

Practice as Evidence of Learning: Using performance assessments in a methods course

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Overview of Session

1. Background on our methods course
2. Overview of performance assessments
3. One Assessment up close: Modeling a computational algorithm with manipulatives
4. Conclusion

1. Background on our methods course

Identifying the Work of Teaching

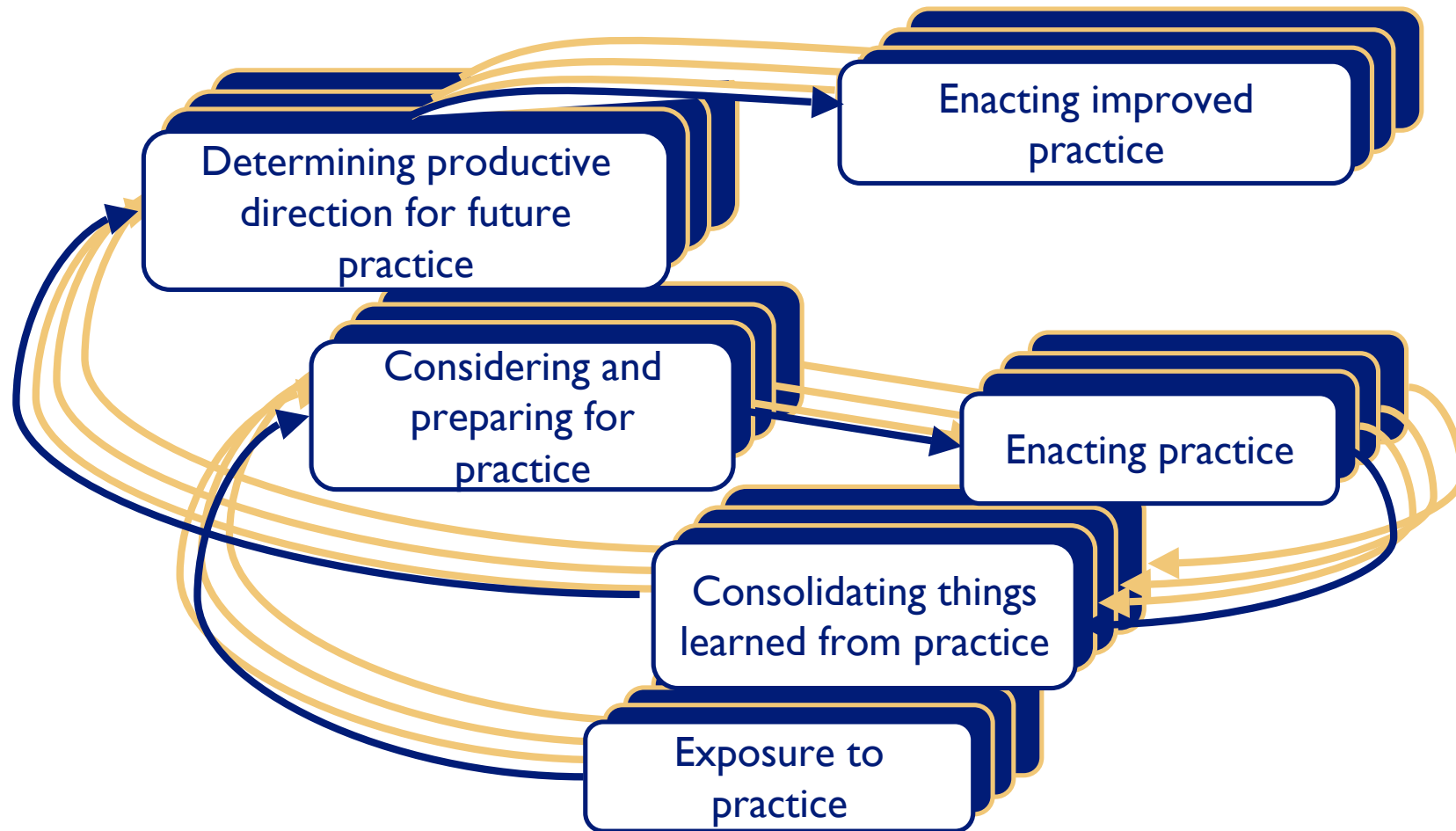
- Course focuses on learning to *do* the work of teaching
- Content consists of practices that are “high-leverage” for beginners and are of appropriate grain size for a course
- Temporarily decompose teaching into smaller practices whose aspects can be:
 - articulated, unpacked, studied, and rehearsed
 - reintegrated in more holistic acts of teaching

Related to work by Lampert (2001); Grossman (2005); Stein & Smith (2007); Franke (2005); Kazemi (2007)

Course Content: Principled Practice

Guiding Principles Domains of Practice	Attending to the integrity of the mathematics	Committing to the learning and achievement of all students	Establishing and managing a productive learning environment	Learning from and systematically improving practice
Leading a whole class discussion about mathematics				
Representing mathematical ideas				
Assessing students' knowledge, skill, and dispositions				
Planning mathematics lessons				

Designing Repeated Opportunities to Practice



2. Overview of performance assessments

Assessing Practice: Four Culminating Performance Assessments

Three are based on a lesson taught in field:

1. Lesson planning conference
2. Leading discussions in a mathematics lesson
3. Assessing students through an end-of-class check

One occurs during final exam:

4. Modeling a computational algorithm with manipulatives

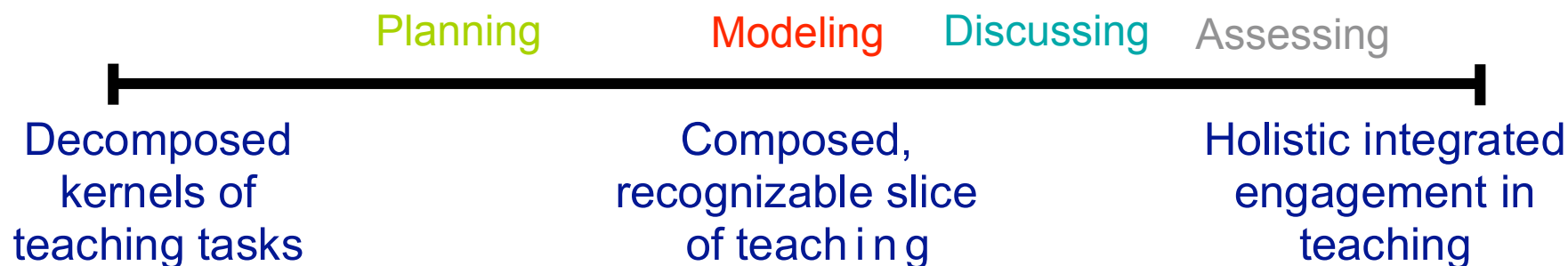
Performance Dimensions of Culminating Assessments

Setting of Teaching

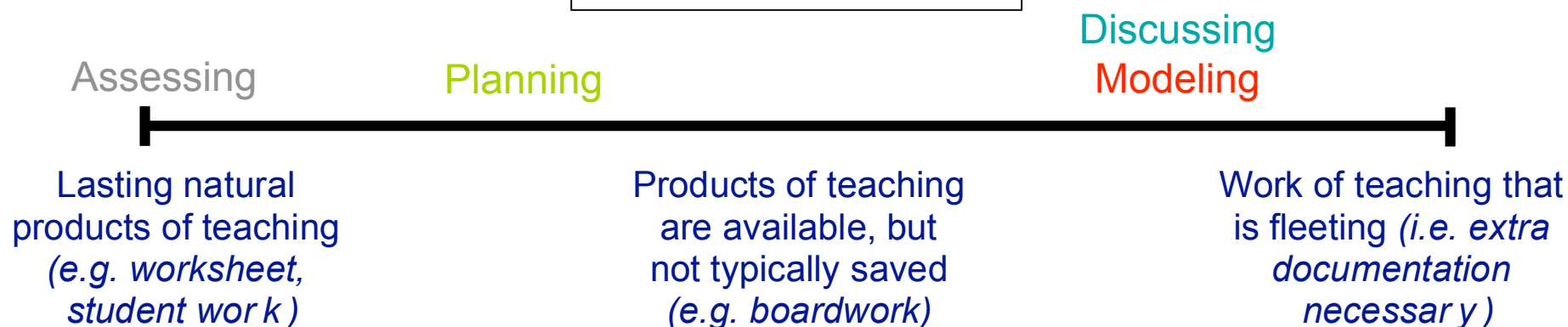


Performance Dimensions of Culminating Assessments

Decomposition of Teaching



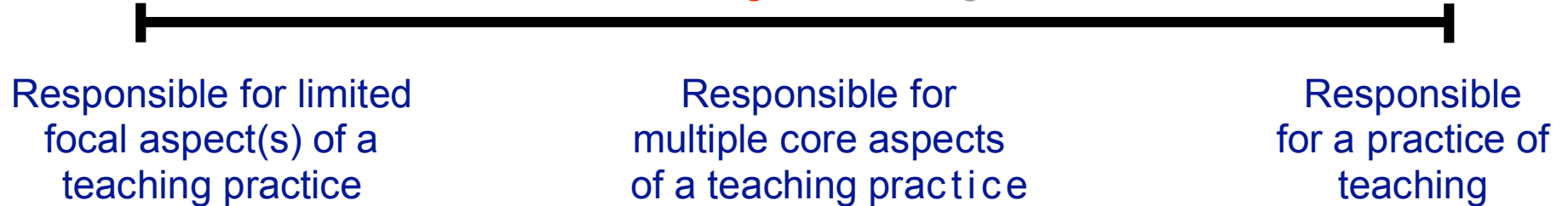
Residue of Teaching



Assessment Dimensions of Culminating Experience

Expectation for Teaching

Discussing Planning
Modeling Assessing

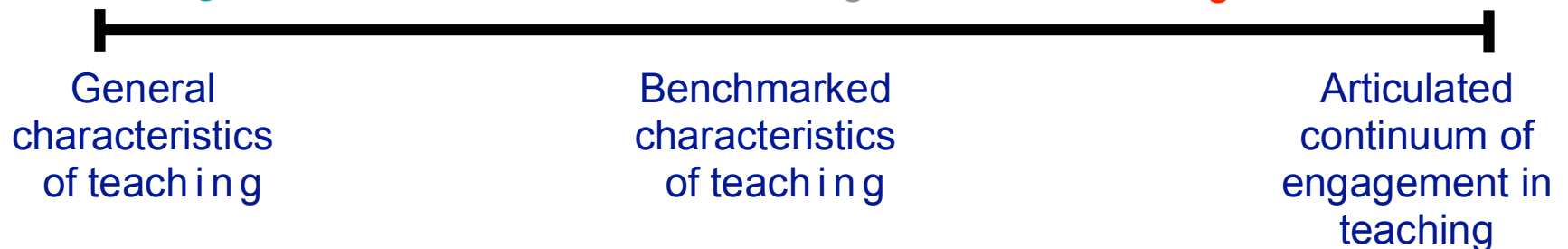


Elaboration of Teaching in Scoring Tool

Planning
Discussing

Assessing

Modeling

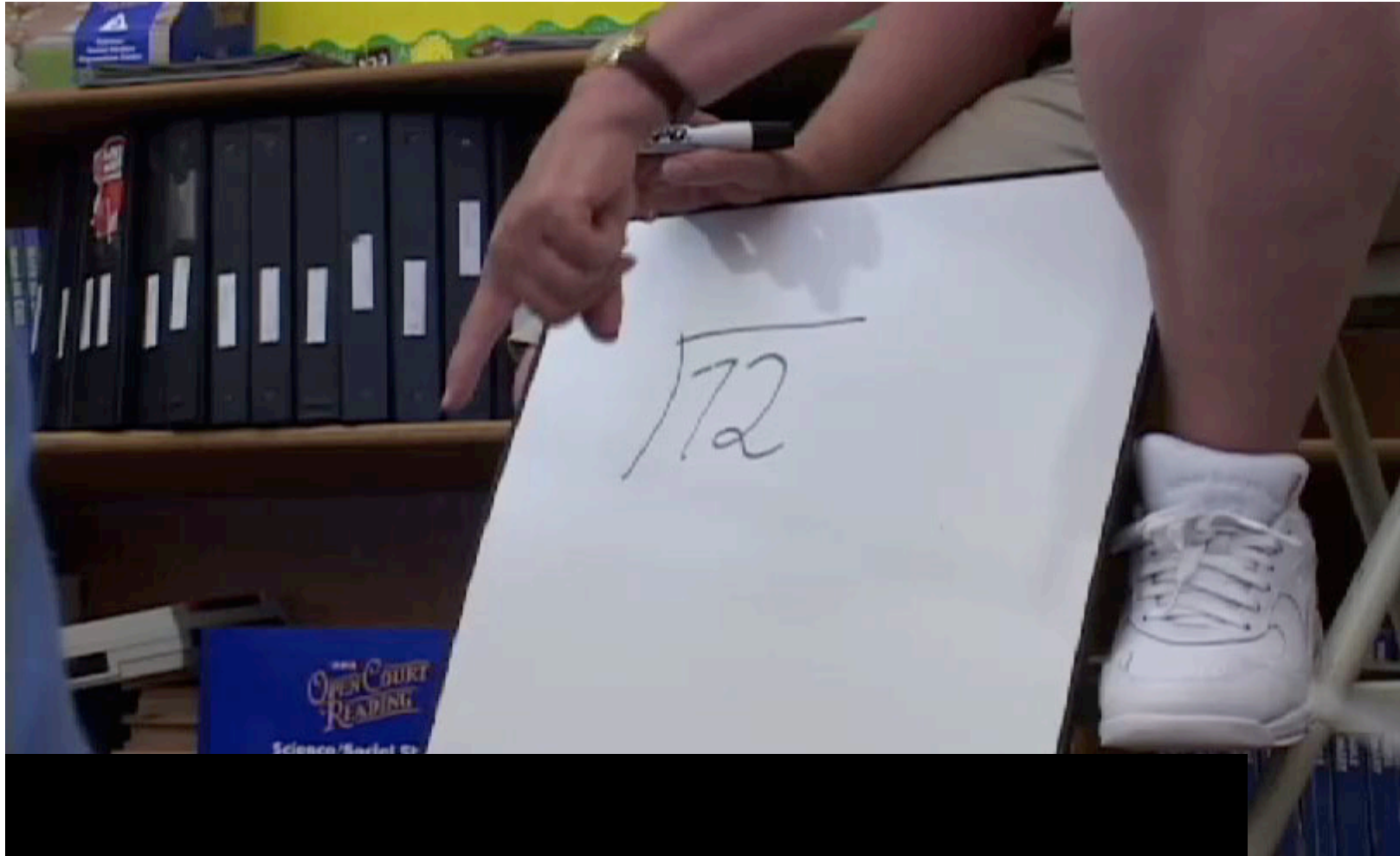


3. One assessment up close: Modeling a computational algorithm with manipulatives

Framing Questions

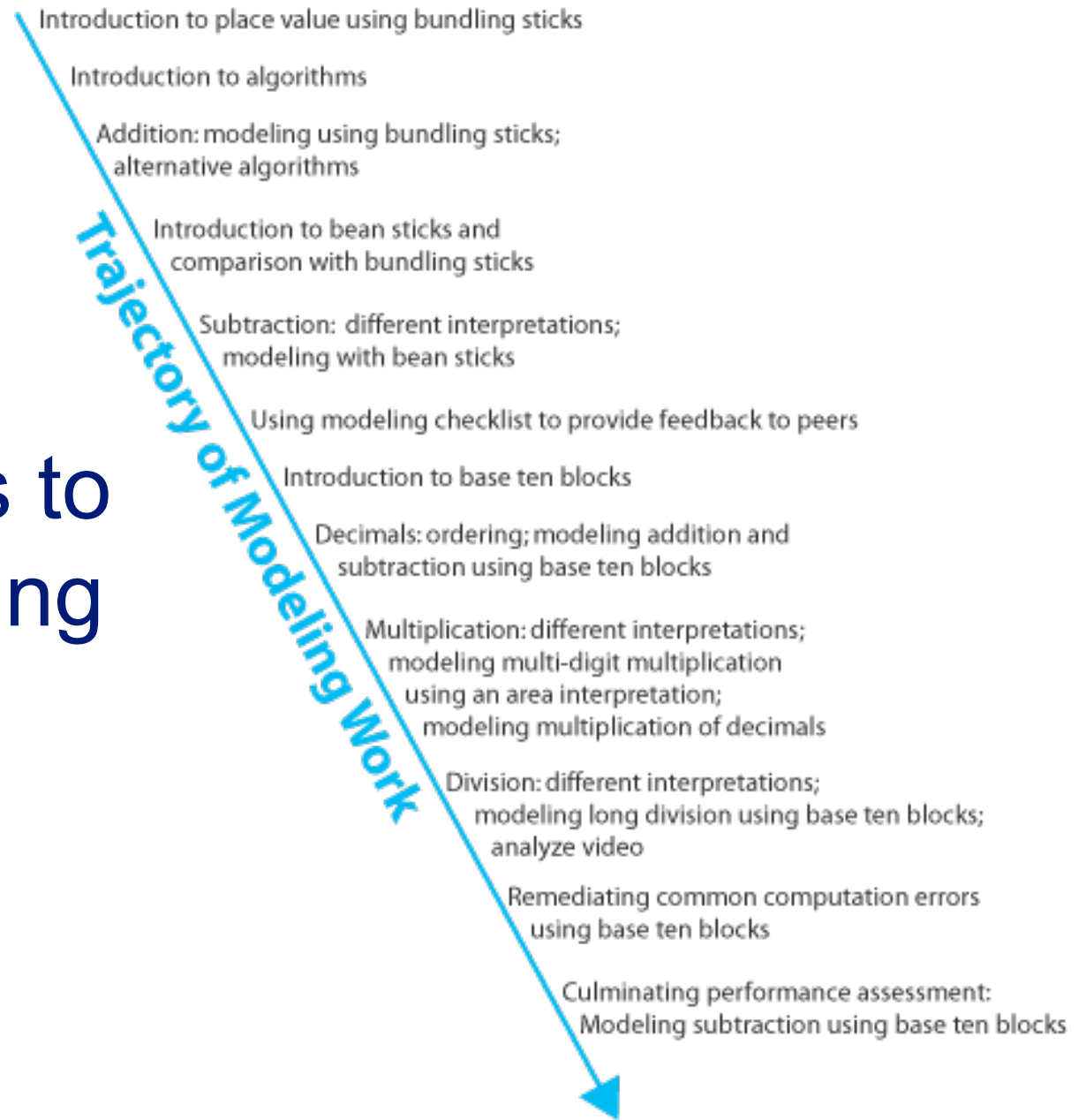
1. What are the benefits and challenges of using practice as evidence of learning in a methods course?
2. How can assessment tasks and tools be formulated to reap potential benefits and address potential challenges?

What Work of Teaching is Being Assessed?



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Opportunities to Learn Modeling



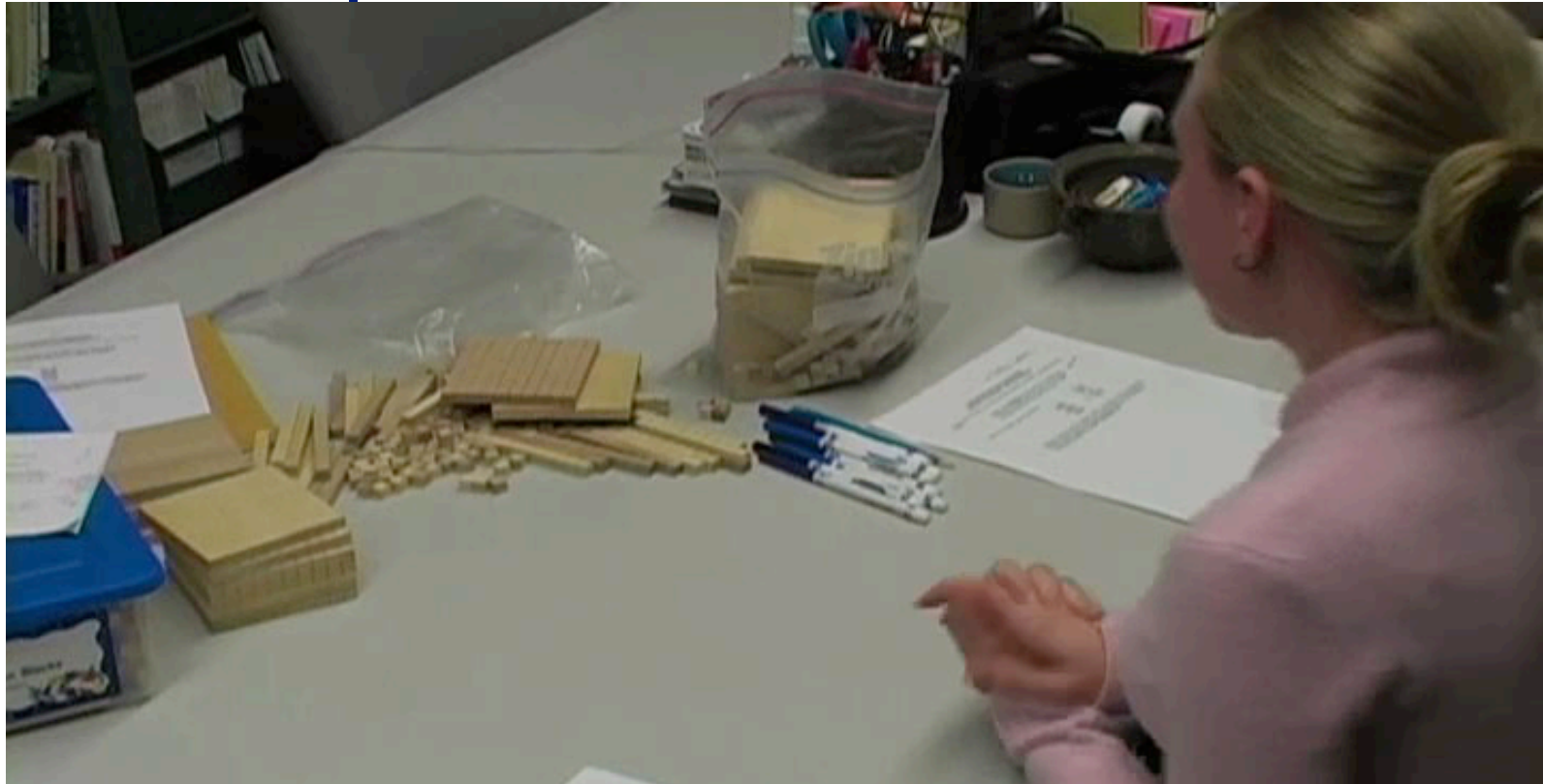
Considering Modeling Practice



Modeling Culminating Performance Assessment

- Instructor meets individually with each student during final exam
- Assessment task specifies features of the teaching scenario and goal for the modeling
- Scoring tool is used to capture and evaluate live modeling performance

Sample Student Performance



What evidence of skill with the work of modeling does this assessment capture/show?

Gaining a Sense of Novice Teaching Through this Performance Assessment

This task afforded the opportunity to appraise:

- Mathematical knowledge
- Instructional dispositions
- Skill in sizing up student error
- Pedagogical skill
 - Use of representation
 - Attending to the error through modeling

4. Conclusion

Using Practice as Evidence of Learning

Emerging benefits

- Reinforce a focus on the doing of mathematics teaching
- Gain insights into novice teaching practice

Persistent Challenges

- Identifying and articulating the work of mathematics teaching
- Developing tasks that elicit and capture teaching performance
- Setting performance expectations for “well started beginners”
- Supporting informed judgment by a diverse instructional team