



Assessing Teaching Practice for Learning and for Licensure

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Warm up problem

Nicholas Kristof, April 30, 2006; *New York Times* op ed:

Suppose Colin Powell tires of giving $100,000-a-pop speeches and wants to teach high school social studies. Suppose Meryl Streep has a hankering to teach drama. Alas, they would be "unqualified" for a public school. Elite private schools would snap them up, of course, but public schools that are begging for teachers would have to turn them away because they don't have teacher certification. That's an absurd snarl in our education bureaucracy. Let's relax the barriers so people can enter teaching more easily, either right out of college or later as a mid-career switch. Sure, there are lots of other problems in the U.S. education system. But this is one of the easiest to solve.

. . . applicants should be eligible for teaching jobs if they have graduated from a recognized college, have passed a competency test in their field and have passed a rigorous background check.

1. **Write: Do you agree or disagree? Why?**
2. **Turn to the person next to you and discuss what you each wrote.**

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Goals for this session

1. Clarify "teaching quality"
2. Consider alternatives for how to get it, and make argument for focusing on practice
3. Explore components of what would be involved in building a system focused on producing responsible teaching practice

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The urgency

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



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Teachers matter––a lot

- Differences in teachers account for 12%-14% of total variability in students' mathematical achievement in each of grades 1, 2, and 3.
- Students assigned to three effective teachers in a row score at the 83rd percentile in math at the end of 5th grade; children assigned to three ineffective teachers in a row score only at the 29th percentile.
- The cumulative effects of being taught by a highly effective teacher can substantially reduce differences in student achievement that are due to family background.

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Not just any teaching. We want . . . "_____ teaching"

- effective
- learner-centered
- direct and explicit
- ambitious

- **. . . high-quality**

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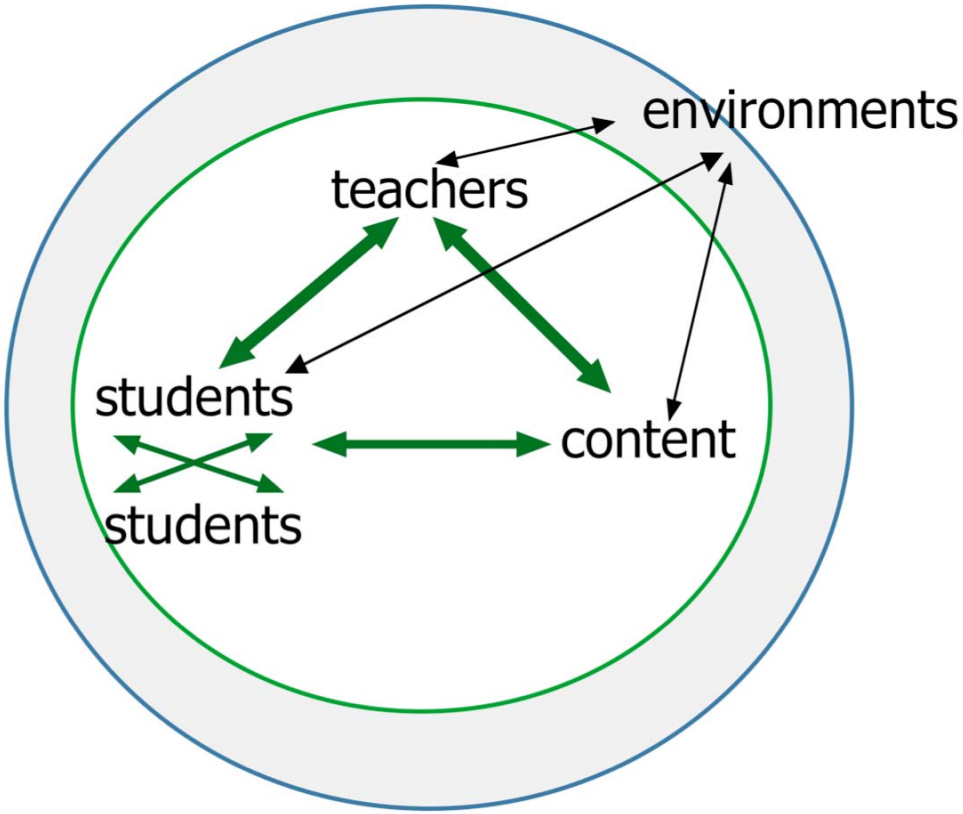
The adjectives for teaching: (Why) do we need them?

1. To ensure the connection to student learning (e.g., effective)
2. To name the surface features (e.g., direct and explicit, learner-centered)
3. To specify the learning goals (e.g., ambitious)

- **Do other professions do this?** (e.g., effective nursing)
- **Do the skilled trades do this?** (e.g., ambitious plumbing)

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What is (responsible) teaching?



- **Takes responsibility for:**

1. deliberately maximizing the quality of the interactions . . .
2. . . . in ways that maximize the probability that students learn
3. . . . worthwhile content and skills (Common Core provides the ground for this)

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We know that every student does not get responsible teaching every day, in every subject.

How could we achieve that goal?

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Two schools of thought, or bets

1. **Focus on teachers**
   - recruitment, selection
   - rewards and sanctions
2. **Focus on teaching**
   - Training
   - assessment
   - curriculum

What are the reasons to bet more on one or the other?

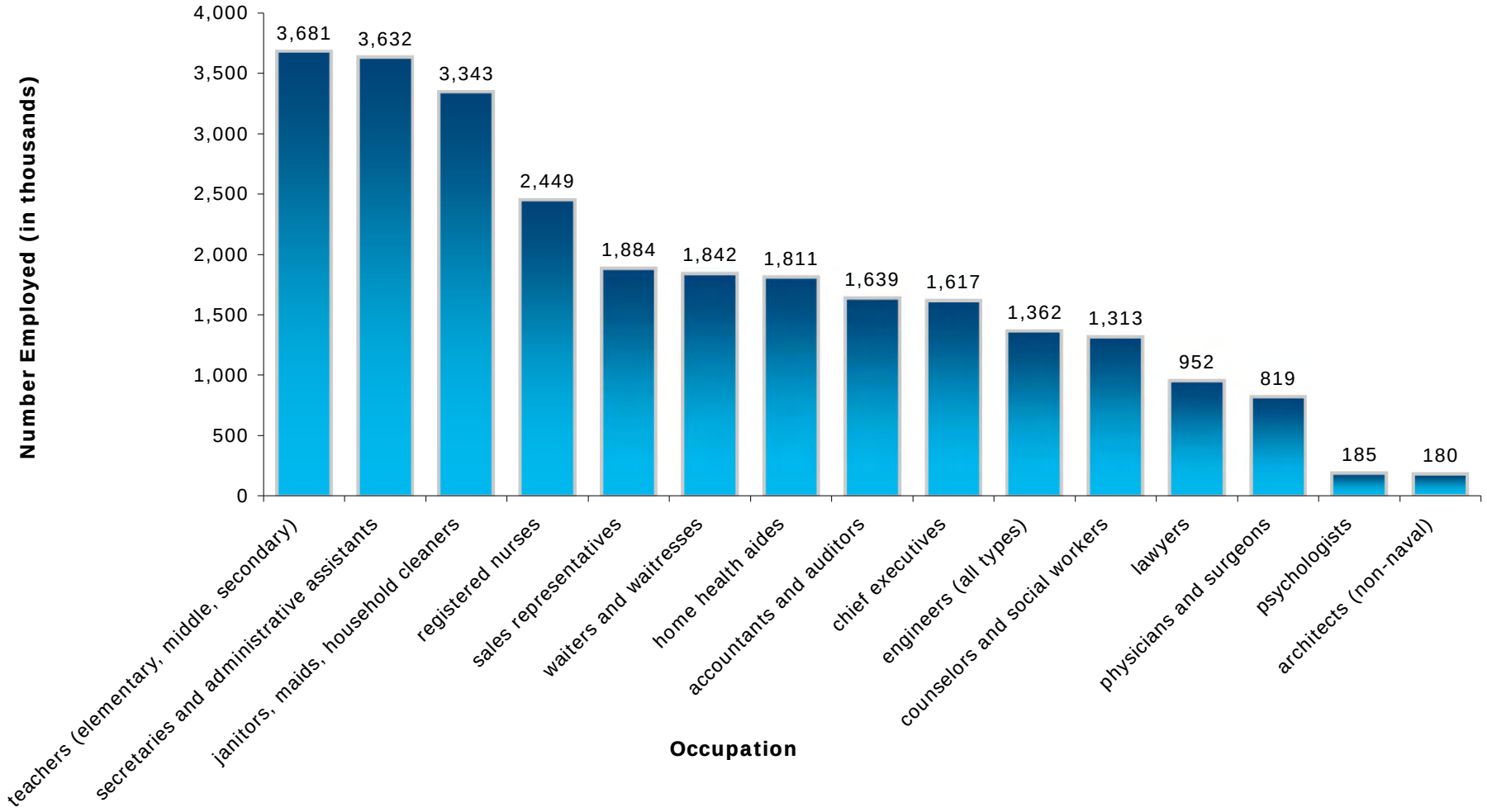
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Why the problem is one of professional training

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

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The realities of scale



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No reliable *system* for preparing and developing teachers in the U.S.

- No common curriculum for teacher training — specific, professionally-agreed upon learning objectives for new or practicing teachers
- Over 2,000 independent providers of initial teacher training; over 2,000 curricula
- No common standard of performance for entry to independent practice with (on) young people
- Teachers report doing most of their learning on the job

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Standards for plumbing

- Install copper and copper alloy piping
- Build a plumbing trap
- Vent a sanitary drainage system
- Disassemble and rebuild a centrifugal compressor
- Maintain joints, connections, supports, and hangars
- Install and maintain storm drainage systems

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Plumbing training and assessment



- Clear, detailed performance expectations
- 5 year apprenticeship
- 1700-2000 hours on-the-job training
- 246 hours related classroom instruction
- 1-year probationary period with on-the-job evaluations

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Standards for medical practice

- e.g., Conduct a chest examination:
  - Observe respiratory efforts and note presence/ absence of respiratory distress
  - Confirm midline tracheal position with gentle palpation anteriorally
  - Percuss the chest on left and right
  - Ascultate the chest using using the diaphragm of the stethoscope on both right and left sides

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Physician training and assessment

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Standards for piloting

- Conduct a preflight inspection
- Perform normal and cross-wind approaches and landings
- Execute straight turns and climbing turns
- Perform effective visual scanning
- Avoid a runway incursion
- Perform crossed control stalls
- Perform s-turns across a road

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Pilot training and assessment



- 100+ hours of flight-time
- Knowledge tests
- Practical tests conducted by an FAA inspector

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No equivalent in teaching

- Performance expectations for novice and more experienced teachers underspecified
- Teaching standards often focus on process rather than on the specific skills involved in teaching specific content, e.g.:

"The teacher uses a variety of instructional strategies to engage students in challenging academic content."

rather than

"The teacher poses a precise task and uses a sequence of questions designed to focus students' attention on the core concept of 'the whole' in fractions."

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An insufficient licensing system

- Most assessments focus on knowledge rather practice
- No assessments measure a candidate's capacity to teach specific content to specific children
- Assessments of practice tend to be portfolio-based, reflection-oriented, and under-detailed
- No confidence: No clear link between teacher licensure and student learning

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Barriers to an improved training and assessment system

1. A confounded view of professionalism
   - Agreement on the complexity of practice
   - Belief that teachers should develop their own approaches to practice
   - Disdain for prescriptiveness and detail as “deskilling” (ironic)
2. Lack of attention to teaching
   - Black box orientation: value-added fails to investigate variation
   - Orientation toward “constructivist” or “student-centered” classrooms
   - Weak language
3. Lack of infrastructure to support coherence across the education system:
   - No common curricula or criterion-referenced exams for K-12 students

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Alternative systems: France, Finland, Singapore



- Common K-12 curricula and criterion-referenced exams
- Prospective teachers study the common curriculum in detail and practice how to teach it
- Inspection system evaluates teachers' instructional capability in reference to the common curriculum

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The dawn of a new day in the U.S.?



- Common Core State Standards
- Widespread agreement that teachers matter
- Major shift: teaching can — and *must* be — taught



March 7, 2010
Sunday NYT magazine
•Elizabeth Green

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Proposition:

It is possible to build a teaching assessment system focused on practice.

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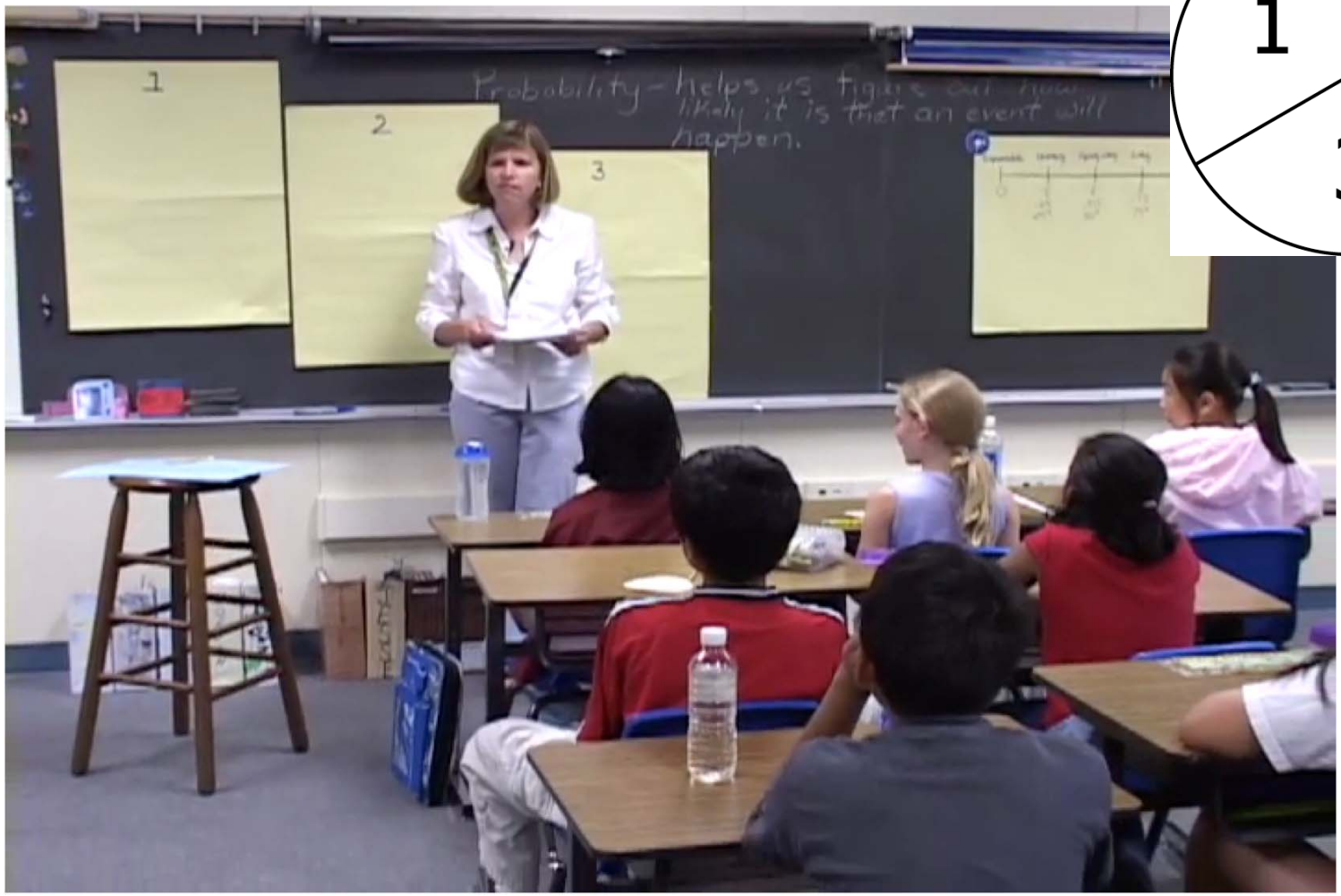
The challenge

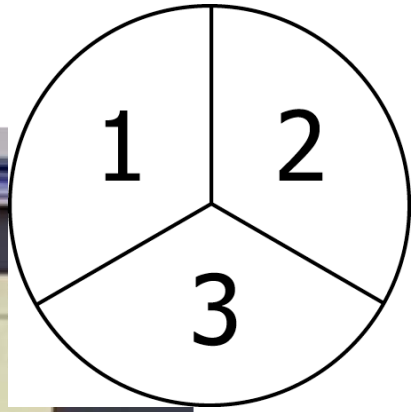
1. Specify and develop consensus around the core tasks and activities of teaching and around the content most important for teachers to understand deeply and flexibly
2. Choose the elements of practice most necessary for responsible independent practice
3. Articulate those elements at an effective grain-size
4. Manage the general and subject-specific aspects of teaching practice
5. Manage the context-specific nature of teaching practice

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What practices of teaching do you see?

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What practices of teaching do you see?

- Making transitions
- Getting and holding the floor
- Introducing a mathematical term
- Creating a safe classroom learning environment
- Designing and sequencing lessons for specific mathematical goals
- Engaging students in experimentation to develop probability concepts
- Posing questions
- Assessing students' prior knowledge and their learning
- Launching a task
- Providing positive reinforcement

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Introducing a mathematical term

1. "What numbers can you get?" (concept)
2. "We call those outcomes." (new term)
3. "Possible results of an experiment." (definition)
4. Puts up poster. (signals importance, supports remembering and using term)
5. "How many outcomes are there?" (practice)

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What characterizes "high leverage" practices?

- Central to building bridges between students and content
- Crucial to improve the learning and achievement of all students
- Address inequities that can arise from diversity of opportunity and experience
- Highly useful and frequent in teaching
- Not natural to do; improve upon normal help

(Ball, Sleep, Boerst, & Bass, 2009; Grossman & McDonald, 2008; Grossman, Compton, Igra, Ronfeldt, & Shahan, 2009; Lampert & Graziani, 2009)

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Examples of high-leverage practices

- Specifying an appropriate and ambitious learning goal, connected to standards
- Explaining core ideas and processes
- Choosing and using representations, examples, and models of core content
- Setting up and managing small-group work
- Recognizing and identifying common patterns of student thinking in a content domain
- Gathering and interpreting information about students' progress toward specific learning goals
- Engaging in small conversations with students, to build relationships and trust
- Conducting a meeting with a parent or caregiver
- Establishing and maintaining a safe, orderly, and respectful learning environment

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Assessing and evaluating teaching

- Tapping multiple aspects of practice
- Warranted by logic, connection to student growth, wisdom of practice, research
- Linked to student learning gains
- Geared to specific K-12 curriculum (CCSS)
- Offering useful information for improvement

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Assessing practice: Four examples

Practice to be assessed	Mode of assessment	Details
Diagnosing common patterns of student thinking in elementary mathematics	Online, in response to video clips or written student work	Candidate will evaluate student productions, identify the common pattern or error and next steps
Conducting a whole-class discussion of a text in secondary English Language Arts	Live classroom episode in response to prompt; live or remote observation	Candidate will be given a short period of time in which to design and enact instruction in response to a specific prompt
Using mathematical knowledge in teaching	Online, or paper-pencil	Solving specific mathematical problems that arise in teaching
Conducting a meeting with a parent/guardian	"Standardized patient" protocol	Candidate will interact with "parent" and respond to standard high-leverage situations

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Assessing content knowledge for teaching

(a)

$$\begin{array}{r} 49 \\ \times\ 25 \\ \hline 405 \\ 108 \\ \hline 1485 \end{array}$$

(b)

$$\begin{array}{r} 49 \\ \times\ 25 \\ \hline 225 \\ 100 \\ \hline 325 \end{array}$$

(c)

$$\begin{array}{r} 49 \\ \times\ 25 \\ \hline 1250 \\ 25 \\ \hline 1275 \end{array}$$

What mathematical steps might have produced these answers?

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An assessment *system*

- Tapping multiple aspects of practice
- Warranted by logic, connection to student growth, wisdom of practice, research
- Linked to student learning gains
- Geared to specific K-12 curriculum (CCSS)
- Offering useful information for improvement
- Connected to an ongoing R&D agenda to adjust and improve metrics
- Including detailed articulations of effective and less effective practice as well as video exemplars, to support learning

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Other challenges

- Accounting for variation in student population, teaching context
- Reliability
- Efficiency, feasibility, and affordability
- Training of assessors or inspectors

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What assumptions are we making?

- That a redesigned teaching assessment system could precipitate and support changes in teacher training
- That skillful teaching needs to be *learned*, and that people *can* learn to do it

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Post-test

1. Name one practice of teaching you would consider high-leverage and that you would want someone to be sufficiently skilled before being licensed for responsible independent practice on young people.
2. Identify a possible fair and valid way to assess performance of that practice.
3. Share with others nearby.

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Now is the moment

- Advent of the Common Core
- Intense preoccupation with debates over pathways to teaching
- Proposals to fire teachers who are “no good” in absence of valid assessments
- Our goals for students demand it

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THANK YOU!

Slides will be available
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(Google "Deborah Ball")

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Credits



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