

“Harnessing” Practice for Professional Learning

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Overview

- What is teaching, and what does it take to get better at it?
- What might be involved in learning in and from practice?
- How can practice be “harnessed” to make learning from experience more educative?

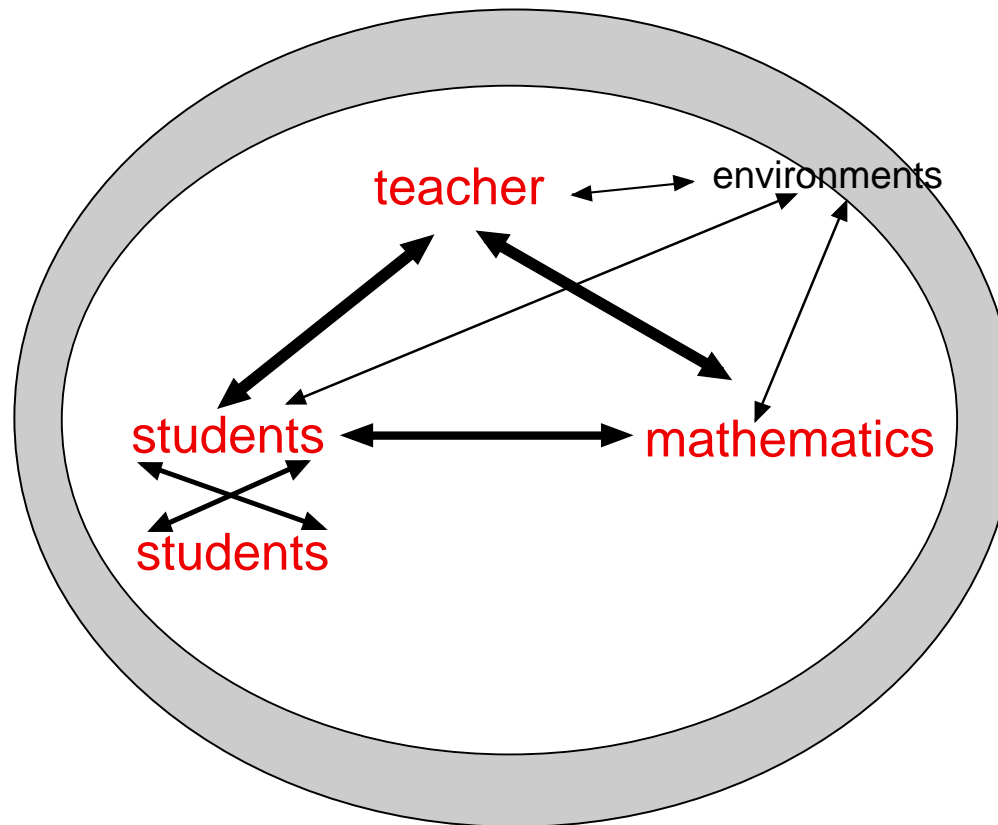
1. What is teaching and what does it take to get better at it?

A set of premises about learning the practice of teaching

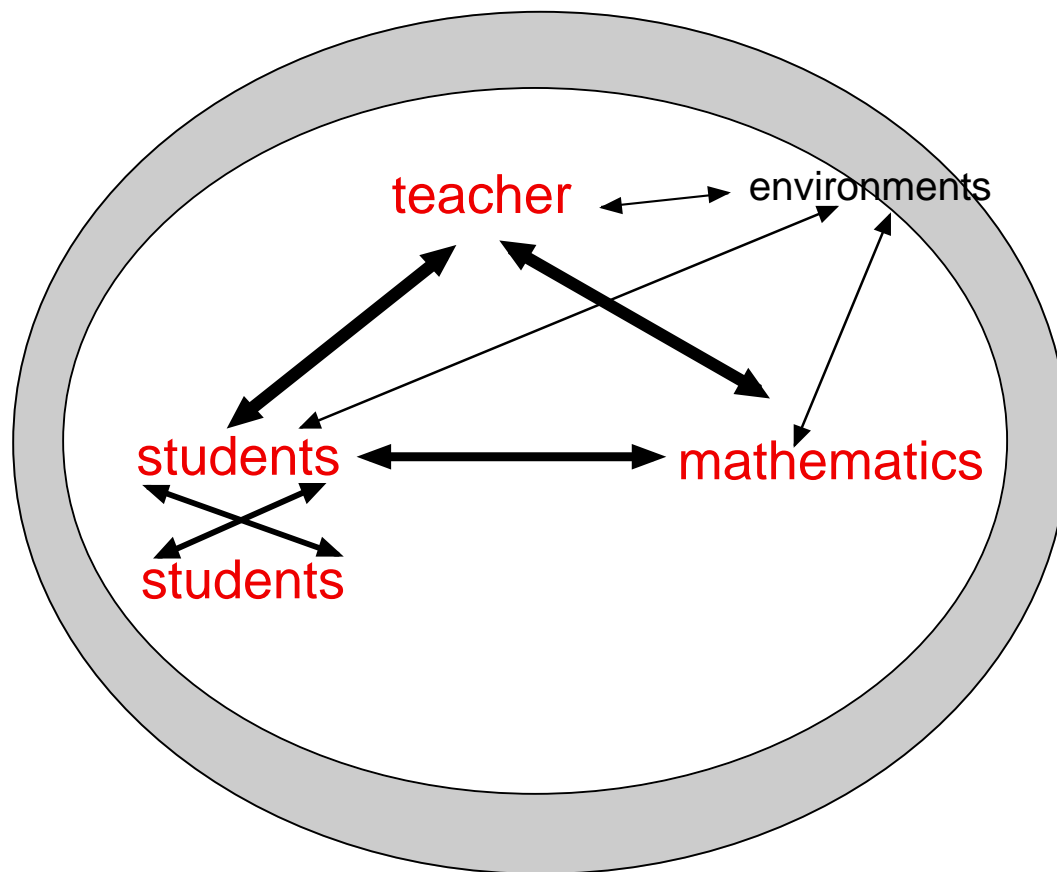
- Learning teaching occurs mostly from experience.
- Experience is often a poor teacher.
- Teaching is a practice, not a domain of knowledge.

- Needed are forms of “harnessing” experience to make learning from experience more possible, both individually and collectively.

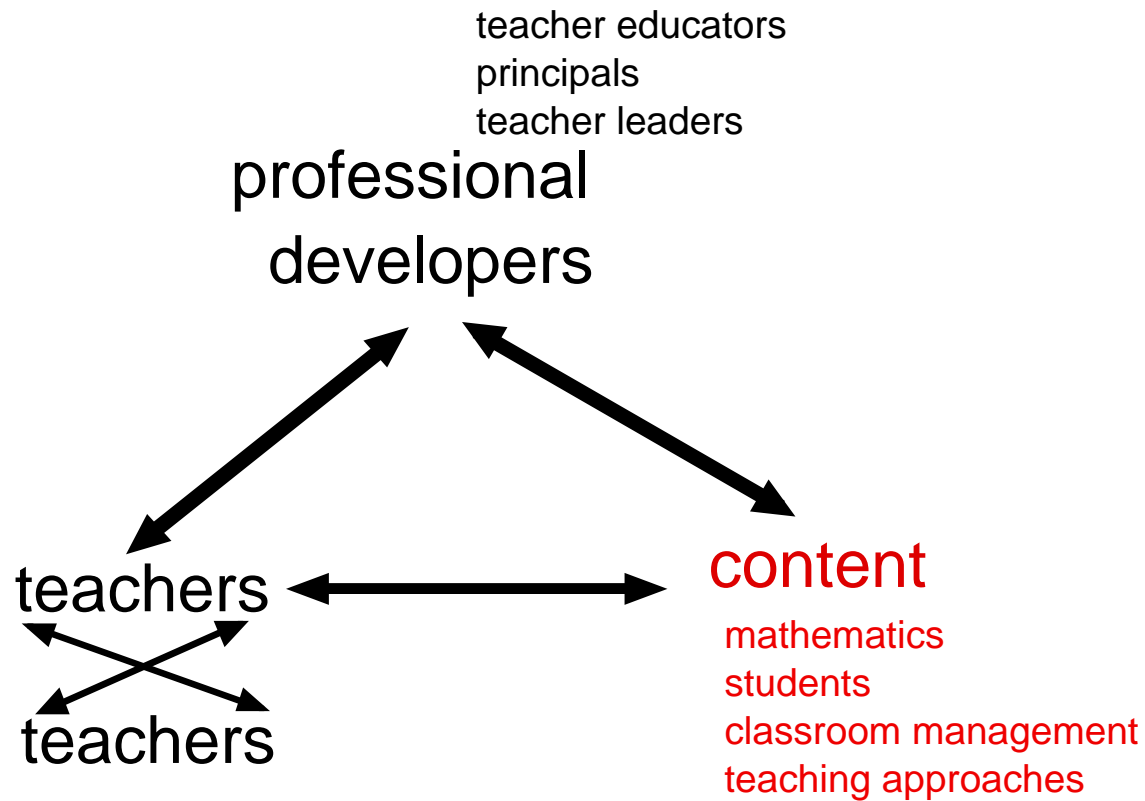
Teaching is a complex practice



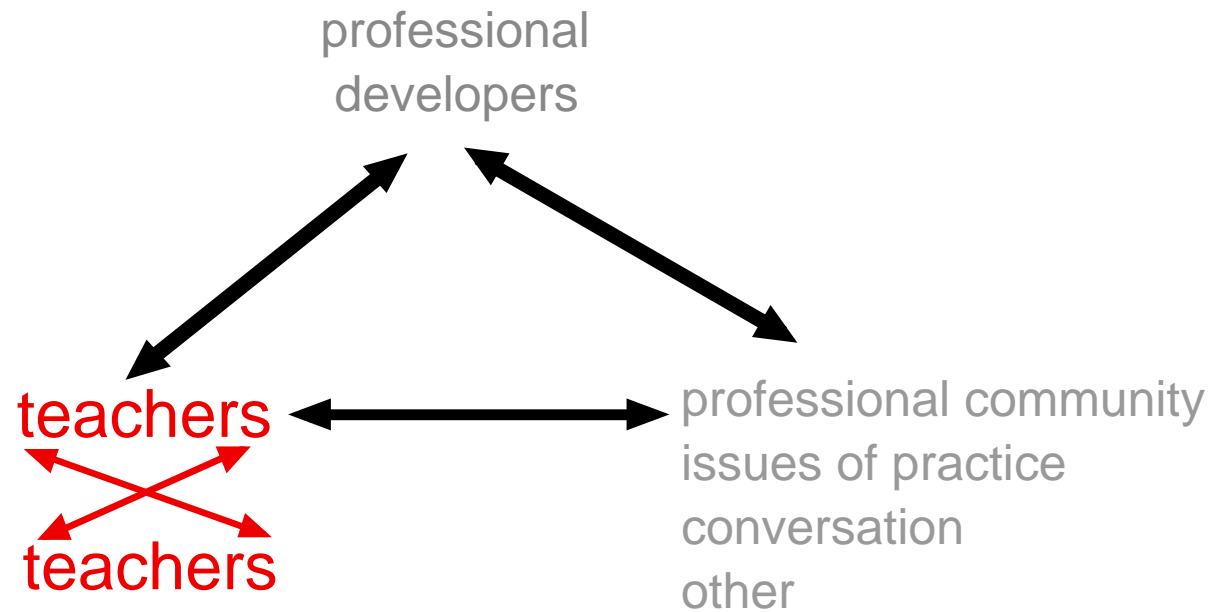
Write number sentences for 10.



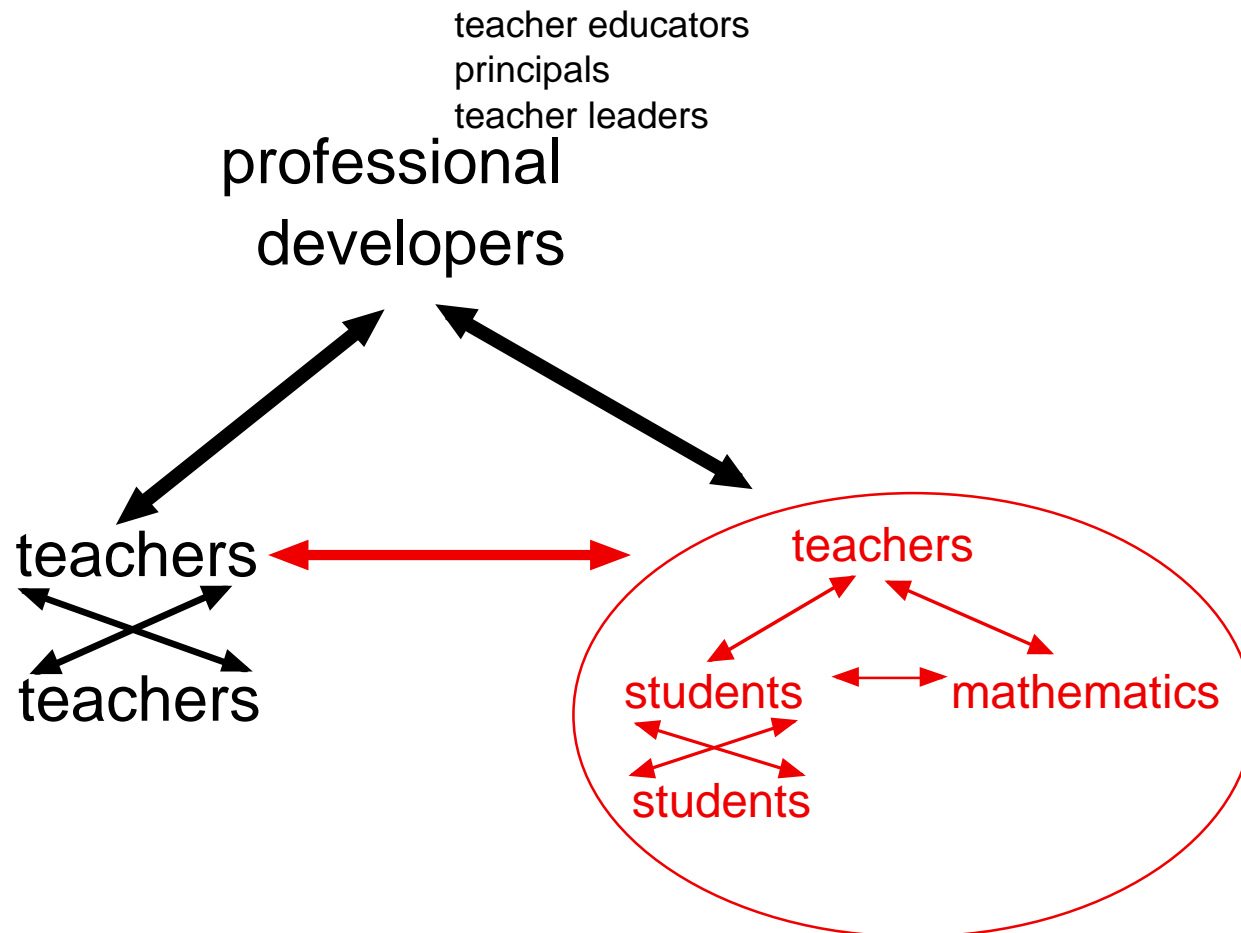
Three perspectives on teachers' professional learning



Learning by acquiring new knowledge



Learning through collegial interaction



Learning in and from practice



What are problems that teachers have to solve in the course of their work?

- What do teachers have to manage in order to teach?
- What kinds of mathematical knowledge, skills, and sensibilities are entailed by the work of teaching?
- What do teachers have to be able to do?

What is teaching and what does it take to get better at it?

- Teaching is a practice.
- Teaching involves problem solving.
- Getting better at teaching depends on becoming skillful at using and learning from experience , and getting better at solving problems.

2. What might be involved in learning and from practice?

Professional learning : Working on problems of practice

- Listening to and interpreting students' ideas
- Deciding which ideas to take up and in what ways
- Sizing up where you are in the larger mathematical territory
- Considering particular children
- Unpacking the mathematics
- Considering the mathematical implications and connections
- Deciding what to do next

Studying a segment of practice

Write number sentences for 10.

$200 - 190 = 10$ segment

1:42 - 1:47

- **Listening to and interpreting students' ideas**
- **Deciding which ideas to take up and in what ways**
- **Sizing up where you are in the larger mathematical territory**
- **Deciding what to do next**
- **Lin's response: "200 take away 190 is ten."**
- **Shea's explanation: "190 is about 10 less than 200."**
- **Bernadette disagrees: $200 - 190 = 190$**
- **Other students: Jillian, Liz**
- **Other students**

What might be involved in learning in and from practice?

- Learning to frame and study problems of teaching
- Working on elements of practice
- Working with colleagues to build knowledge of practice in and from practice

**3. How can practice be
“harnessed” to make learning
from experience more
educative?**

What are examples of “harnessing” practice?

- Case studies
- Lesson study
- Records of practice
(video, student work, teacher notes, lesson plans, assessments)

Teacher Notebook

Plans
Notes on students
reflections

Student work

What is involved in making practice educative?

- Records
- Problems or questions
- Language for distinguishing practice
- Frameworks for practice
- Stance of inquiry toward practice
- Norms for the collective study of practice
- Using mathematical lenses, and developing them

What is afforded by cases? What are possible pitfalls?

- Specific controlled content or examples
- Reduced complexity -- greater focus
- Opportunity to make or study commentaries
- Lack of vividness
- Disconnect from teachers' own classrooms
- Can become academic rather than practical

What is afforded by lesson study? What are possible pitfalls?

- Direct engagement in making and studying practice
- Based on organic units of practice
- Integration of information about mathematics, student thinking, and lesson design
- Opportunity to design, analyze, redesign
- Work on enactment
- Small coverage over time
- Superficial enactment (form over intent)
- Intensive time demands
- Risk
- Big demand on leadership to develop “curriculum”

What is afforded by records of practice? What are possible pitfalls?

- Access to other than verbal channels
- Capturing of the dynamic
- Possibility of repeated viewing and study
- Multiple uses -- different goals
- Large demand to make “curriculum”
- Disconnection from teachers’ own classrooms
- Dismissal
- Lack of “realism”

How can practice be “harnessed” to make learning from experience more educative?

- Choose forms to “harness” practice
- Consider, and mediate, affordances and pitfalls
- Write and read broadly about related work on professional learning in and from practice

Next steps

- What makes some instances so filled with curriculum potential? Or is any record useful, depending on what one wants to do?
- Development of ideas and materials that can support a systematic “curriculum of practice”
- How do professionals learn to study practice?
- Investigating what teachers learn from different modes of studying practice
- Ways to track teachers’ learning validly and reliably as they engage in professional study
- What is the contribution of making records of practice in learning?
- Opportunities for the development of teacher leaders