

# EFFECTIVE READING INTERVENTIONS

Devin Kearns  
Neag School of Education

**UConn**

---

---

---

---

---

---

---

---

## Overview

- I. The problem
- II. Evidence whether we can solve it
- III. Interventions for beginning reading
- IV. Interventions for reading comprehension

**UConn**

---

---

---

---

---

---

---

---

## THE PROBLEM

**UConn**

---

---

---

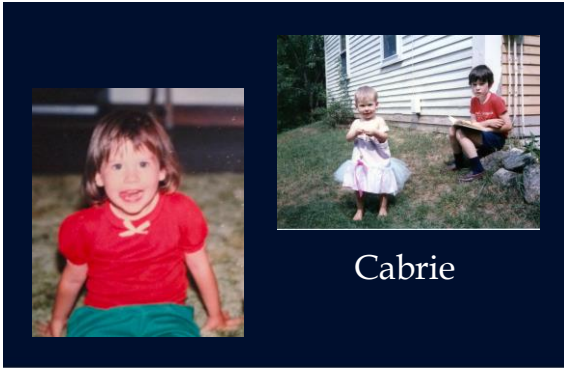
---

---

---

---

---



Cabrie

UConn

---

---

---

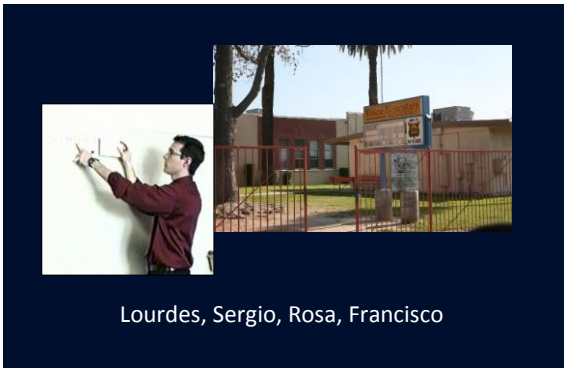
---

---

---

---

---



Lourdes, Sergio, Rosa, Francisco

UConn

---

---

---

---

---

---

---

---

### Negative outcomes for SWD

Fraction of secondary-age students with disabilities with standardized test scores below the 5 <sup>th</sup> percentile	1 in 5
Fraction of high school students with LD who drop out	1/4
Percentage of variance in 11 <sup>th</sup> grade reading comprehension explained by 1 <sup>st</sup> grade comprehension	33%
Percentage of youth with disabilities who ever attended a 4-year college	1/11 <small>other students 1/4</small>
Among youth with disabilities who drop out, fraction who have spent a night in jail	1/3 <small>other students 1/9</small>

Cunningham & Stanovich, 1997; Fuchs, Fuchs, & Vaughn, 2014; Juel, 1988; Wagner, Newman, Cameto, Levine, & Garza, 2006

---

---

---

---

---

---

---

---

Poor reading has a relation with many adult problems

- Weak employment prospects
- Poor physical health
- High-risk behavior
- Involvement in the criminal justice system

**UConn**

---

---

---

---

---

---

---

---

EVIDENCE WHETHER WE CAN SOLVE THE PROBLEM

**UConn**

---

---

---

---

---

---

---

---

Can we prevent or remediate reading difficulties?

**Yes**

**UConn**

---

---

---

---

---

---

---

---

## Evidence Suggests It Is Possible

- Secondary (Tier 2) prevention in reading has evidence of success
- There is growing knowledge about effective reading instruction  
Institute of Education Sciences, 2008, 2009a, 2009b; National Institute of Child Health and Human Development, 2000; U.S. Department of Education, 2005
- Good Tier 1 and Tier 2 instruction can reduce special education referrals  
Torgesen, 2007
- Progress monitoring is effective for tracking change  
Bangert-Drowns, Kulik, & Kulik, 1991; Fuchs & Fuchs, 1986

UConn

---

---

---

---

---

---

---

---

---

---

---

---

## Secondary prevention (Tier 2) works

Very structured early reading intervention can prevent reading problems in all but the very most struggling readers

**Table 2**  
*Numbers and Percentages of Children, in Respective Remediated Groups, Whose Percentile Ranks for the Basic Skills Cluster Were Within Given Reading Achievement Ranges at the End of First Grade*

Type of remediation	<15%	16-30%	31-45%	>45%	Total
<b>Small group instruction by school</b>					
n	7	5	9	5	26
%	26.9	19.2	34.6	19.2	
<b>Several days of tutoring by school</b>					
n	4	1	4	7	16
%	25.0	6.2	25.0	43.8	
<b>Daily tutoring by tutors trained by project staff</b>					
n	12	13	17	34	76
%	15.8	17.1	22.4	44.7	

*Note.* Children are grouped by percentile ranking on the Basic Skills Cluster of the Woodcock Reading Mastery Tests—Revised at the end of first grade.

Compton, Fuchs, Fuchs, & Bryant, 2006; Fuchs et al., 2008; McMaster, Fuchs, Fuchs, & Compton, 2005; Vadasy, Jenkins, & Pool, 2000; Vaughn et al., 2010; Vellutino et al., 1995

UConn

---

---

---

---

---

---

---

---

---

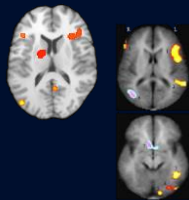
---

---

---

## Good Intervention can rewire the brain

Struggling readers who receive effective beginning reading instruction start processing words like their peers without disabilities



Barquero, Davis, & Cutting, 2013; Shaywitz et al., 2004

UConn

---

---

---

---

---

---

---

---

---

---

---

---

# INTERVENTIONS FOR BEGINNING READING

UConn

---

---

---

---

---

---

---

---

## Three foci

- Phonological awareness
- Phonics
- Explicit instruction

UConn

---

---

---

---

---

---

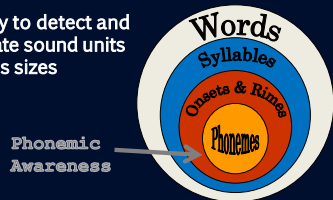
---

---

## Phonological awareness

- What is it?

the ability to detect and manipulate sound units of various sizes



UConn

---

---

---

---

---

---

---

---

## Advice for teaching phonological awareness

- Keep it short
  - 3-5 minutes a day
- Focus on important things
  - Phoneme level skills
  - Oral segmenting and oral blending
- Link sounds to letters
  - Teach *letter sounds* rather than *letter names*

UConn

---

---

---

---

---

---

---

---

## Oral segmenting and blending

### Oral segmenting task

- The word is *cat*. What word?
  - *Cat*.
- Say the sounds in *cat*. (Then, put up fingers)
  - /k/... /a/... /t/.
- Good. What word? (Sweep hand across)
  - *Cat*.

### Oral blending task

- "Listen. I'll say the sounds. You say the word.
  - /d/ ... /o/ ... /g/ (Put up fingers for sounds)
  - What word? (Sweep hand across)
    - *Dog*.

UConn

---

---

---

---

---

---

---

---

## Phonics

- What is it?

A method of teaching reading by connecting letters with sounds and using these to sound out words

UConn

---

---

---

---

---

---

---

---

## Critical importance of phonics

- Linking sounds to letters to pronounce words is exactly what beginning reading is about
- Emphasize **using the letters in the word**

UConn

---

---

---

---

---

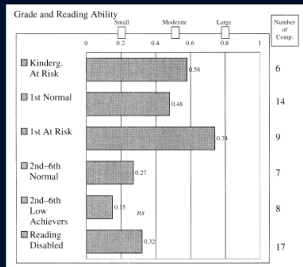
---

---

---

## Meta-Analyses Show Positive Effects of Basic Skills Instruction

Phonics instruction leads to significantly better reading achievement



UConn

Ehri, Nunes, Stahl, & Willows (2005); also National Institute of Child Health and Human Development (2000) and Stuebing et al. (2008)

---

---

---

---

---

---

---

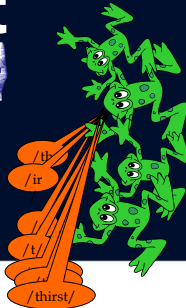
---

## Phonics instruction

thirst



Sound  
Sound  
nd  
nd  
nd  
What word?



UConn

---

---

---

---

---

---

---

---

## What phonics skills to teach

- “synthetic” phonics units
  - GPCs
  - sound spellings
  - sound-symbol correspondences
  - letter-sound correspondences
- “analytic” phonics units
  - onsets/rimes
  - phonograms
  - word families

UConn

---

---

---

---

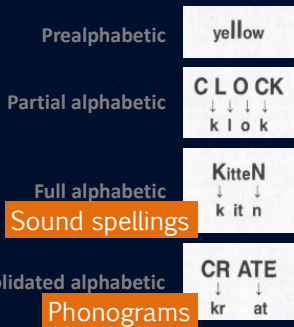
---

---

---

---

## Stage theory supports the use of both units



Ehri, 1992

23

---

---

---

---

---

---

---

---

## What should we teach?

Good rules: Rules that work for a lot of words and don't get broken very often

**ai = long A**

Bad rules: Rules that work for very few words and/or get broken often

**ough = short O**

*thought rough ... through ... though ... tough*

---

---

---

---

---

---

---

---



## Useful Phonograms/Word Families

- *ing* = /ɪŋ/
- *all* = /ɔl/
- *ave* = /āv/
- *old* = /ōld/
- *ear* = /ēr/
- *alk* = /ok/
- *ind* = /īnd/
- *ose* = /ōz/
- *ould* = /ood/ (like /good/)
- *ore* = /or/
- *ound* = /ownd/
- *ight* = /īt/

UConn

25

---

---

---

---

---

---

---

---

---

---

## Some popular techniques lack evidence

- Using pictures and context clues
  - Little evidence suggests that this is an effective strategy for reading words
- Spending a lot of time trying to say each word
  - Little evidence suggests that asking students to puzzle over an individual word helps them
  - Students tend to get frustrated

UConn

Ehri, 2005, 2014; Harzém, Lee, & Miles, 1976; Fleisher & Jenkins, 1983; Foorman, Francis, Novy, & Liberman (1991); Kouri, Selle, & Riley, 2006; Nicolson, 1991; Pany & McCoy (1988); Perfetti, 1992; Share, 1995, 1999; Vellutino, 1991; but see Crowe (2003)

---

---

---

---

---

---

---

---

---

---

## Explicit instruction

- Give clear explanations
- Ask the right questions
- Elicit responses in multiple ways
- Provide good feedback
- **Use a program**
- **Do good cognitive planning**

UConn

Ellis & Worthington, 1994; Fuchs, Fuchs, & Vaughn, 2014; Lemons, Kearns, & Davidson, 2014; NICHD, 2000; Stuebing et al., 2008; Simonsen et al., 2010;

---

---

---

---

---

---

---

---

---

---

INTERVENTIONS FOR READING  
COMPREHENSION

UConn

---

---

---

---

---

---

---

---

*1. TEACH IN THEMES*

UConn

---

---

---

---

---

---

---

---

Build networks of knowledge

Hadrian



Hadrian's Wall

Roman Empire  
stops expanding



Trajan



Pantheon

---

---

---

---

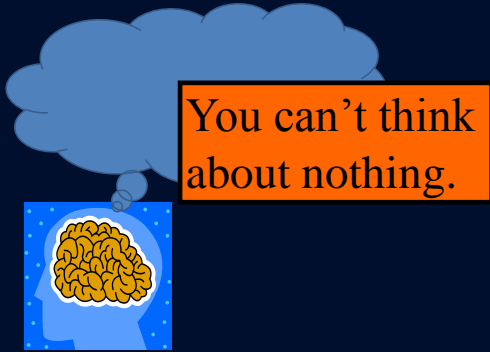
---

---

---

---

Because...



---

---

---

---

---

---

---

---

*2. CHOOSE GOOD TEXTS*

UConn

---

---

---

---

---

---

---

---

Choose texts centered around the **theme**

- Networks of ideas allow for clearer thinking
- Builds cultural capital in a specific way



UConn

---

---

---

---

---

---

---

---

# Choose appropriate level of text

UConn

---

---

---

---

---

---

---

---

# Perception of text complexity

“I am saying that [giving struggling readers complex grade-level texts] are going to give him a shot to struggle and **grow as best he can with a text**”

## 2. Teach the whole class how to closely read grade-level complex texts

Obviously, it would be pretty jacked up if it were to give Johnny “I read an 8th-grade level” person a copy of *Things Fall Apart* or an article from *The New York Times*. “No, that’s not going to make me go to my desk, get up my feet, and sip my coffee.”

It’s pointless to give students grade-level complex texts if we don’t ensure students with direct, effective instructional practices the modeling, scaffolded instruction, monitoring, and checks for understanding that Schenckers’ class is making an engaging text. That’s why, in my, *in class* is the perfect environment to do this.

To not say that these instructional practices are going to magically make it so Johnny can read *Things Fall Apart* or 10th-grade comprehension and enjoyment. I am saying they are going to give him a shot to struggle and grow as best he can with a text that’s within reach of someone who can read the passage and cause readiness.



Stuart (2013)

UConn

---

---

---

---

---

---

---

---

# Reality of text complexity

## Reading at the Frustration, Instructional, and Independent Levels: The Effects on Students' Reading Comprehension and Time on Task

ACADEMIC JOURNAL ARTICLE  
By Treptow, Megan A.; Burns, Matthew K.; McComas, Jennifer J.  
*School Psychology Review*, Vol. 36, No. 1, March 2007

“Comprehension was highest at the independent level and lowest at the frustration level.”

UConn

---

---

---

---

---

---

---

---

## Principles

- Grade level text may be emphasized in core instruction
- Grade level text should NOT be the focus of tiered supports
- In general, read texts that are at the learner's **instructional level (93-97% accuracy)**

UConn

Burns, 2004

---

---

---

---

---

---

---

---

## *3. START READING WITH THE ABCD*

UConn

---

---

---

---

---

---

---

---

## ABCD Prereading Process

- Three simple steps to success
  - Activate prior knowledge
  - Build background
  - Concentrate on vocabulary
  - Describe purpose for reading

UConn

---

---

---

---

---

---

---

---

## Activate prior knowledge: World History

Yesterday, we talked about Trajan's era in Rome. Turn and talk with your neighbor: What was his greatest accomplishment?

Trajan expanded Rome to its largest size in history.

This was a great accomplishment. Today, we're talking about his successor, Hadrian. Trajan's success created some problems for Hadrian... we're going to learn what those were.

UConn

---

---

---

---

---

---

---

---

## Build Background

- Before reading, provide information you don't expect your students to know and will make the reading easier

In today's text, the authors explain that Hadrian built a lot of infrastructure. Infrastructure describes things built to help people get what they need.



Roads were one form of infrastructure, to move people and goods from place to place. Here's a very well-built Roman road.



To get water, they had aqueducts instead of pipes. This is an aqueduct.

---

---

---

---

---

---

---

---

## Concentrate on Vocabulary

- Teach highly imageable words students may need should be taught quickly and simply
- Long discussions of them are not needed

**aqueduct**

a structure to carry water from place to place, like an open pipe



UConn

---

---

---

---

---

---

---

---

## Clear definitions

- Very clear and simple!
  - Synonyms best
  - As few words as possible
  - But don't distort it!

*escutcheon*

Technically: The shield part of a coat of arms  
Simply: A shield



UConn

---

---

---

---

---

---

---

---

## Elaborate on definitions: Examples, Non-Examples, and Sentences

- Examples (good instances of the word's use)
  - Give examples for *all the* meanings of the word students should know (skip ones that are too hard)
  - Make the examples short and information-rich

Let's look at two examples of **metaphor**. If I say, "That car is a dinosaur! It's time to get a new one," that's a metaphor, a creative description. The car isn't a dinosaur really; I'm using a metaphor to say the car is old creatively. Another metaphor would be, "Our principal, Mr. González, is a walking encyclopedia." I'm using a metaphor to say Mr. Gonzalez knows a lot in a creative way.

UConn

---

---

---

---

---

---

---

---

## Elaborate on definitions: Practice

- Ask questions that encourage thinking  
(Kame'enui, 2006):

Which word goes with **fabulous** - o.k. or super?  
Why does super go with **fabulous**?  
Is it **fabulous** if you fall and scrape your knee?  
What would it be?  
Maria thought her car was **fabulous** because...  
The family had a **fabulous** time at the park.  
How could a family have a **fabulous** time?  
When have you had a **fabulous** time?  
Is a **masterpiece** **fabulous**? Why?  
The concert was the best he had ever heard. Every note seemed perfect. Am I talking about **fabulous** or **discover**?

---

---

---

---

---

---

---

---

## Describe the purpose for reading

- Remind the students why this might be interesting
- Link to their experiences, back to your activation of prior knowledge
- Give hints about what students should focus on
- Make clear how they will use the information later

Many of you said Trajan was a great Roman emperor. As we read about Hadrian today, pay attention to **his different accomplishments**. When we're finished reading, we'll discuss whether Trajan or Hadrian was a better emperor.

UConn

---

---

---

---

---

---

---

---

---

---

## 4. EMPHASIZE 3 READING STRATEGIES

UConn

---

---

---

---

---

---

---

---

---

---

## What are reading strategies?

### TOOLS FOR UNLOCKING TEXT

Uh oh! I don't get it I need help!



What tool will help me unlock this?

---

---

---

---

---

---

---

---

---

---






---

---

---

---

---

---

---

---

### The best strategies

- Summarizing or paraphrasing
- Self-monitoring
- Questioning
  - Self-questioning
  - Teacher questioning

UConn

---

---

---

---

---

---

---

---

### Summarizing: Paragraph Shrinking

Peer-Assisted Learning Strategies' approach

Name the most important who or what.

Tell the most important thing about the who or what

Say the main idea in 10 words or less.

*The who or what only counts as 1 word*

Mr. Bennet's wife

Mr. Bennett's wife insisted on telling Mr. Bennett that Netherfield Park had finally been rented to someone.

Mr. Bennett's wife told him that someone had rented Netherfield Park.

UConn

Fuchs, Fuchs, Mathes, & Simmons, 1997

---

---

---

---

---

---

---

---

## Monitoring

- Identify when the textbox is locked
- Figure out the problem
- Reread the sentence and talk it through

**SMaRTSS**

Stop when stuck  
 MArk the hard part  
 Read a part out loud  
 Talk about that part  
 Say the other parts  
 Say what you figured out

---

---

---

---

---

---

---

---

## Questioning

- Ask the students questions
- Have students ask themselves questions
- Have students ask each other questions (peer-mediated learning)

UConn

---

---

---

---

---

---

---

---

## Question-Answer Relationships

Question Type	Explanation	Example
Right There	Literal questions, usually found in a single sentence.	Where did Monseigneur hold his fortnightly reception?
Think and Search	Draw conclusions (make inferences) from text Integrate information from more than one place in the text.	How did Monseigneur use four men to help him with his chocolate?
Author and You	Connect information in the text with outside experiences and opinions	How does Monseigneur's way of life compare with the lives of wealthy people today?
On Your Own	Can be answered without the text at all	What social consequences might this excessive way of living have?

---

---

---

---

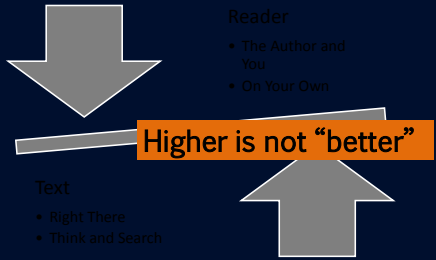
---

---

---

---

## Teach those students need



If the text-focused questions cannot be answered, the reader-focused questions cannot be answered.

---

---

---

---

---

---

---

---

## THE RESULT?

**UConn**

---

---

---

---

---

---

---

---

Significant growth in student achievement

**UConn**

---

---

---

---

---

---

---

---

And one happy sister who lives in Australia and works for an NGO!



---

---

---

---

---

---

---

---

Many thanks

**Devin Kearns**  
Assistant Professor  
Department of Educational Psychology  
Neag School of Education  
University of Connecticut

[devin.kearns@uconn.edu](mailto:devin.kearns@uconn.edu)

If you might be interested in pursuing your doctoral degree in reading for struggling learners, please get in touch! We have great faculty and funds available for study!

---

---

---

---

---

---

---

---

Additional information follows

---

---

---

---

---

---

---

---

## Use a program

- Program developers do work for us
- Using a program encourages cognitive planning
- Building from scratch can be problematic

UConn

---

---

---

---

---

---

---

---

## Think of ourselves (teachers) as astronauts, not Houston

- Packed schedules from 7:30 A.M. to 7:30 P.M.
- Have scheduled
- Increased every
- Must consider events and encounters



Fishman (2015); Malik (2009)  
<http://www.spacex.com/6711-astronauts-brute-force-rip-handrail-hubble.html>  
<http://www.theatlantic.com/features/archive/2014/12/5200-days-in-space/383510/>

---

---

---

---

---

---

---

---

## Problematic Alternatives

### No curriculum

We can't start planning Tier 2 yet because we don't have a complete and validated general education curriculum.

Assistant superintendent who is in charge of creating the new curriculum after the program-based curriculum was dropped after last year

### Incompletely-designed curriculum

- ✓ X materials to teach the themes
- ✓ X daily and weekly objectives
- X weekly assessments and independent practice

UConn

---

---

---

---

---

---

---

---

## What are the consequences?

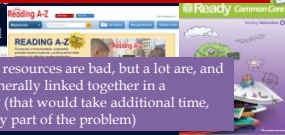
Teachers have to write their own curricula, select materials, and plan in

Many teachers (especially new, less confident, less experienced ones) feel overwhelmed ... this might include you

Regular t  
not systematic, not linked to instruction, or not carefully designed



Not all of these resources are bad, but a lot are, and they are not generally linked together in a systematic way (that would take additional time, which is already part of the problem)



---

---

---

---

---

---

---

---

## Follow the Program

- Use the materials
- Follow the core procedures
- Make sure implementation follows the program
- Check your own fidelity
- Check others' fidelity
- Reteach but don't skip around

*This is not mindless implementation ... Make sensible (small) changes!*

UConn

---

---

---

---

---

---

---

---

## Cognitive planning

- Even the most carefully structured program takes time to learn to use
- You will make many instructional decisions that aren't in the teacher's guide, however prescriptive

UConn

---

---

---

---

---

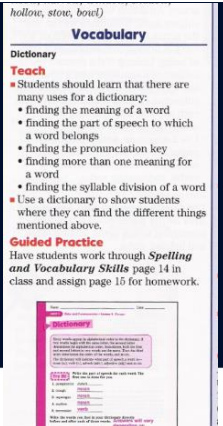
---

---

---

Program example:  
Cognitive planning required

- Look at the “Dictionary” “Teach” section.
  - What cognitive planning is required?



UConn

---

---

---

---

---

---

---

---

---

---

Planning ... Mr. Kearns' classroom  
(in 2000, as a second year teacher)

<p><b>Organizational planning</b></p> <ul style="list-style-type: none"> <li>• SQRRR: I decided that I will teach <i>Sunken Treasure</i> using this approach</li> <li>• Writing: We will work on letter writing and students will write letters</li> </ul>	<p><b>Cognitive planning</b></p> <ul style="list-style-type: none"> <li>• SQRRR: I say we will do it “together” but I don't explain anything else</li> <li>• Writing: I say I will model my thinking process and procedure and I have thought about where to put the overhead</li> </ul>
--	--

- Shared Reading: *Sunken Treasure* ... SQRRR together
- Writing
  - **milestone:** letter writing ... model my thinking process and procedure (try putting the overhead closer to the ground)
  - have students write their own letters

---

---

---

---

---

---

---

---

---

---

What's missing from Mr. Kearns' cognitive plan?

<p><b>SQRRR</b></p> <ul style="list-style-type: none"> <li>• What does it mean to do it “together”?                     <ul style="list-style-type: none"> <li>– Is it strictly out loud?</li> <li>– How will I involve students?</li> <li>– Will I review the steps in the procedure?</li> <li>– Will I read the entire text this way (it's at least 16 pages)?</li> </ul> </li> </ul>	<p><b>Writing</b></p> <ul style="list-style-type: none"> <li>• What exactly will I model? The entire process of writing a letter? That's a lot to cover!</li> <li>• Am I modeling this only once?</li> <li>• How will I be sure students are ready to do this themselves?</li> <li>• How long am I expecting it to take for them to write these letters?</li> </ul>
---	---

- Shared Reading: *Sunken Treasure* ... SQRRR together
- Writing
  - **milestone:** letter writing ... model my thinking process and procedure (try putting the overhead closer to the ground)
  - have students write their own letters

---

---

---

---

---

---

---

---

---

---

### A organizational planning disaster

Ms. A was teaching a lesson on comparing fractions



but Ms. A didn't have fraction manipulatives

So, she made fraction pies herself



... out of construction paper

and she latticed every one

UConn

---

---

---

---

---

---

---

---

If you remember nothing else ...

# Never

lattice a fraction pie

UConn

---

---

---

---

---

---

---

---

### Right There Questions

- Literal questions, usually found in a single sentence.
- Many of the words in the question are in the text

Where did Monseigneur hold his fortnightly reception?

What was Monseigneur about to do?

UConn

---

---

---

---

---

---

---

---



## Think and Search

- Draw conclusions (make inferences) from text
- Integrate information from more than one place in the text
  - (Answers may require multiple sentences)

What can we infer about Monseigneur's way of life?

How did Monseigneur use four men to help him with his chocolate?

UConn

---

---

---

---

---

---

---

---

---

---

## Author and You

- Connect information in the text with outside experiences and opinions
- Text-to-self connections, text-to-text connections, text-to-world connections

How does Monseigneur's way of life compare with the lives of wealthy people today?

What is your emotional reaction to this text? What causes that?

UConn

---

---

---

---

---

---

---

---

---

---

## On Your Own

- Can be answered without the text at all

What social consequences might this excessive way of living have?

What is your emotional reaction to this text? What causes that?

UConn

---

---

---

---

---

---

---

---

---

---