Identifying High-Leverage Practices for Teacher Education

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Recent reports call for improvements in teachers' clinical preparation

- Gates Foundation Report, *Race to the Top and Teacher Preparation* (March 2011)
- NCATE Blue-Ribbon Panel, *Transforming Teacher Education Through Clinical Practice* (November 2010)
- NCTQ Report, *Ed School Essentials: A Review of Illinois Teacher Preparation* (2011)

The idea of "practice" in learning to teach is not new

- Teachers cite experience as most important source of learning (Jackson, Lortie)
- Student teaching (or "practice teaching") long a key component of teacher education
- Most programs include substantial practicum or field experience

A concern for preparing teachers for practice, but . . .

- More attention to the extent and quality of placement than to an explicit clinical curriculum or pedagogy
- No consensus about the set of instructional practices that are essential for beginners to be able to carry out

The challenge: Building an explicit approach to the teaching of practice

- Beyond the equivalent of "seat time"
- Differentiating the long-held faith in "experience" and "practice" to build a curriculum for learning practice
- Getting clear about what novices need to learn to do, and coaching them intensively as they develop proficiency

Key questions

1. What do we mean by "practice-centered" or "outcomes-oriented" teacher education?
2. What is the difference between traditional "field experience" and learning through an explicit clinical curriculum?
3. What is involved in designing a professional education curriculum focused on practice?
4. What problems must be managed in specifying a explicit clinical curriculum for the training of teachers?

What do *we* mean by "practice-centered" teacher education?

Focused on beginning teachers' ability to <u>do</u>

(as well as know, care about, be committed to)

key aspects of the work of teaching.

Problems in designing practice-based teacher education

1. Developing a common and sufficiently precise language for the work of teaching (Grossman, et al..)
   - Teaching practice has not been decomposed into practically-sensible parts
   - Lack of useful terms for the parts, and where there is language, it is often not shared
2. Articulating teaching practices at a useful grain size
3. Managing the specific versus general aspects of teaching proficiency
   - Subject-specific versus generic
   - Local and contextualized versus general
4. Distinguishing the highly predictable and routine ("textbook cases") from the uncertain and highly complex
5. Determining what is worth trying to teach about practice, and when
   - What is of most risk to students when beginners lack skill
   - What can — or must — be learned over time

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

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

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

Physician training and assessment

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 uses probing questions to provoke students' engagement in the main themes in Romeo and Juliet in order to introduce the play."

Core components of practice-centered teacher education

- **Curriculum**: What is there to learn in order to become a competent beginning teacher?
- **Instructional activities and settings**: What specific approaches and settings work best to prepare and support novices as they *do* the complex relational, psychological, social, and intellectual work of teaching?
- **Assessment**: How do we know when beginning teachers are ready to take responsibility for their own classrooms?

What it would take

- A common core K-12 curriculum, or a means toward it
- Developing common "standard of care" for practice, with assessments of performance linked to student outcomes
- Developing capacity for the teaching of practice: resources, training, and shared professional knowledge
- Working in common rather than in competition
- Building continuous cycles of improvement

3. Five problems inherent in making practice the center of teacher education, and an example from the University of Michigan

The challenge

Professionals working toward practice-centered teacher education would need to manage at least five inherent problems:

1. Specify and develop consensus around the core tasks and activities of teaching
2. Choose the elements of practice most necessary for entrants to the profession
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 practice

1. Specifying and developing consensus around core tasks and activities of teaching

- Absence of robust professional knowledge base
- Link between particular teaching practices and student learning not always clear
- Weak common language for describing and studying teaching

2. Choosing elements most important for competent beginning practice

- Given vast scope of teaching practice and brevity of professional training, what is most important?
- Are some aspects of practice fundamental to more advanced elements?
- Are there elements of practice that are best or only learned through formal training (rather than experience)?
- What makes a "safe" beginner?

3. Articulating core practices at an effective grain-size

- How to decompose the intricate practice of teaching into parts that are small enough to be learnable but are still meaningful?
- Does it matter if core practices are of different "grain-sizes"?
- What to do about practices that cut across multiple elements of instructional work?

4. Managing the general and the subject-specific aspects of teaching

- How does the work of teaching differ from one subject to the next?
- Are there practices that all elementary teachers, all secondary teachers, or all K-12 teachers need to be able to do, independent of their field?
- What are the subject-specific practices that are most important for beginners?
- How to manage without a common K-12 curriculum in the U.S.

5. Managing the context-specific nature of instructional practice

- How does context interact with a given teaching practice?
- How can we account for that interaction in teacher education, particularly given the diversity of learners and instructional contexts in the United States?

An example: Identifying high-leverage practices at the University of Michigan

- At U-M, we have tried to manage the first three of these problems by:
- Enlisting the experience and imagination of a broad range of practitioners and researchers to create a comprehensive "map" of the work of teaching
- Specifying and using criteria for identifying those aspects of the work that are the most "high-leverage" for beginners
- Deliberately choosing tasks and activities at grain sizes useful for a curriculum of learning to teach

Examples of considerations

- *Considerations central to the practice of teaching:*
  - High probability of making a difference in teaching quality and effectiveness
  - Effective in using and responding to differences among pupils
  - Useful broadly across contexts and content
- *Considerations central to teacher education:*
  - Can be assessed
  - Can be taught to beginners

Examples of high-leverage practices

- Explaining 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
- Selecting and using specific methods to assess students' learning on an on-going basis
- Conducting a meeting with a parent or caregiver

In sum

1. Teaching is a practice, and learning to do it must be centered in and on the actual work.
2. Still, unmediated (or under-mediated) experience is an unreliable teacher in learning to teach.
3. Many professions and occupations make practice more central to preparing beginning practitioners. This is an important direction for the improvement of teacher education through any pathway.
4. We need to identify, collectively, those aspects of the work that are crucial for beginners, and center teacher education on them. We have a strong history and new resources for doing so.
5. The problems of designing practice-centered teacher education should be worked on across programs and approaches to the preparation of teachers.

In this session, we examine the challenge:

- Lots of (new) talk about practice and clinical preparation, but . . .
- Incomplete knowledge about how to design and deliver explicit clinical training in teaching
- In this session, we probe this challenge:
  - Schutz: Learning to teach in real school settings, coaching in literacy
  - Davis & Nelson: decomposing and approximating science teaching
  - Ball & Sleep: attending to content in a practice-focused approach (elementary math)
  - Chavous: attending to learning, context, and diversity

Thank you!

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