Content Knowledge for Teaching Reading

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Introduction

Measures of content knowledge for teaching reading that we will discuss in this session were developed for:

- Use in the Study of Instructional Improvement, a large scale, mixed-method study being conducted at the University of Michigan;

- Use in studying teacher knowledge and learning in the California Reading Professional Development Institutes.

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Plan for today's session

- What do we mean by "content knowledge for teaching reading"?
- What do measures of content knowledge for teaching reading look like?
- Why develop measures of content knowledge for teaching reading?
- What have we learned?

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Background:

What do we mean by "content knowledge for teaching reading"?

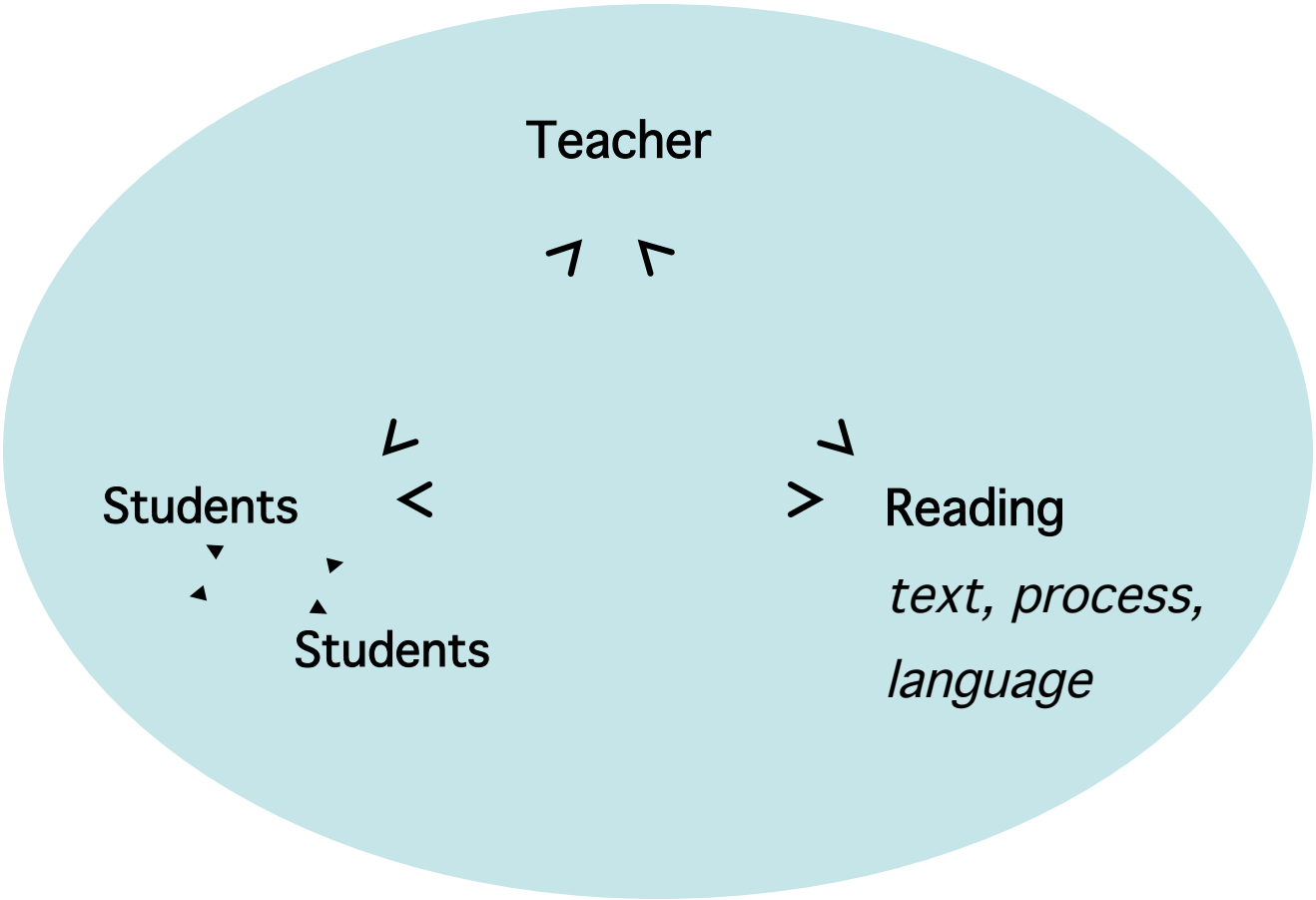
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What is the actual problem that we want to solve?

The quality of the teaching and learning of reading

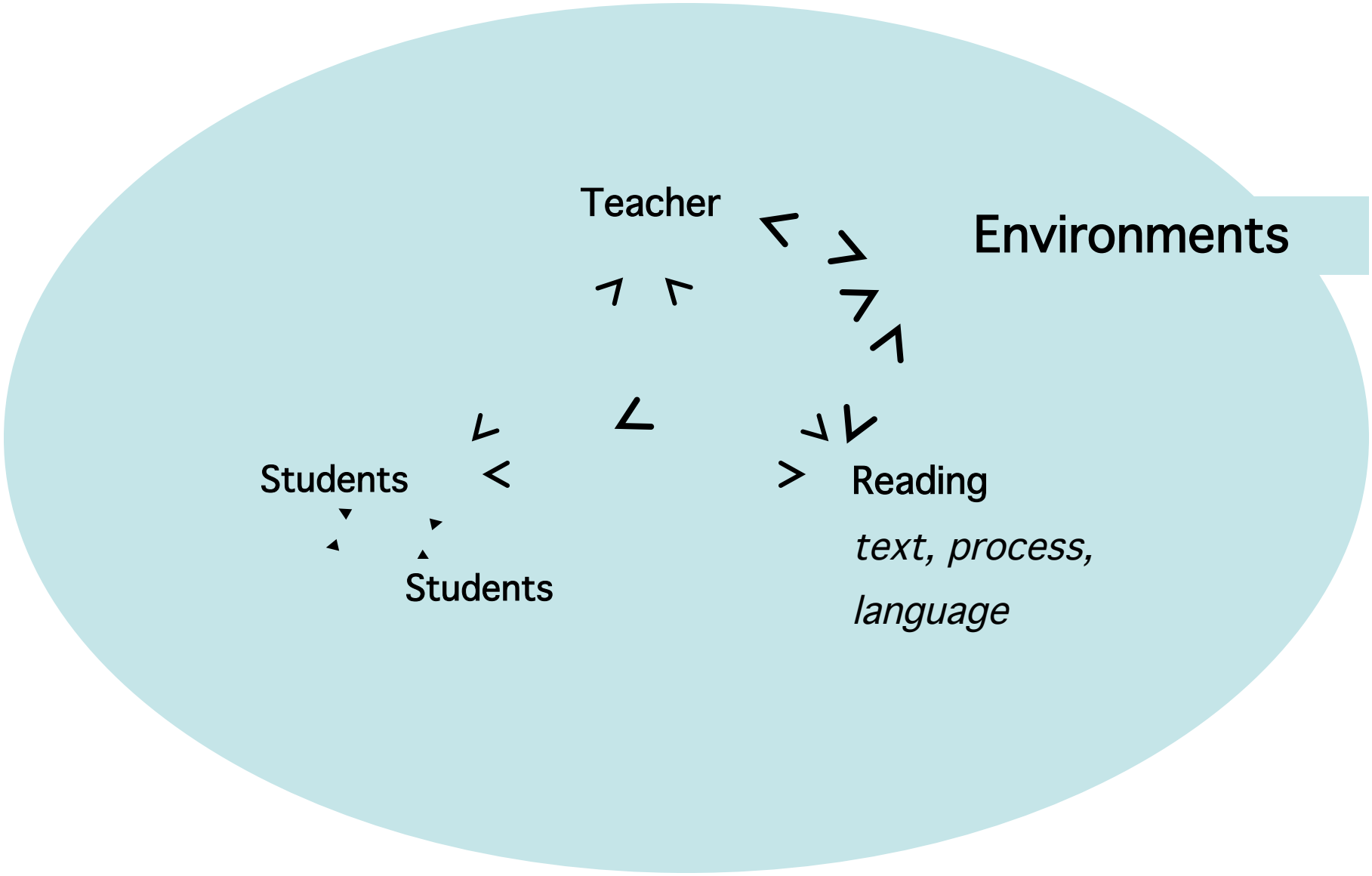
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What is teaching?



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What is teaching?



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What is knowledge of reading for teaching?

- knowledge of text, language, and reading process
- in the curriculum
- beyond the curriculum
- useful to and usable in the work of teaching

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Knowing reading for teaching

- ***What*** reading knowledge -- skills, understanding, sensibilities -- are entailed by teaching?

- How is reading knowledge ***used*** in the course of teaching?

- How might teachers be helped to ***develop*** usable reading knowledge?

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Where and how do teachers use knowledge of reading in teaching?

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While reading a story called *The Marvelous Manatee*, Jamal says, "I've heard the word **habitat** before but I cannot remember what it means." Ms. Gomez has been helping her students learn to a use a variety of approaches to figure out unknown words. She quickly glances over the text of *The Marvelous Manatee* as she decides what to do next.

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The peaceful manatee, like its cousin the elephant, is an endangered animal. Manatees have few natural enemies, other than humans. Boat collisions are the single greatest reason for manatee mortalities. Ultimately, however, loss of **habitat** is the most serious threat facing manatees today. There are approximately 3,000 manatees left in the United States. Without our help the manatee could soon be extinct.

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Ms. Gomez notices that a number of students have their hands up. She has been encouraging students in her class to help each other when they are stuck and decides to let the students share some ideas.

Crystal suggests that Jamal should look for a root word in "habitat" and use this to figure out the word.

Robert argues that it would be smart to read *The Marvelous Manatee* again, looking for clues in the text.

Ethan says that he would just think back over what he has read in *The Marvelous Manatee* and substitute another word for "habitat."

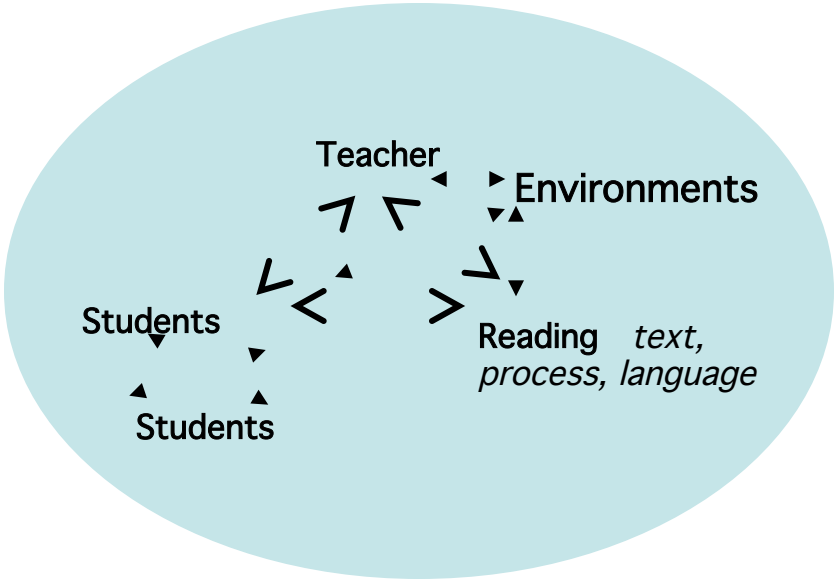
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Some examples of how teachers use content knowledge in teaching reading

What does teaching reading entail?



Some examples:

Interpreting curriculum materials
Designing lessons
Modifying instructional tasks
Clarifying instructional goals
Choosing and using texts
Setting up instructional tasks
Posing questions

More examples:

Examining students' work
Listening to students
Interpreting students' ideas and approaches
Evaluating students' approach to decoding text
Evaluating explanations, interpretations
Motivating students

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What do measures of content knowledge for teaching reading look like?

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Principles of item development

- Developing multiple choice items suitable for use in large scale survey research
- Seek to measure use of content knowledge by embedding questions in the work of teaching
- Develop items that can be scored as right or wrong
- Seek to develop both easy and difficult items; develop scales

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Basic conceptual structure for reading item development

::	Content knowledge (CK)	Content-specific teaching knowledge (CST)
Word analysis		
Comprehension		

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A brief detour into mathematics

Choosing a task to assess student understanding

Ordering decimals

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Working on items

- What knowledge of content is used to answer the item?
- In what ways is this knowledge specialized to the work of teaching?

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Suppose you wanted to find out if your students understand how to put decimal numbers in order. Which of the following strings of numbers would be the best choice? Why?

A.	.5	7	.01	11.4
B.	.60	2.53	3.14	.45
C.	.6	4.25	.565	2.5

D. Any of these would work well for this purpose. They all require students to read and interpret decimals.

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Task of teaching reading: Inspecting a worksheet

Grapheme-phoneme connections

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Ms. Peters' students are completing a worksheet requiring them to match two words that contain the same sound made by the letter combination "ough." The worksheet is laid out in two columns and directs the students to draw a line between a word in the first column and the matching word in the second column that has the same "ough" sound. The worksheet looks like this.

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Connect words that sound the same with a line.

bought	cough
tough	plough
dough	enough
bough	thorough
though	thought

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In the middle of the activity, one of the students in the class raises her hand and complains some words do not have a match.

Do all of the words have a match?

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Task of teaching reading: Choosing a discussion question for a specific text

Analysis of nonfiction text

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Mr. Stier is using the following text to determine which of his students can evaluate an author's perspective and the evidence the author uses to support that perspective. Mr. Stier refers to this skill as "critical reading."

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The Civil War was fought from 1861 to 1865. The Northern states fought against a collection of 11 states, mainly in the Southern United States. According to most authors, the Civil War was fought to earn freedom for African-American slaves in the Southern United States. But the Civil War was really fought to preserve the sovereignty of states over the national government. While issues such as slavery may have accelerated the conflict, the states' rights issue would have surfaced eventually. Even if slavery had not existed as an issue, the North and South would have eventually gone to war.

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The teacher's guide includes a few questions a teacher might ask about this passage. Which of these questions could Mr. Stier choose to assess his students' ability to read critically?

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	Yes	No	I'm not sure
a) During what years was the Civil War fought?	1	2	3
b) According to most authors, why was the Civil War fought?	1	2	3
c) Do you agree with the author? Why or why not?	1	2	3
d) What attitude toward the Civil War does the author of this text want you to take?	1	2	3
e) What evidence does the author present to support his claim about the inevitability of the war?	1	2	3

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Why develop measures of content knowledge for teaching reading?

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Aims

- Study teacher learning
- Investigate relations of teachers' usable knowledge of content, their conventional knowledge of content, and their teaching
- Develop theory of content knowledge about teaching useful for professional education
- Study these on a broad scale, not with small, select groups

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What have we learned?

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- It is possible to generate multiple choice items that form reliable scales suitable for use in survey research.

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- Teachers did very well on items across many topic areas.

- These measures hold promise for identifying areas of content knowledge for teaching that deserve attention in professional development settings.

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- It is possible to write items that educators view as useful and valid measures of content knowledge for teaching reading.

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Future directions

- Generate more difficult items and items across wider range of topical domains
- Interview teachers to better understand the knowledge used in answering items
- Interview non-teachers to learn if and how items capture content knowledge specialized to teaching
- Study reading instruction to better understand how teachers use knowledge of reading content in their teaching practice

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