

Design Problems and Progress in Practice-Centered Teacher Education

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Goals for this session

1. Set a frame for the issues of trying to design and deliver practice-based teacher education
2. Show (briefly) examples from the work going on at the University of Michigan
3. Discuss how we might work to find common ground in tackling this crucial problem of how to prepare beginners for responsible practice

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?

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

Identifying high-leverage practices (HLPs)

At Michigan, we have tried to manage three (#1, 2, and 5) 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

"High-leverage" practices

- Have significant power in teaching because they:
  - Are central to the daily work of teaching
  - Attend to considerations of equity
  - Are most likely to support student learning
- Fundamental to the development of more complex practice

Identifying high-leverage practices (HLPs)

- Identified and used a set of considerations to identify list of 88 potential HLPs
- Bundled or further decomposed items to achieve a shorter list that highlights a range of crucial features of the work of teaching

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 ongoing basis
- Conducting a meeting with a parent or caregiver

An additional problem

- Lots of (new) talk about practice and clinical preparation, but . . .
- Incomplete knowledge about how to design and deliver explicit clinical training in teaching

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

Building an explicit approach to the teaching of practice

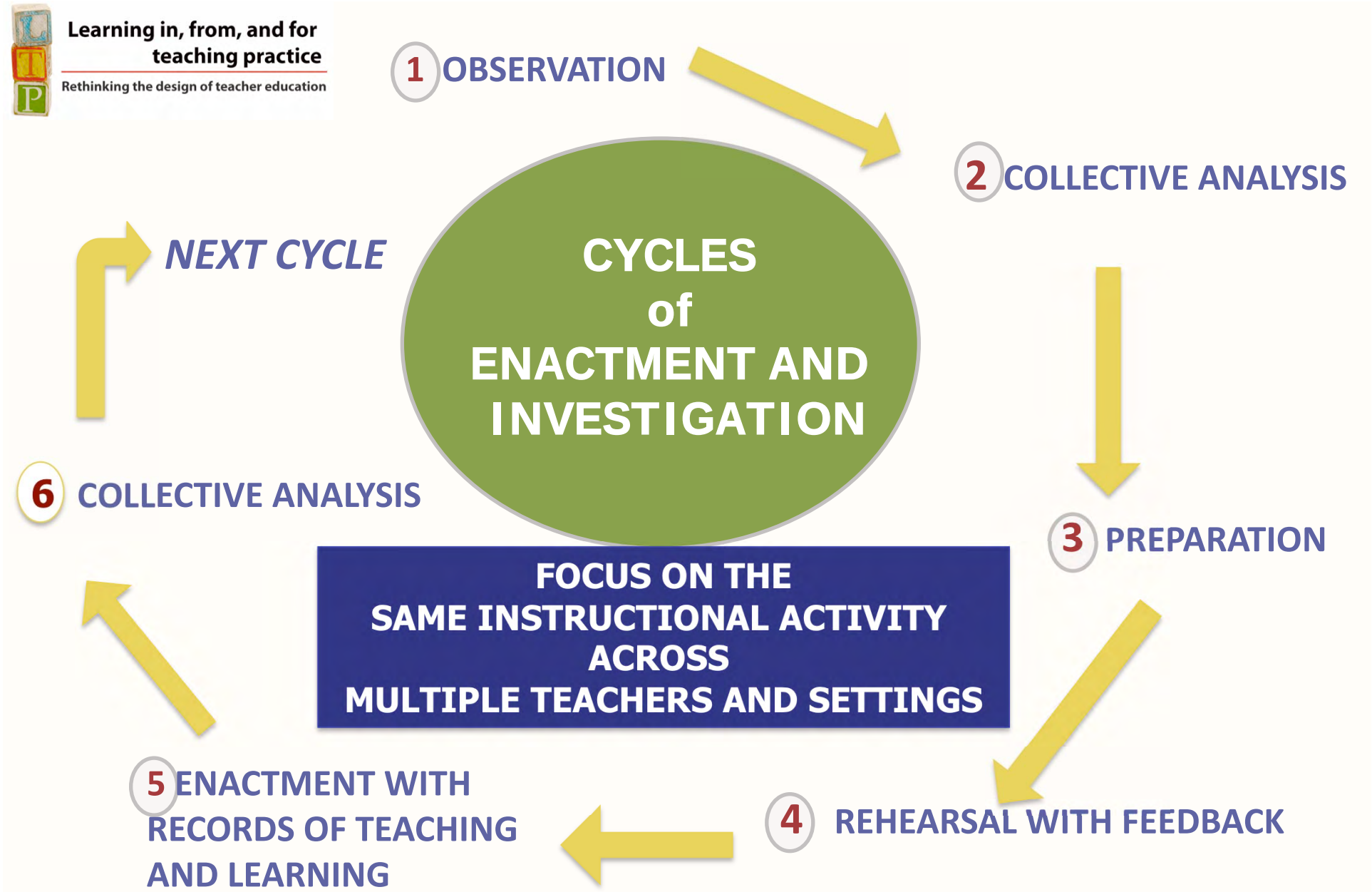
- Beyond the equivalent of “seat time”
- Differentiating the long-held faith in “experience” and “practice” to build a curriculum for learning practice

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?

Key design elements

- **Instructional activities** that serve as "containers" that carry principles, practices, and knowledge (of students, content, curriculum) into practice, and support both *student learning* and *teacher learning*
- **Cycles of enactment and investigation** that provide for deliberate and collective practice and "strong" feedback
- **Designed settings** in which common principles, practices, curriculum materials and learning goals structure teachers' collaborative work on student achievement

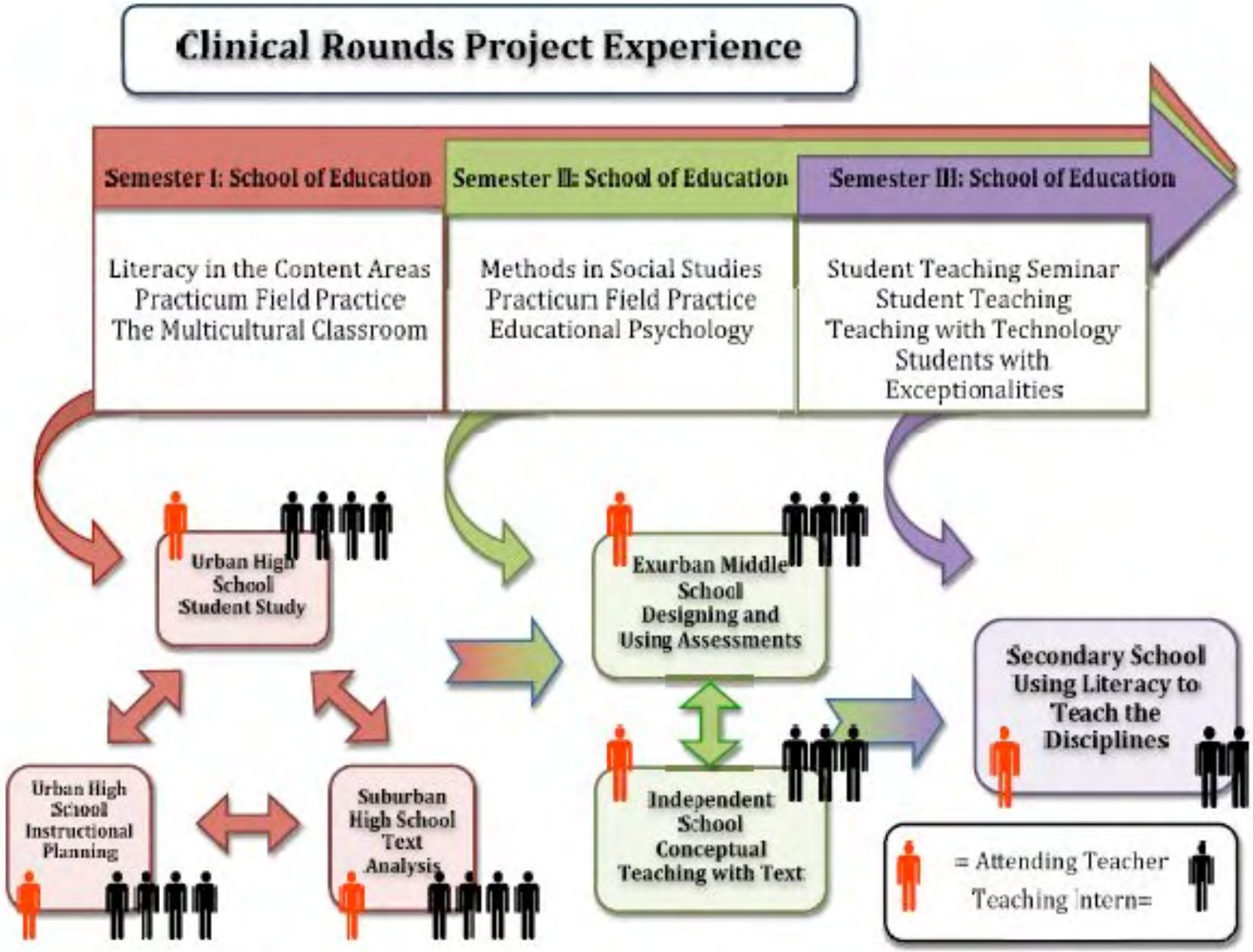


Examples illustrate:

1. Focus on specific content
2. Focus on specific high leverage practices of teaching, decomposed and designed to make them learnable
3. A sequenced curriculum for developing instructional practice
4. Designed settings

Examples from our work at Michigan

1. Secondary history/social studies
2. Elementary mathematics
3. Elementary mathematics
4. Elementary ELA



Moje, E., & Bain, B. (2010). *Clinical Rounds Project*.

Mighty Mustangs Daily Schedule

3:42 – 4:00	Snack/play	
4:00 – 4:40	Homework time	Students work on homework from their regular classroom; mathematics topics vary. If they finish their homework, they can work on math boxes.
4:40 – 5:15	Mini-lesson on fractions concepts	Week 1: Fair sharing problems Week 2: Area models Week 3: Linear models and number line Week 4: Area models with different wholes Week 5: Set models Week 6 & 7: Comparing and ordering Week 8: Culminating events
5:15 – 5:35	Centers	Students rotate to a different center each day. Each week, centers include work on: • Fractions • Whole-number computation • Number sense • Technology
5:35 – 5:45	Wrap up	
5:45 – 6:00	Dinner	

Weekly clinical practice cycle

- Unpack the mathematics that will be worked on in Mighty Mustangs in the upcoming week
- Use records of practice to identify and name the work of teaching, focusing on specific teaching moves and their purposes
- Plan with grade-level colleagues to implement that practice in Mighty Mustangs while teaching the focal content
- Rehearse in class and get feedback from peers and instructors
- Revise and finalize plan for assignment
- Enact practice in Mighty Mustangs, video record
- Immediate debrief with instructor, mentor teacher, and/or peers
- Individual analysis of own video for assignment
- Collective viewing and analysis of select videos during class

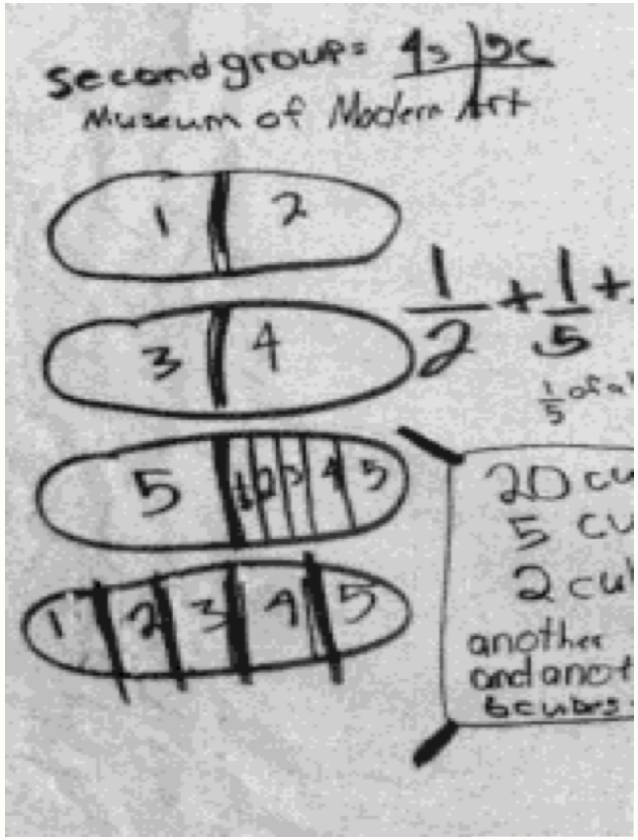
• Performance assessments for each of the focal teaching practices

Learning in, from, and for teaching practice

Rethinking the design of teacher education

Problem being rehearsed

A fifth grade traveled on a field trip in four separate cars. The school provided a lunch of submarine sandwiches for each group. Group 2 had 5 people and shared 4 subs equally. How much did each person in Group 2 get?



$$\frac{1}{2}+\frac{1}{5}+\frac{1}{5}$$

*Image used with permission

Clip highlights

1. Intern rehearses an interaction with a student who has made a key error in naming fractional pieces of a whole sub

(calling one-fifth of whole sub the same as one-fifth of half a sub)

2. Teacher educator stops exchange to discuss how the intern phrased her question

Intern: so those pieces would have to be equal if they're both a fifth?

3. Other interns comment on the mathematical point

4. Teacher educator asks intern to try again with new phrasing

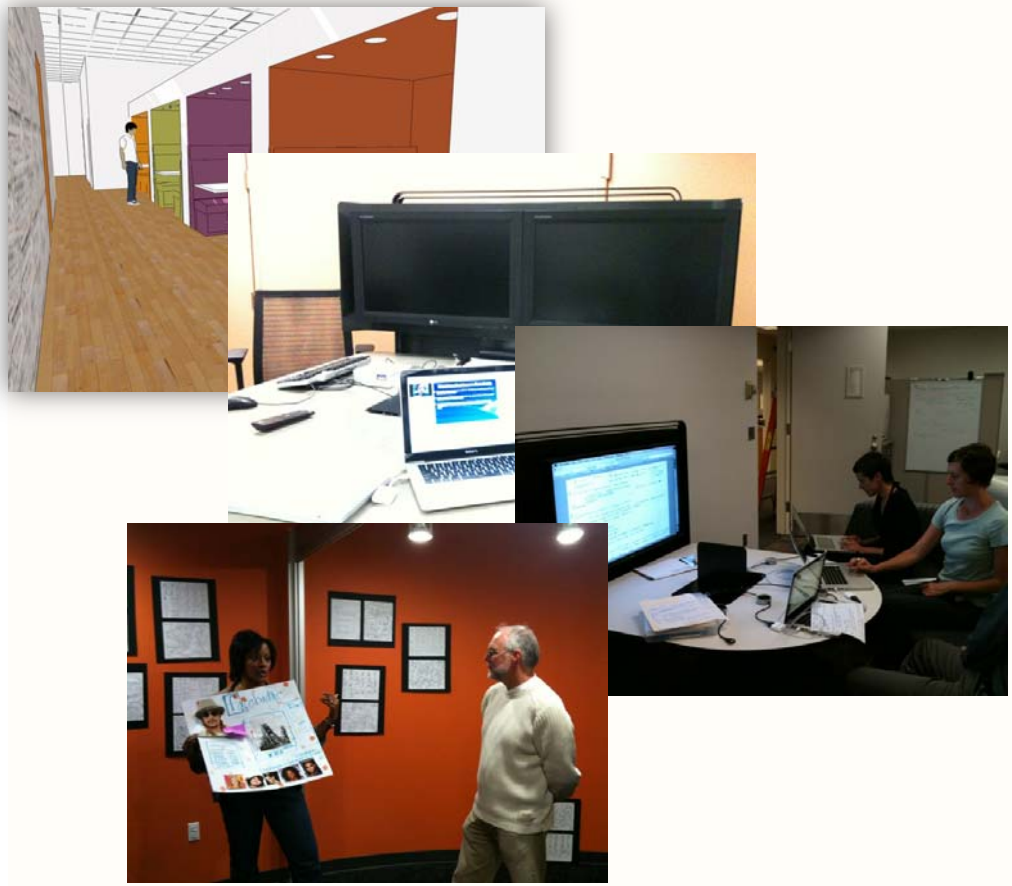
<Video Clip Removed>

Elementary Mathematics Laboratory

A site for collective work on practice

- Opportunity to deliberate collectively about instructional decisions, and to develop and discuss experiments
- Diverse participants with varied interests, areas of expertise, and “lenses” for viewing practice lend different perspectives and expand the range of discussion

The Brandon Center and Digital Archive of Records of Practice



- Archive of records of practice for study and use
- Studios for design and rehearsal
- Tools and structures for collective work with records of practice

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

Establishing an institute at the University of Michigan

A national laboratory for research and development on the professional preparation and continuing development of teachers, with four primary branches:

1. **Materials and resources** for teacher educators and professional developers;
2. **Training** for teacher educators and developers;
3. **Research** on our designs and on other approaches;
4. **Communications**, policy analysis and leadership for the improvement of teaching quality

The goal: Effective teaching in every classroom for every student

1. Identify “high-leverage” teaching practices that are essential for beginning and more advanced practice
2. Identify the content knowledge and professional and practical foundational knowledge essential to practice
3. Design an initial and continuing licensure system based on this knowledge and skill
4. Build corresponding materials and tools for training and developing teachers

Build stringent performance assessments

- Design detailed, subject-specific performance assessments (non-portfolio) that span the professional continuum

  e.g., candidates will teach an introductory lesson on *Romeo & Juliet*; lead a whole-class discussion of a specific mathematics problem; or conduct a meeting with parents/caregivers about a specific child and a specific issue

Develop practice-focused training materials

- Design materials that teacher training programs and professional developers can use in conjunction with the assessments to help student and practicing teachers improve their performance, and that candidates can also use on their own:
  - Guides for assessing practice
  - Video exemplars
  - Instructional activities

Design new training methods

- Design and and demonstrate practice-focused approaches to teacher education that will help candidates develop skill and use knowledge in practice:
  - Modeling and demonstration
  - Rounds in schools
  - Rehearsal
  - Coaching
  - Post-instruction analyses of student learning
  - Video documentation and analysis

THANK YOU!

Slides will be available
at Deborah Ball's website

(Google or Bing "Deborah Ball")