Research-Based Reading Comprehension Strategies

EDC448
Today’s objectives

- Identify **seven key comprehension strategies** that research has documented successful readers use to comprehend complicated text

- **Observe** a “think-aloud” example, **reflect** on the strategies used, and then **try it yourself** with a partner using the difficult texts you brought in
What is reading comprehension?

- Reading comprehension is the **active construction of meaning** from text (it’s more than sounding out words, it’s **UNDERSTANDING**)
- Good readers approach a text with a **mindset** that reading is like solving a problem
- Good readers are **reflective readers**
- Would Chris Tovani agree with these statements? Why or why not?
“Students lost interest when my questions were the only ones getting answered.” (p. 80)

“Readers who are taught how to question the text can infer and clear up confusion better than those who simply decode words and accepts ideas unchallenged.” (p. 81)

“After a bit of modeling, my students realize they have questions too.” (p. 82)

Gradually, I turn the responsibility for the question asking over to the students. (p. 83)

MONITOR to enrich understanding OR to clear up confusion (CLARIFY)
Instructional Strategies for Prompting Wondering to Help Monitor & Clarify

**B/D/A Questioning:** Students keep track of what they are wondering; THIN questions clarify author’s purpose, key vocabulary, and important facts; THICK questions extend learning and lead to deeper understanding; summarize new understandings at the end.

**Self-Questioning Taxonomy:** Remember > understand > apply > analyze > evaluate > create (goal is to move up the levels)
# B/D/A Questioning Chart

### Wondering? Monitoring?

<table>
<thead>
<tr>
<th>Before Reading</th>
<th>During Reading</th>
<th>After Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why would adolescents be more vulnerable to tobacco addiction?</td>
<td>Can teens really get hooked from the first cigarette?</td>
<td>Will we discover how to predict tobacco addiction?</td>
</tr>
<tr>
<td>How easy is it for adolescents to become addicted?</td>
<td>How many teens smoke?</td>
<td>How can we tell if one has an &quot;addictive&quot; personality?</td>
</tr>
<tr>
<td>How easy is it for adolescents to become addicted?</td>
<td>Is teen smoking on the rise?</td>
<td>Are cigarettes too available for purchase?</td>
</tr>
<tr>
<td></td>
<td>What can schools do?</td>
<td>Will we ever eliminate dangerous habits like smoking?</td>
</tr>
<tr>
<td></td>
<td>Why is there more smoking in movies?</td>
<td></td>
</tr>
</tbody>
</table>

What do you understand now that you didn’t understand before?

Teens can become addicted to tobacco almost immediately, even infrequent smokers, and as a result are highly likely to continue smoking into adulthood.
[Self-questioning Taxonomy]
Wondering? Monitoring?

Bloom’s Taxonomy, Revised by Anderson and Krathwohl (2001)

Original Version
- Evaluation
- Synthesis
- Analysis
- Application
- Comprehension
- Knowledge

Revised Version
- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering
## Taxonomy of Self-Questioning Chart

<table>
<thead>
<tr>
<th>Level of thinking</th>
<th>Comprehension self-assessment</th>
<th>Focusing question</th>
<th>Comprehension process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating</td>
<td>I have created new knowledge.</td>
<td>How has this au-</td>
<td>Synthesizing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>thor changed what I understand?</td>
<td></td>
</tr>
<tr>
<td>Evaluating</td>
<td>I can critically examine this author’s message.</td>
<td>How has the author’s perspective influenced what he or she tells me?</td>
<td>Inferring</td>
</tr>
<tr>
<td>Analyzing</td>
<td>I can take my understanding to a deeper level.</td>
<td>How is this similar to (or different from) other material I’ve read?</td>
<td>Making connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Determining importance</td>
</tr>
<tr>
<td>Applying</td>
<td>I can use my understanding in some meaningful way.</td>
<td>How can I connect what this author is telling me to understand something better?</td>
<td>Making connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inferring</td>
</tr>
<tr>
<td>Understanding</td>
<td>I can understand what the author is telling me.</td>
<td>What does this author want me to understand?</td>
<td>Determining importance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inferring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Creating visual/sensory images</td>
</tr>
<tr>
<td>Remembering</td>
<td>I can recall specific details, information, and ideas from this text.</td>
<td>What do I need to remember to make sense of this text?</td>
<td>Determining importance</td>
</tr>
</tbody>
</table>
How can the 2 strategies in your Beuhl text (B/D/A Questioning and Self-Questioning Taxonomy) foster “wondering” and “monitoring” as you (or your students) read?
What else besides Self-Questioning/Wondering?

➔ **Active reading** involves:

– Actively noticing if it makes sense
– Underlining/highlighting/summarizing key ideas
– Reacting with comments/conversations through symbols (?,?,?,?,,+,,)
– Sticky notes to jot, mark, label, & connect
– “Leave a road map” of your reading and thinking
As readers construct meaning from complicated texts…

- They should be **aware** of their mistakes AND be able to **revise/correct** their understanding = **MONITOR & CLARIFY**

- 40 years of research tells us that good readers have quick access to a variety of cognitive strategies to assist them

- Let’s have a look at some examples…
Good readers read actively; Good Teachers Think Aloud and Model how to read actively in your discipline

Understanding a Chemistry Text
Other Reactions in Aqueous Solutions
Defining Cognitive Strategies
(Your Reading Toolbox: M&M DAVIS)

- **Monitor and Clarify**: Be aware of mistakes and apply strategies to repair/revise understandings
- **Making Connections**: Text-to-self, text-to-text, and text-to-world
- **Determining Important Ideas**: Identify the main idea and supporting details
- **Asking questions**: Readers asks ?’s and reads to clarify before, during, and after reading
- **Visualizing**: Use senses to picture, smell, taste, or feel something in the text
- **Inferencing** (Reading between the lines- e.g., predicting): Use clues from the text & your background knowledge
- **Summarizing**: Combine main ideas and put in your own words
Key Reading Strategies
Which ones were used?

Notice the parallels in Buehl Ch. 1 when you read this week – pages 12 and 13 categorizes instructional activities by strategy.
So, what’s so hard about teaching reading comprehension? Most of the skills are abstract and invisible!
Cognitive Apprenticeship

- Just like good builders model how to construct strong houses...or gymnasts model how to do a cartwheel...or parents model how to drive a car
- Good content area teachers model how to construct deep meaning from the texts they use
- But because comprehension and metacognition takes place in one’s head...we must make our thinking visible and explicit to model important comprehension process for others (and take the mystery out of reading!)
What is metacognition?

- **Cognition**: Thinking
- **Metacognition**: *Thinking about thinking*

- **In a reading context**: Thinking about the goals, tasks, and strategies that will help you comprehend more deeply as you read
Levels of Metacognitive Awareness  (Perkins, 1992)

- Tacit readers: lack awareness of their thinking
- Aware readers: know when meaning breaks down but no strategies to repair meaning
- Strategic readers: know when meaning breaks down and uses strategies to repair meaning
- Reflective readers: reflect on reading and intentionally apply strategies not only when meaning is lost but also to deepen understanding
So, can we teach students to be reflective readers? YES!

- **Think-aloud** to explicitly model what, how, and when a strategy is useful
- **Class discussions, peer interactions, and coaching** (*social interaction* is key!)
- **Integrate into subject matter** to help transfer new learning to other settings
- **Goal:** *Self-regulation* (monitor and fix-up) and *independence*

<table>
<thead>
<tr>
<th>The Teacher</th>
<th>The Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do</td>
<td>You watch</td>
</tr>
<tr>
<td>I do</td>
<td>You help</td>
</tr>
<tr>
<td>I help</td>
<td>You do</td>
</tr>
<tr>
<td>I watch</td>
<td>You do</td>
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</tbody>
</table>
Promote Independence by Gradually releasing Responsibility

Model, think-aloud, and SCAFFOLD your strategy support
Figure 1
Gradual Release of Responsibility

<table>
<thead>
<tr>
<th>Teacher Regulated</th>
<th>Supported Practice (Scaffolding)</th>
<th>Student Regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modeling</strong></td>
<td><strong>Discussion Web</strong></td>
<td><strong>Make Connections</strong></td>
</tr>
<tr>
<td><strong>Explicit</strong></td>
<td><strong>Anticipation Guides</strong></td>
<td><strong>Generate Questions</strong></td>
</tr>
<tr>
<td><strong>Instruction</strong></td>
<td><strong>B/D/A Questions Chart</strong></td>
<td><strong>Visualize and Create</strong></td>
</tr>
<tr>
<td><strong>Teacher</strong></td>
<td><strong>Structured Note-Taking</strong></td>
<td><strong>Mental Images</strong></td>
</tr>
<tr>
<td><strong>Think-Alouds</strong></td>
<td><strong>Interactive Reading Guides</strong></td>
<td><strong>Make Inferences</strong></td>
</tr>
<tr>
<td></td>
<td><strong>QARs</strong></td>
<td><strong>Determine Importance</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Guide Experiences</strong></td>
<td><strong>Synthesize</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Shared Experiences</strong></td>
<td><strong>Monitor Reading</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Classroom Strategies</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cooperative Experiences</strong></td>
<td></td>
</tr>
</tbody>
</table>

I Do
You Watch

I Do
You Help

You Do
I Help

You Do
I Watch

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Let’s watch another example

- Part 1: Notice/Name the strategies that students use in the pre-reading picture activity.
- Part 2: Notice/Name some of the strategies the teacher uses to think-aloud with her students.
- Part 3: Notice how students begin to actively practice and gradually accept responsibility for their understanding.
Now it’s your turn to model reflective reading...

- Select 1-2 examples of what you found challenging in your text
- “Think-aloud” with a partner about a challenging piece of the text
  - What made it hard to understand?
  - How did you repair your understanding?
  - Share your “I-wonder” questions to deepen understanding
Reflecting on Reflecting

- What did you notice from this experience?
- What did you learn about what makes text hard?
- How might you apply this in your own classroom teachings about ____?
Homework:

- Read **Beuhl Ch. 1** Cognitive Strategies for background and connections to class (p. 3-13)
- Read **#3 Lapp et al** article on Think-Alouds (see wikispace - using three column chart)
- Complete the **Tackling The Text Think-Aloud** Assignment following that model (skim standards for content ideas) [review directions]
- Refer to **#4 Block & Israel** for additional ideas for thinking aloud about each strategy
- Look ahead to texts due and lesson plan topic
What do good readers do? (seven comprehension processes)
Readers as Apprentices
Metacognitive Conversations
Building Independence (see p. 12-14 for activities)
<table>
<thead>
<tr>
<th>Text</th>
<th>Teacher commentary during the think-aloud</th>
<th>Strategies modeled/practiced</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Going Through Changes</em> (Photo of pancakes)</td>
<td>“As I look over this piece of text, I see a photo of pancakes cooking on a griddle. Some are golden brown and others are still a beige batter color. The title of this reading is <em>Going Through Changes</em>. I wonder if the pancakes, some uncooked and others fully done, represent changes at a chemical level. I’ll read the first paragraph.”</td>
<td>Predicting and using titles and graphics provides focus and motivation to read further.</td>
</tr>
<tr>
<td>Text</td>
<td>Teacher commentary during the think-aloud</td>
<td>Strategies modeled/practiced</td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>It usually takes energy to combine substances in a chemical reaction. This kind of reaction is called an endothermic reaction.</td>
<td>“An endothermic reaction. Wow, I’m not sure what that means, but I do know that thermic sounds like a word part from thermometer or thermal and both of those terms relate to heat. Maybe endothermic also relates to heat in some way. I’ll continue to read. Maybe I’ll gain an understanding of the meaning of this word if I read on.”</td>
<td>Segmenting words into word parts brings attention to root words or affixes that might offer clues to meaning. In addition, understanding that clarification might come from context or from continued reading.</td>
</tr>
<tr>
<td>Dimension</td>
<td>Definition</td>
<td>Components</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Vocabulary    | Focus on solving an unknown word, not providing the definition of the word | • Context clues  
• Word parts (prefix, suffix, root, base, related words)  
• Use of resources (peers, dictionary, Internet) |
| Comprehension | Strategic moves to support understanding the text                           | • Summarizing/synthesize  
• Predicting  
• Inferring  
• Visualizing  
• Questioning  
• Connecting  
• Monitoring  
• Activating background knowledge |
| Text structures | Structures used in presenting information that readers can use to predict the flow of information | • Cause/effect  
• Compare/contrast  
• Problem/solution  
• Temporal/sequence  
• Descriptive  
• Story grammar (plot, setting, character, conflict, etc.) |
| Text features | Components of the text added to increase understanding or interest         | • Captions  
• Illustrations, diagrams  
• Headings, titles  
• Bold, italic words  
• Glossary, index |
Review Today’s Objectives

 IDENTIFY **seven key comprehension strategies** that research has documented successful readers use to comprehend complicated text

 OBSERVE a “think-aloud” example, reflect on the strategies used, and then try it yourself with a partner using the difficult texts you brought in