching* in the curriculum and in assessments.

This must draw on past accomplishments and progress. But it will also require significant change.

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Overview

1. Teaching in the U.S. in the 21st century
2. The work of teaching and the need for professional training
3. Teaching practice inside teacher education: Toward a curriculum and two examples
4. Next steps

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1. Teaching in the U.S. in the 21st century

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The urgency

- Enormous gaps in learning opportunities and disparities in achievement (within U.S. and in international comparisons)
- Rapidly changing school population
- Higher, more complex academic goals
- High expectations for all students

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Teachers matter — a lot

- Persistent evidence that a large proportion of the variability in student achievement gains is due to the teacher
- So one obvious strategy for improving students' opportunities and learning is to ensure that they have teachers who are able to help them learn
  - ❑ Recruitment
  - ❑ Professional training

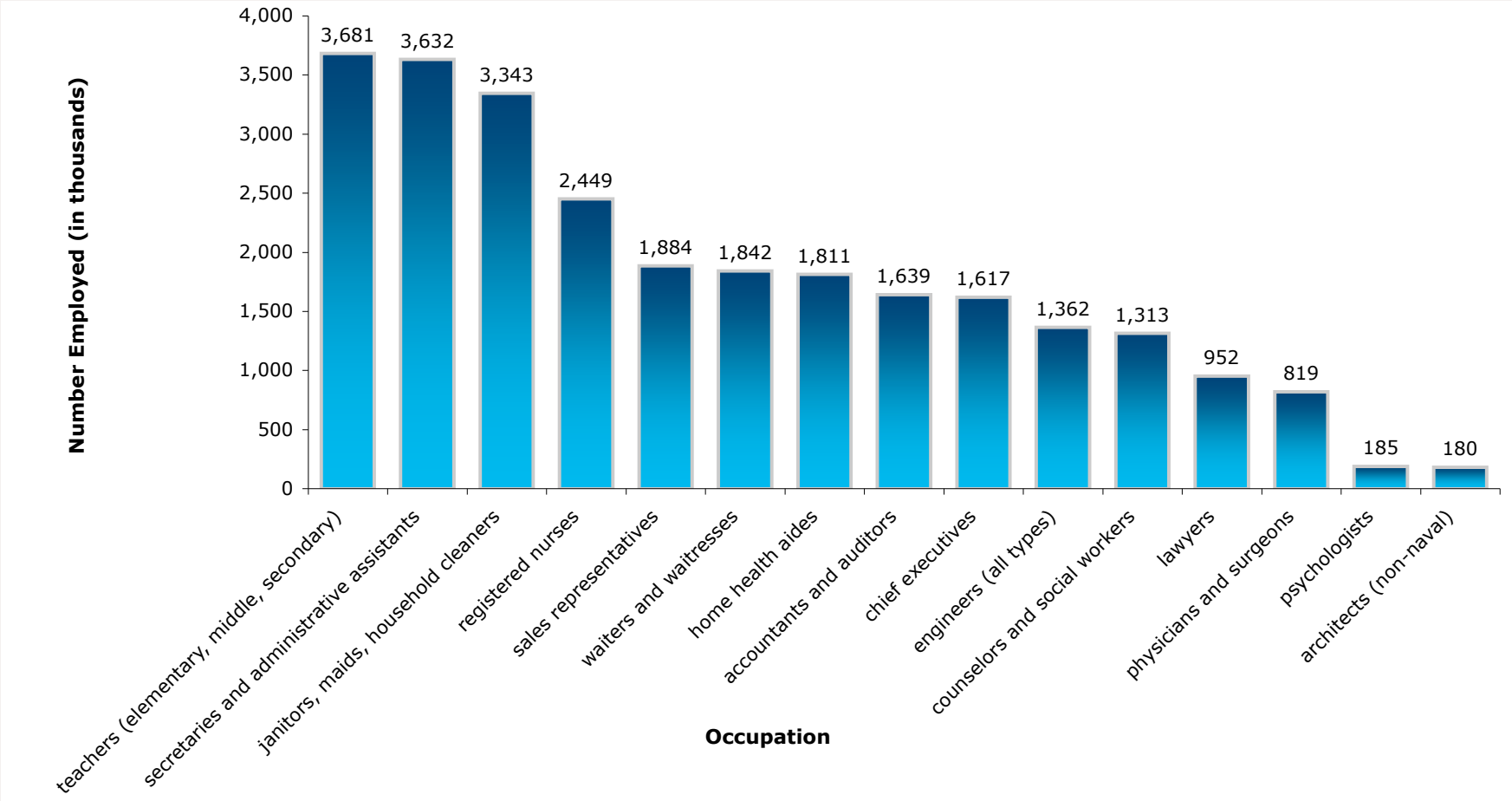
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Why the problem is one of professional training

- The scale of the need
- Teaching as unnatural, intricate, and deliberate work

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The realities of scale



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2. The work of teaching and the need for professional training

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Teaching as unnatural work*

Common ways of being

- Asking questions to which you do not know the answers
- Telling and showing others, doing things for people
- Assuming you know what others mean
- Correcting and smoothing over mistakes
- Assuming others experience things as you do
- Liking/disliking people
- Being "yourself"

Ways of being in teaching

- Asking questions to which you often do know (at least part of) the answer
- Listening and watching others, help others do
- Probing others' ideas
- Provoking disequilibrium and error
- Not presuming shared identity; seeking to learn others' experiences and perspectives
- Seeing people more descriptively
- Being in professional role

*Jackson, 1986; Murray, 1999

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Teaching fractions in third grade

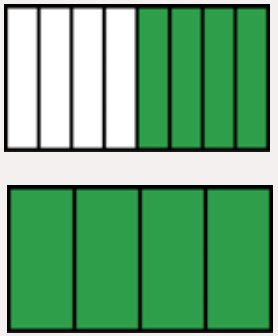
Comparing fractions

Multiple representations: area model, number line

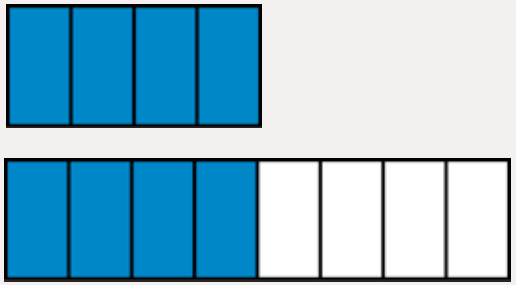
Which is more—

$\frac{4}{4}$ or $\frac{4}{8}$?

Lin's explanation:



Kevin's error:



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Teaching as intricate and deliberate work

1. "Off camera": Before this episode
2. During these 6 minutes

What are some specific tasks required in order to teach this segment?

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Teaching as intricate and deliberate work

"Off camera": Before this episode

1. Learn about individual children and what they know, care about, are worried about, can do, etc.
2. Establish the environment to manage behavior
3. Teach intellectual habits (e.g., drawing, speaking to peers, knowing and being able to choose and make different kinds of mathematical moves)
4. Choose the specific problem: Which is more 4/4 or 4/8? Why that question? Why those numbers? What's a similar or better choice?

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During these 6 minutes

12:58:35—Open the discussion: use specific tone, body movement around the room, choose whom to call on, and call on that child

12:58:38—Watch students while walking around; figure out who is drifting and encourage students' attention; maintain tenor of class while Lin draws

1:00:58—Lin completes drawing. Decide what to do about "I took four out of it"; direct her to repeat, "more loudly"; ask others to comment; work to get other students to comment besides Bernadette

1:01:28—David comments. Work to understand; manage risk of losing class; decide not to take up; close interchange with David kindly.

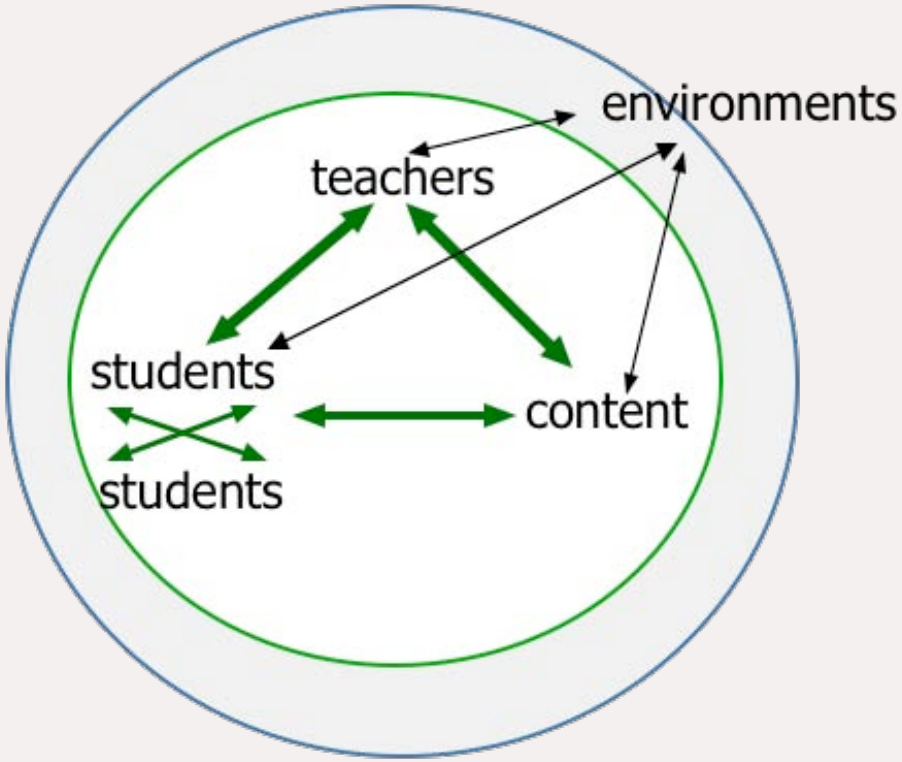
1:02:40—Bernadette suggests the number line. Decide to have her work on the side; make her a number line to work on.

1:02:57—Kevin agrees and says first he did something else that was wrong. Decide to probe and to take this up; highlight for others; amplify by drawing incorrect picture on board

1:24:57—Pose question to assess students' understanding; make up specific question; decide how to take up answers

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Teaching as unnatural, intricate, and deliberate work



- Instruction as the "black box" of interactions among students, teachers, content
- (Cohen) Teaching is a thoughtful human construction designed to improve learning
- Teaching practice is deliberate and attentive.
- Practicing teachers seek to connect their teaching to students' learning.
- Coordinating, over time, and with groups of students to accomplish specific goals

Cohen, Raudenbush, & Ball (2003); Lampert (2001); Lee (2007).

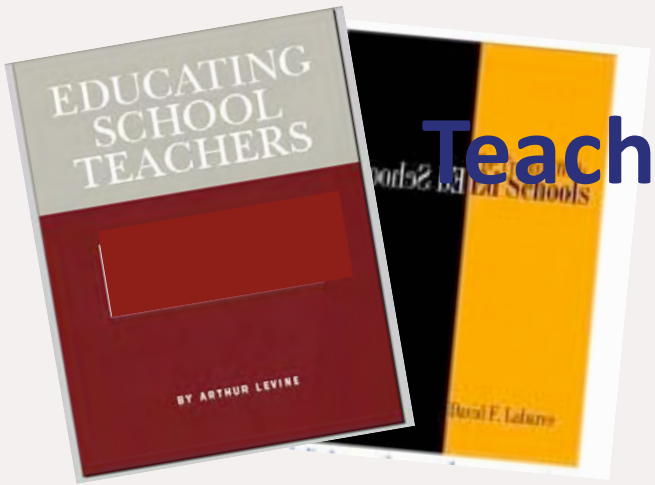
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Given the scale of the need and the fact that teaching is unnatural, intricate, and deliberate work . .

. . .then equipping all students with good teachers is a problem of effective teacher education.

BUT —

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Teacher education is under siege

Widespread criticism:

- Vacuous curriculum
- Lack of connection to practice
- Weak students
- Low requirements
- Lack of evidence of its effects

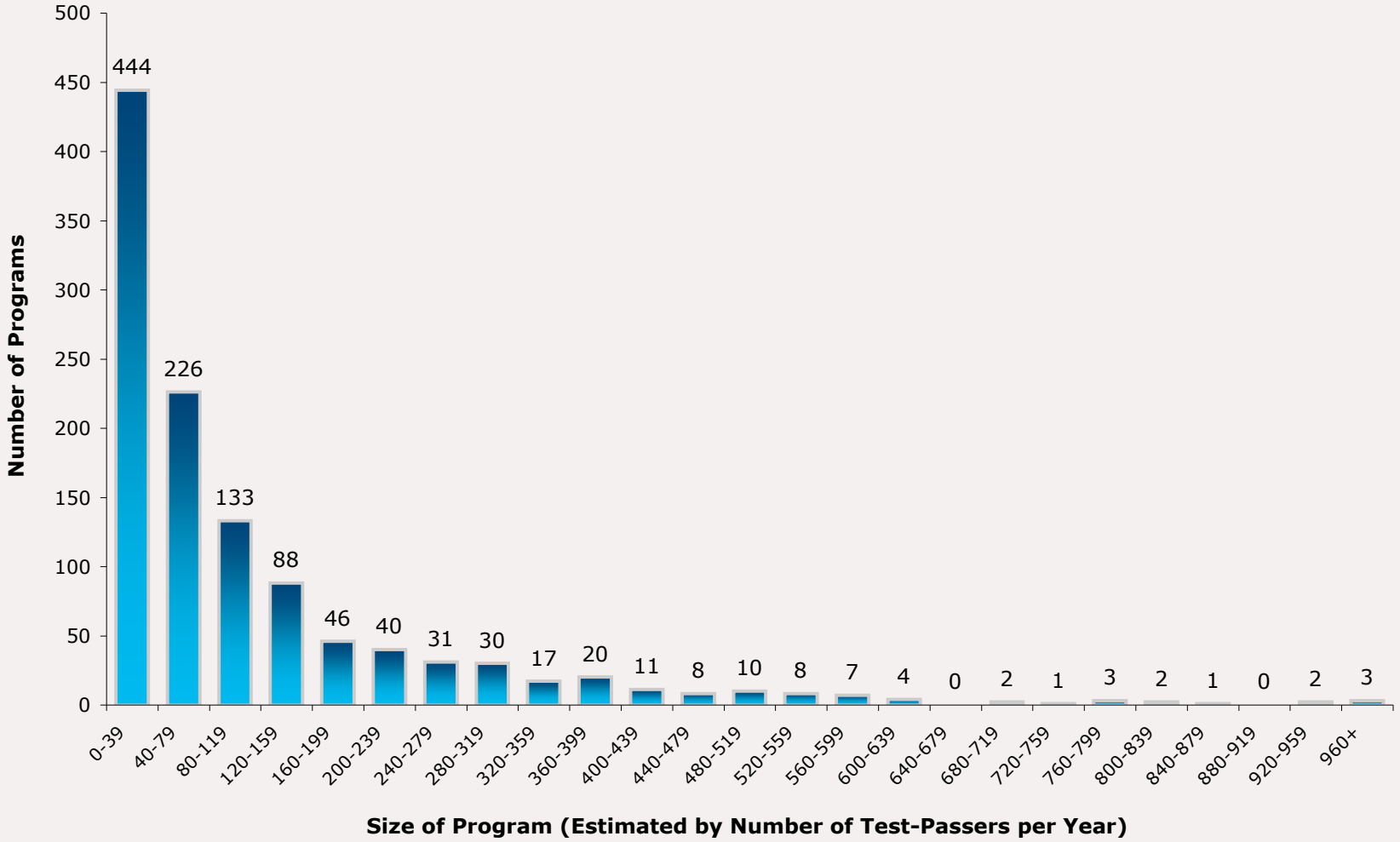
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Our critics are partly right

- Many different structures; more variation within pathways than among them
- A distributed and unassembled enterprise
- Failure to demonstrate consistently that professional training makes a difference

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A distributed (and unassembled) enterprise



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The enterprise, however arranged or not, is simply not doing well enough.

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We lack a reliable system to prepare professionals for practice

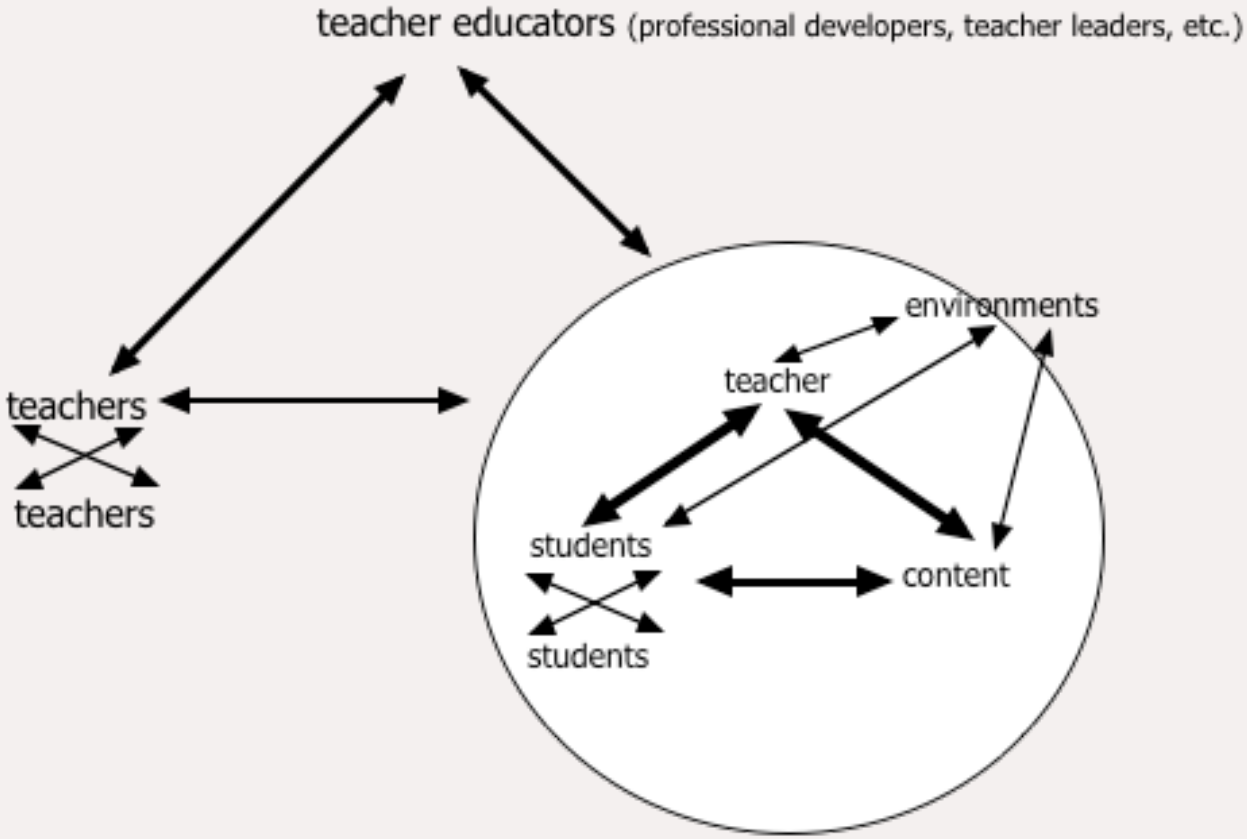
- A curriculum off-center, emphasizing knowledge and beliefs rather than practice
- Field experience often focused more on reflection than on development of actual skill and judgment
- Assessments that do not appraise professional effectiveness
- Inappropriate subject matter preparation
- Inadequate preparation for diversity of U.S. classrooms

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3. Teaching practice in teacher education

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Teaching practice as the content of teacher education



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Toward a curriculum and pedagogy for teaching practice

- *What* is the "content"?
  - How to "decompose" and articulate the work of practice (Grossman and her colleagues)
  - How to see it when so much is invisible (Lewis, 2007)
  - What is generic and what is subject-specific or context-specific
- *How* can practice be practiced?
  - Rehearsal
  - Approximations to real practice
  - In real time
- *Where* can practice be practiced?
  - Virtual, designed, real settings (Lampert)
- How can practice be *taught and assessed* in ways that do not convert it to propositional knowledge and analysis?

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Identifying what to teach

- Decompose the work of teaching into smaller practices that:
  - can be articulated, unpacked, studied, and rehearsed
  - can be reintegrated into real-time teaching
- Choose practices that are "high-leverage" for beginners
  - Occur frequently in teaching
  - Core to different approaches to teaching
  - Crucial to improve the learning and achievement of all students
  - Can be articulated and taught
  - Accessible to preservice teachers

Grossman and Shahan, 2005; Boerst, Sleep, and Ball, 2006; Ball, Sleep, Bass, and Boerst, in press

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A few examples . . .

- Interacting with pupils' caregivers
- Posing well-framed questions
- Launching a task
- Putting material up for pupils to use (diagrams, words, tasks)
- Assessing and diagnosing pupils' skills and knowledge
- Learning about pupils' contexts

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Two cases

1. Teaching students to use mathematical knowledge for teaching (modeling and critique)
2. Teaching students to do guided reading (rehearsal and feedback)

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Teaching practice

#1: Modeling subtraction

- Learning mathematics for teaching
- Developing skill and precision with modeling

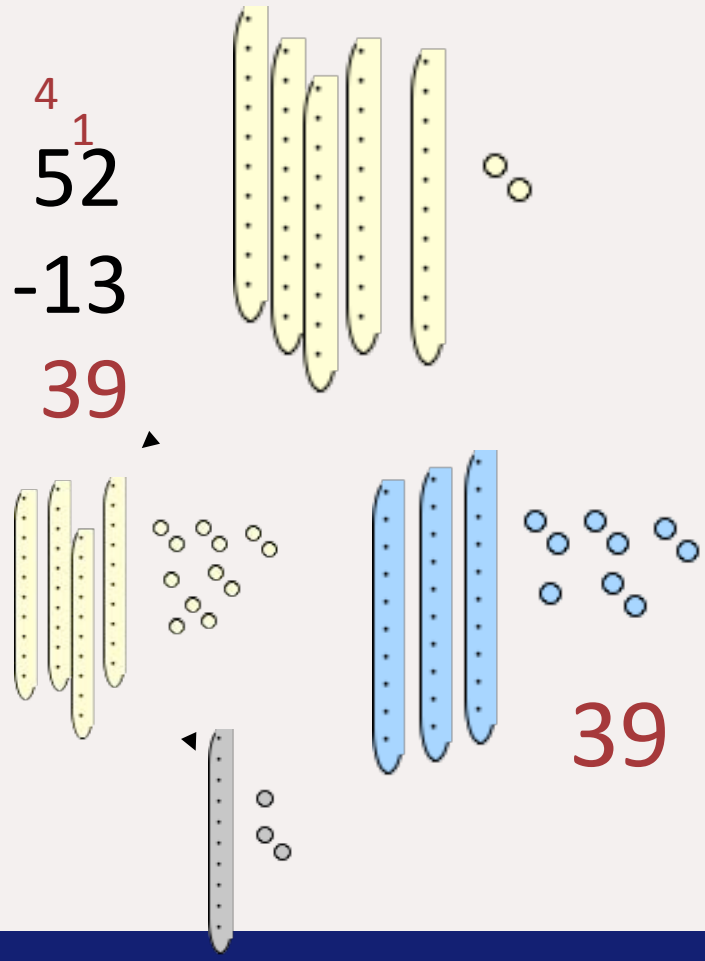
#2: Rehearsing guided reading

- Learning to talk about and read a book
- Practicing articulating and integrating different instructional goals

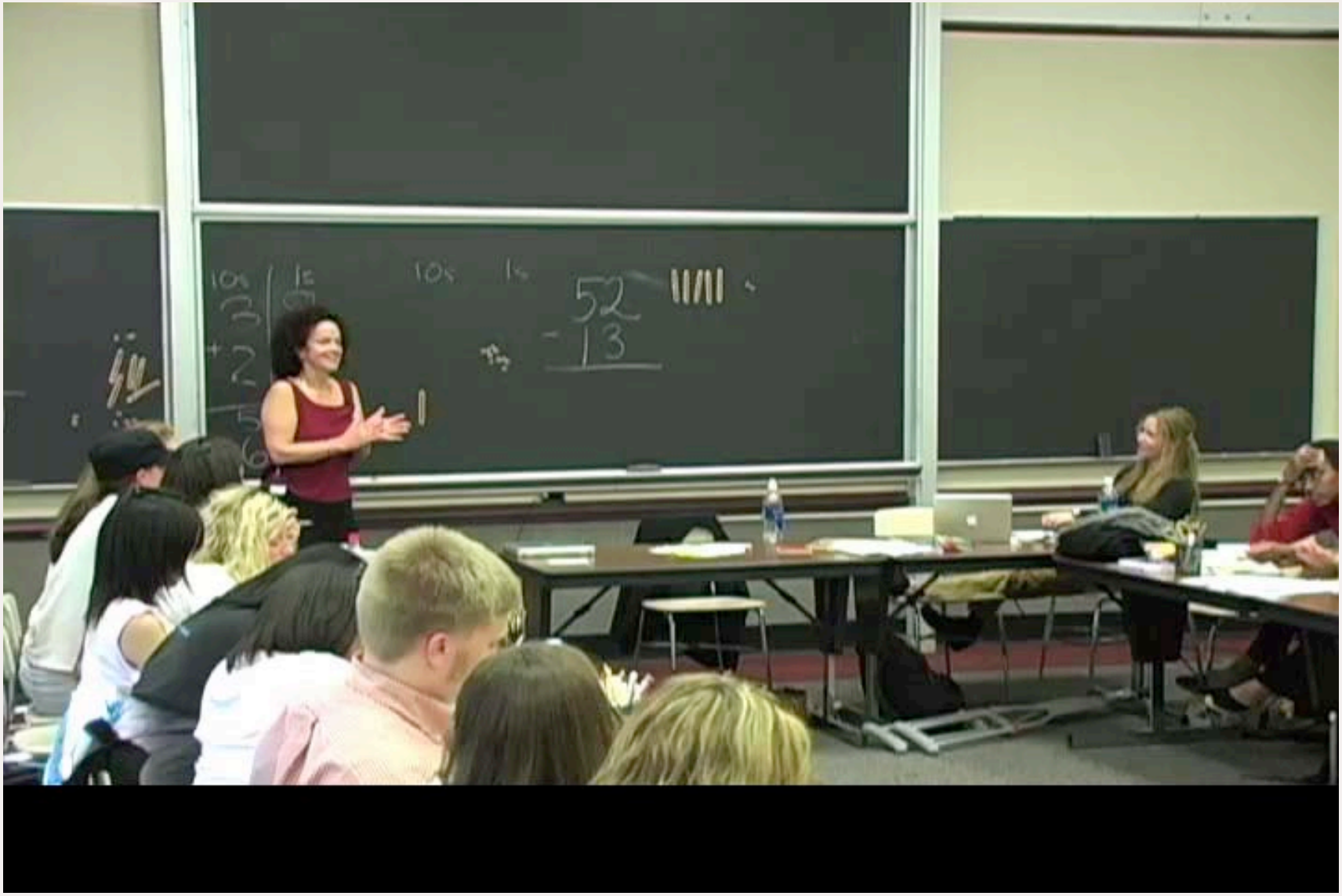
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Using specialized content knowledge:
Modeling subtraction with base-ten materials

- Mapping closely between actions with the materials and the symbolic representation
- Showing that "borrowing" is actually regrouping, or "re-writing" a number
- Developing fine attention to details of doing the representing



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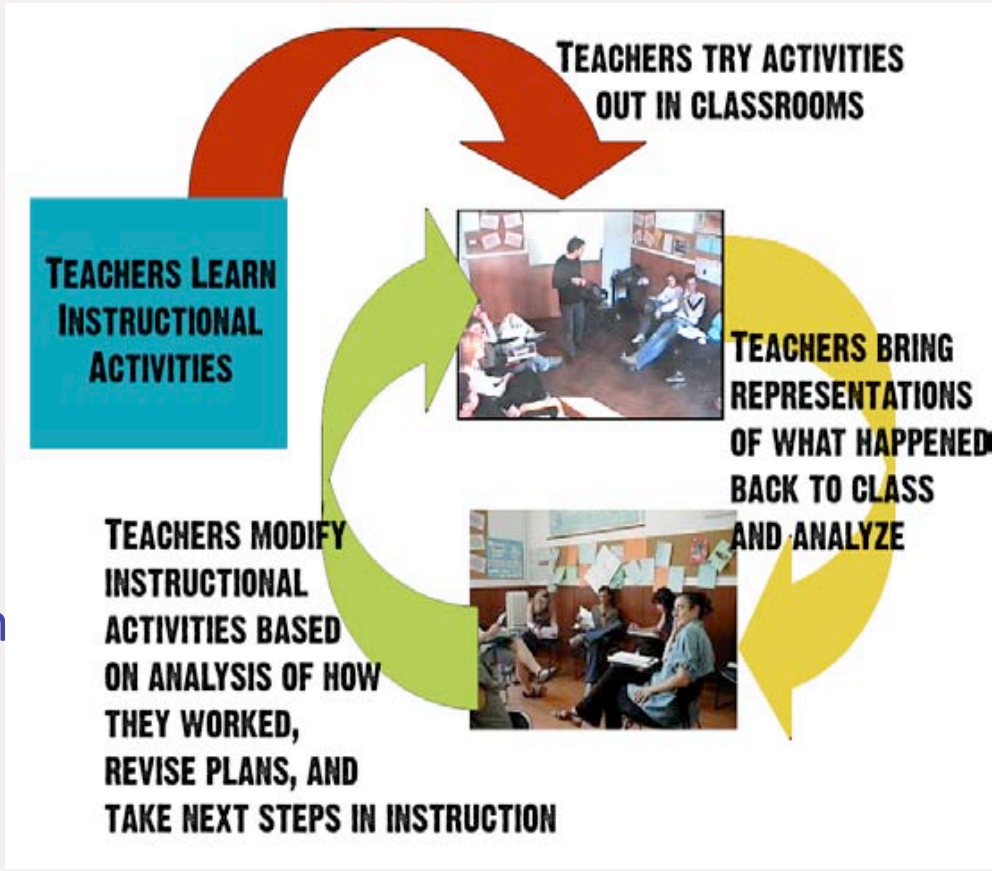
Performing instructional moves:
Rehearsing reading aloud

1. Word study:

   wind — wind

   (whined)

2. Setting up reading with specific guiding questions
3. Anticipating and providing directions
4. Using one's voice, writing on clipboard



(Lampert & Scott, 2007)

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Cases of teaching practice

SIMILARITIES

1. Outside the classroom (but still "in practice")
2. Subject-matter focused
3. Real pieces of the work
4. Roles of other students

DIFFERENCES

1. Reading: whole chunk of the work
2. Math: isolated element
3. Role of teacher educator

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4. Centering teacher education in practice: What are the challenges —and the resources?

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Challenges of centering teacher education on practice

1. Lack of an adequate knowledge base about teaching practice
   - Inadequate language (in English)
   - Difficulty parsing the work into basic elements
2. Problem of expertise and tacit knowledge
3. Widely held view of teaching as uncertain, artistic, and unable to be specified
   - Resistance to seeing teaching as high-precision work, requiring high levels of skill
   - View of detail as "prescriptive" and as de-skilling professional work
4. Lack of people prepared to teach practice
   - Unspecified professional group, with no preparation for the work
5. No common K-12 curriculum in the U.S. and lack of agreement about what to make core

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Resources for centering teacher education in practice

- Our past history of microteaching and competency-based teacher education
  - Analyze similarities and differences
  - Integrate subject matter knowledge for teaching, skills, discretionary adaptation and judgment
- Progress made on content knowledge for teaching
- Other professions (Grossman)
  - Developing an agreed-upon curriculum of practice
  - Broadening idea of "clinical" and ways to structure and support it
  - Attention to relational work

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In Praise of Prescriptiveness and Training in Teacher Education

- We urgently need to improve all students' opportunities and learning.
- This requires skillful teaching.
- Teaching is intricate work, and not natural, and needs to be learned and, hence, taught.
- Seeing teaching as skilled, high-precision work, that is not a matter of personal style and preference, is to acknowledge its professional nature, not to repudiate its "creativity."
- We need a reliable system of preparing many ordinary people for expert practice.

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Slides will be available
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