# “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?

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

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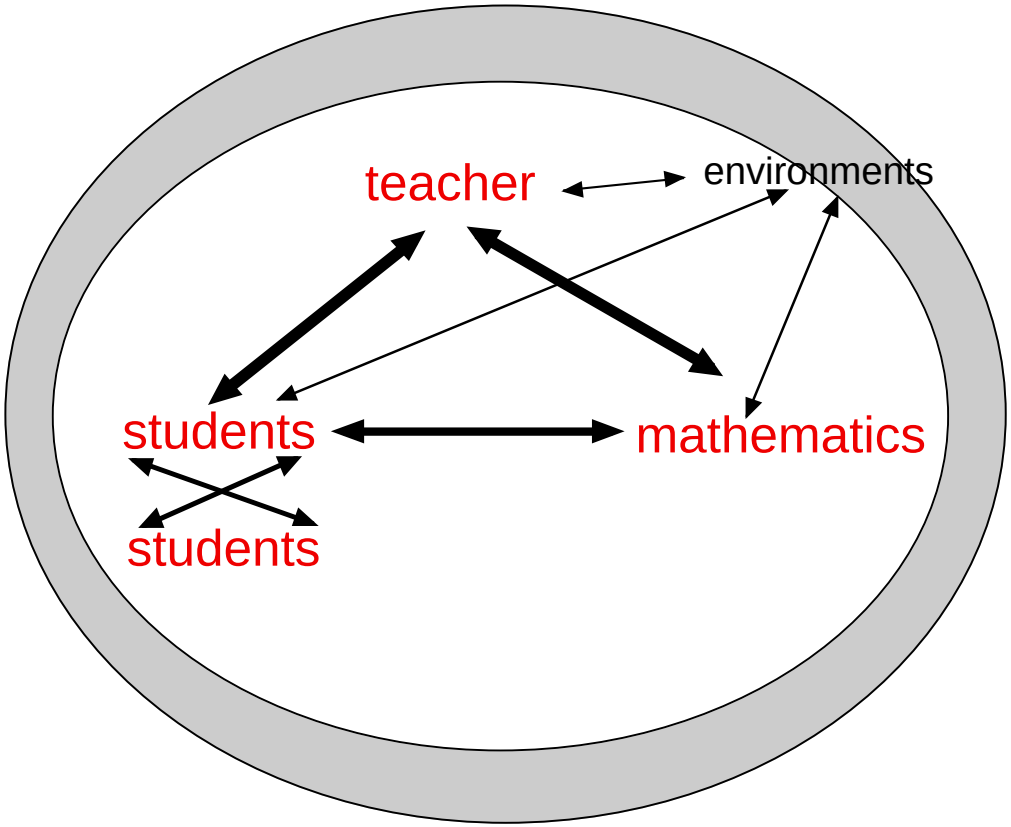
# A set of premises about learning the practice of teaching

- 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.

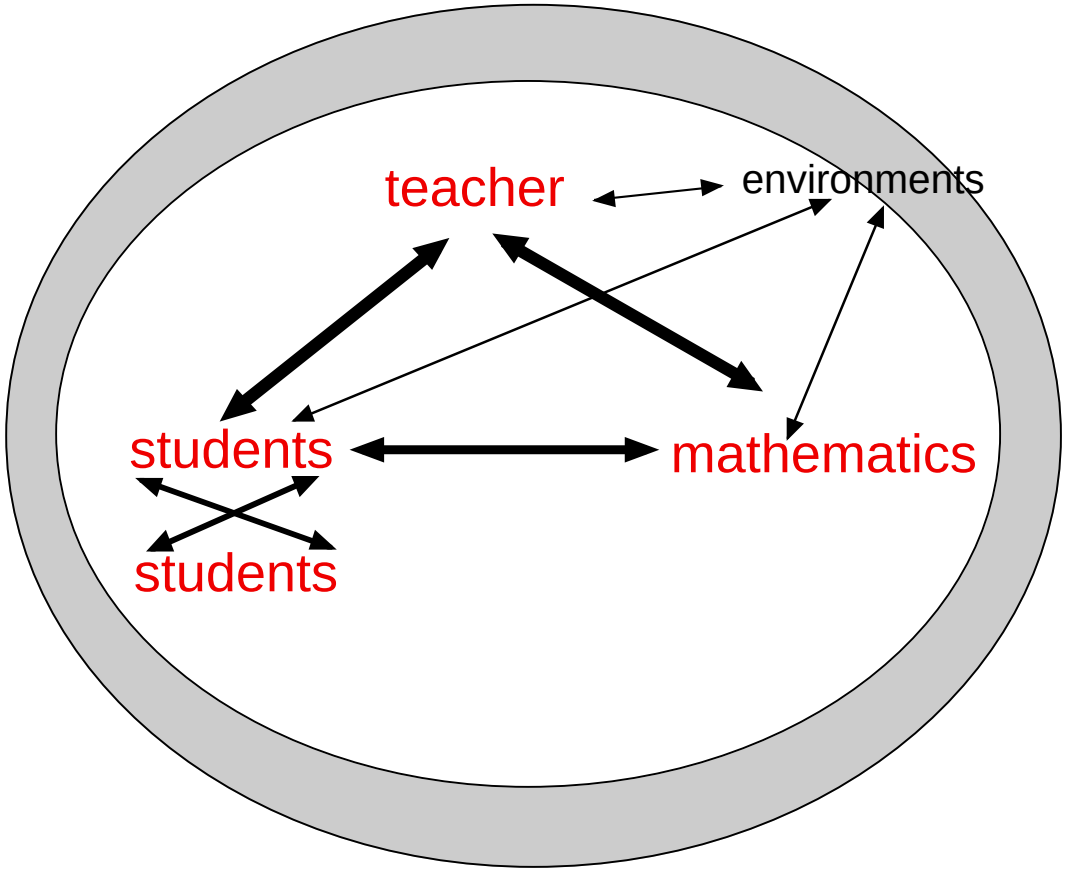
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# Teaching is a complex practice




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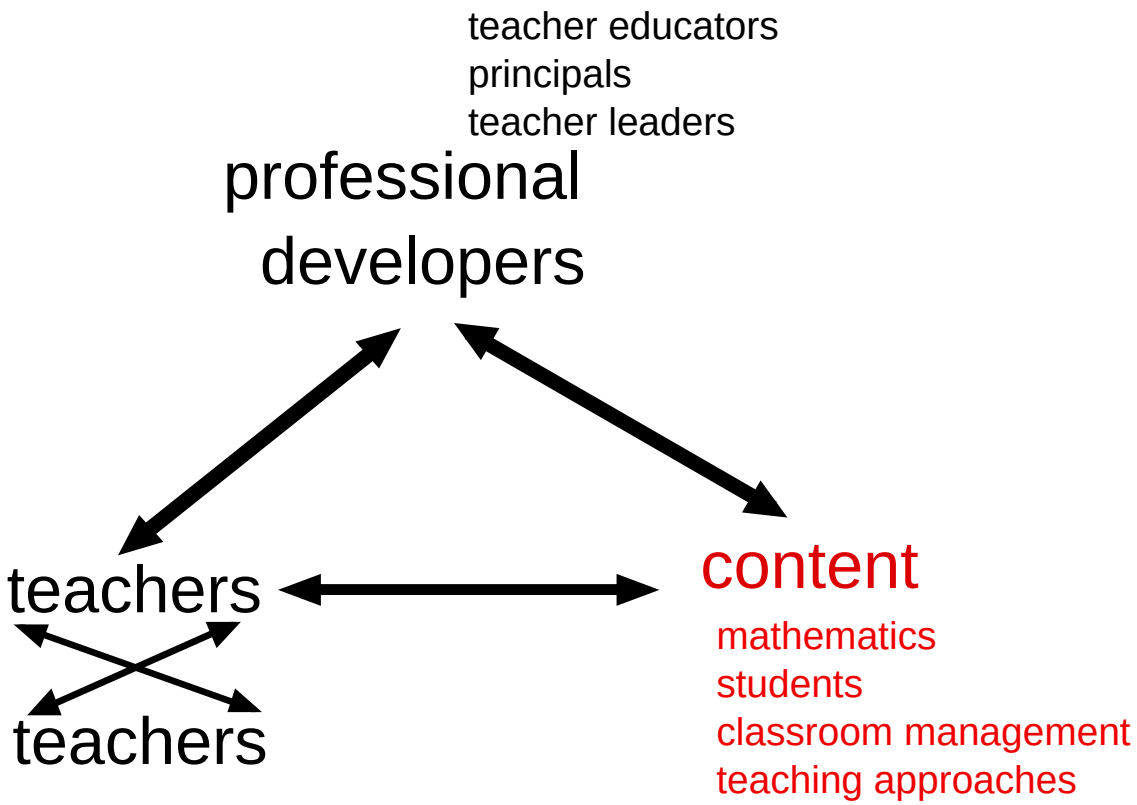
# Write number sentences for 10.




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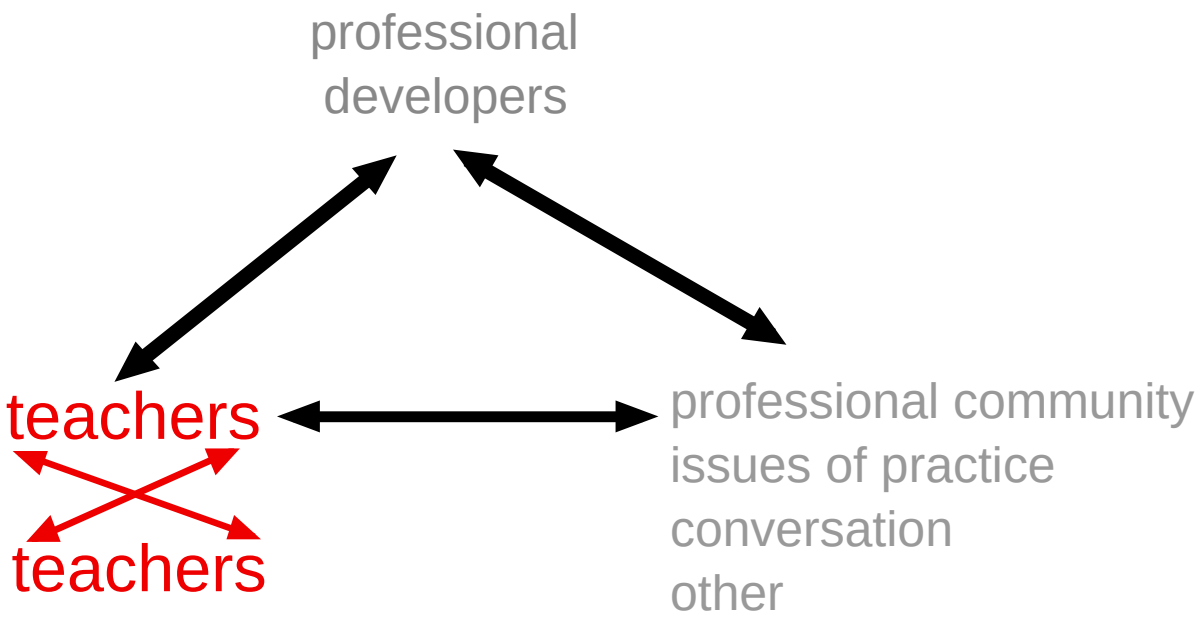
# Three perspectives on teachers' professional learning

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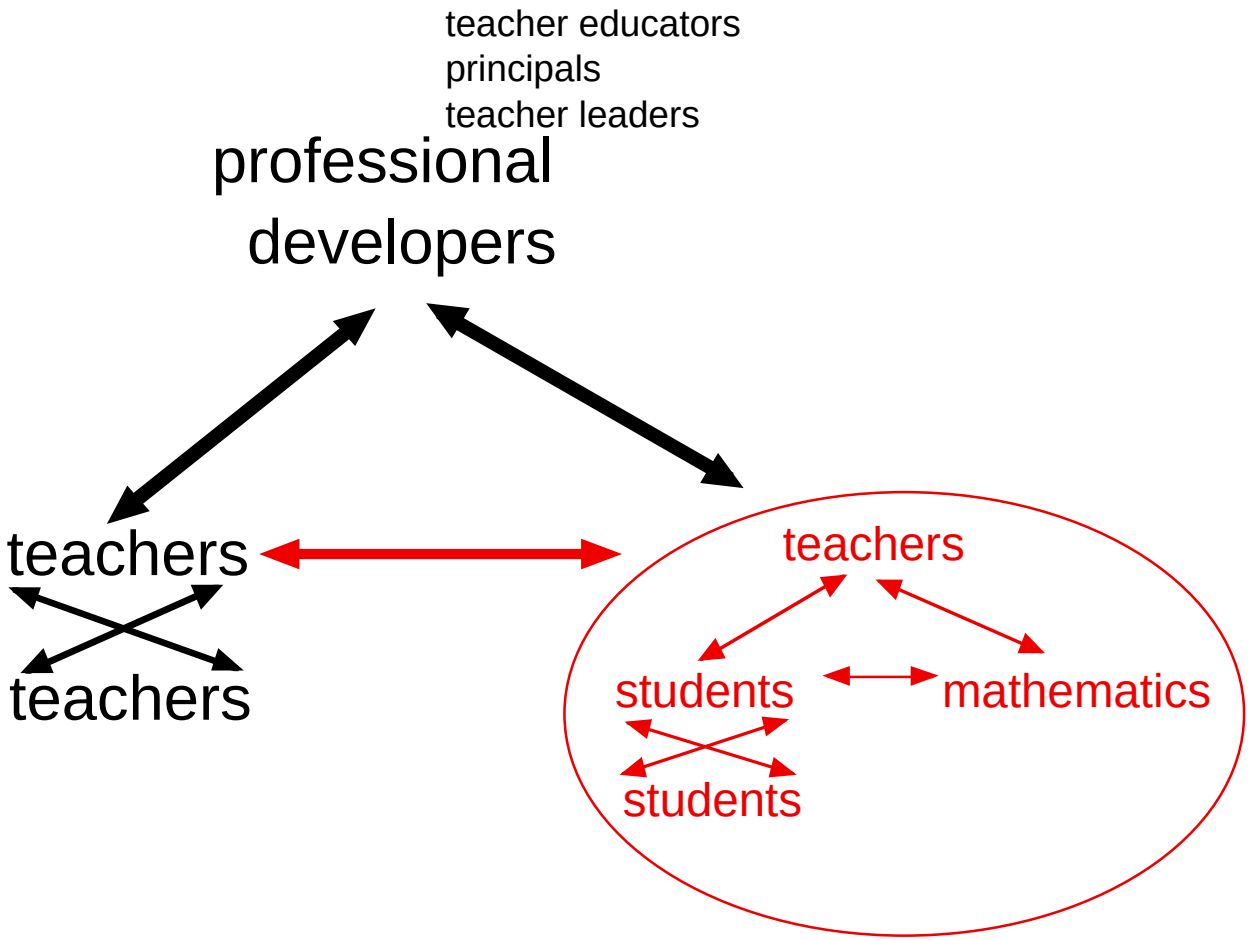

# Learning by acquiring new knowledge

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# Learning through collegial interaction

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# Learning in and from practice

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# 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?

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# 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.

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

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# 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

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# 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**

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# 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

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# 3. How can practice be "harnessed" to make learning from experience more educative?

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# What are examples of "harnessing" practice?

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

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# Teacher Notebook

Plans
Notes on students
reflections

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Student work

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# 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

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# 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

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# 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”

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# 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”

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# 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

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# 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

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