

*The*  
**Key**  
**Comprehension**  
**Routine** Second Edition

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**Keys to Literacy<sup>®</sup>**



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## Chapter 2

# Comprehension Instruction

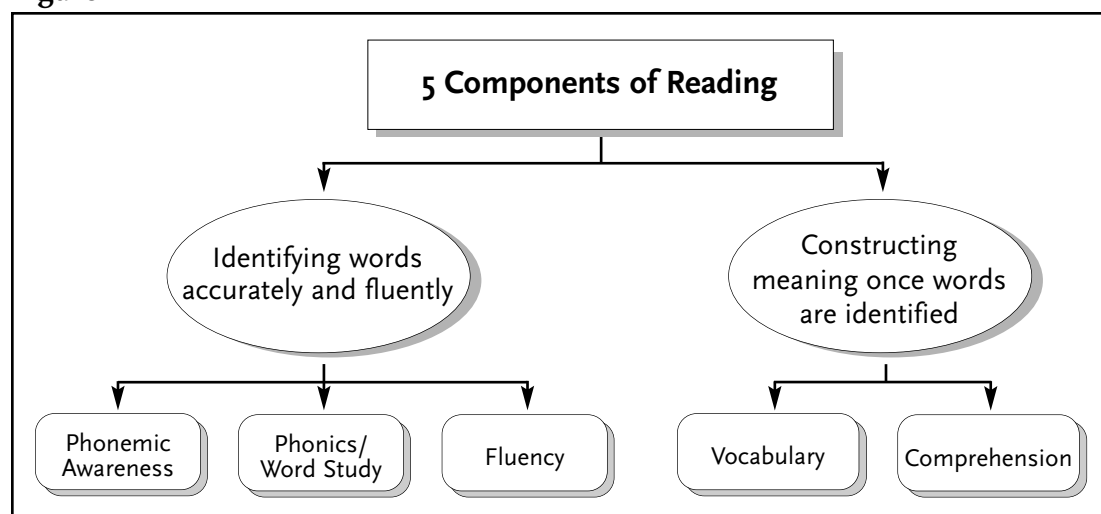
### Comprehension: One of Five Components of Reading

Five areas of instruction must be addressed to successfully teach students to read and comprehend (National Reading Panel, 2000):

- \* **Phonemic Awareness:** The ability to notice, think about, and work with the individual sounds in spoken words. Before students learn to read, they must understand how the sounds in words work.
- \* **Phonics:** The ability to understand the relationship between the letters of written language and the individual sounds of spoken language; the use of letter combinations and patterns, syllable types, and word attack skills to read and spell words.
- \* **Fluency:** The ability to read text quickly, accurately, and automatically, with proper expression and understanding.
- \* **Vocabulary:** The ability to understand the meaning of words.
- \* **Comprehension:** The ability to derive meaning based on the information in the text in combination with the reader's own knowledge. Comprehension can be improved by teaching students to use specific reading strategies.

The first three components (Phonemic Awareness, Phonics, and Fluency) are necessary for basic decoding. They collectively allow readers to identify and spell words accurately and fluently. The ultimate goal of reading, however, is to understand what is read. The last two components (Vocabulary and Comprehension) enable readers to construct meaning once words are identified (see Figure A).

Figure A



## Meta-Cognition

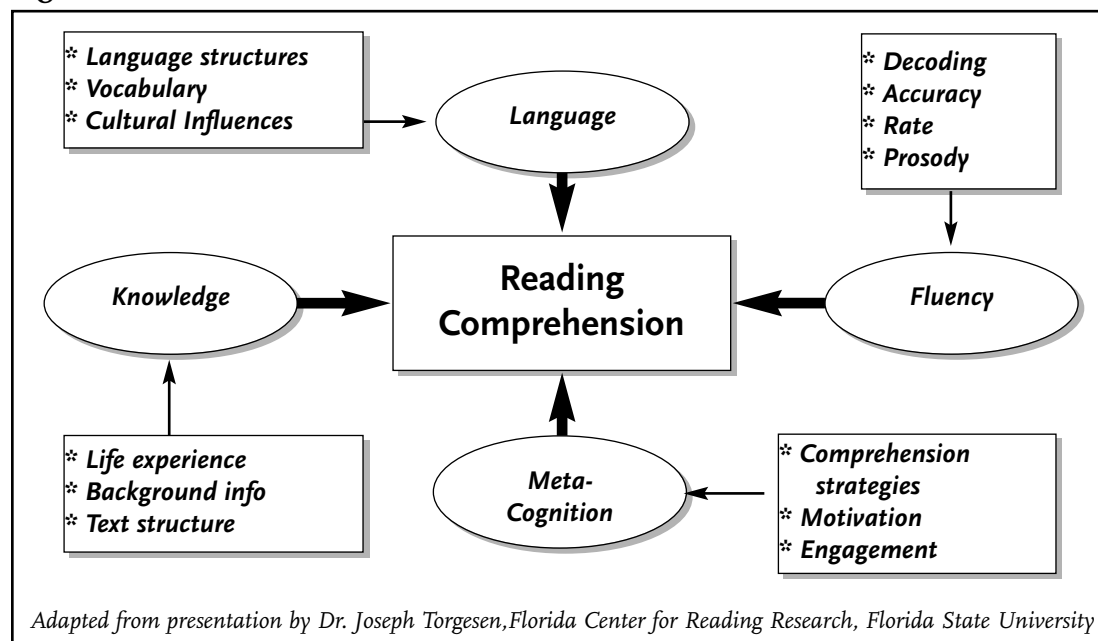
Reading comprehension is a complicated process that requires intentional and thoughtful interaction between the reader and the text. Readers must monitor their understanding, engage in problem-solving, and apply strategies to gain meaning from text. They construct meaning from the combination of information they acquire from the text with their background knowledge. Background knowledge consists of experience with the topic covered in the text as well as knowledge of text structure at sentence, paragraph, and discourse levels (Maria, 1990; Snow, 2002).

Good readers think actively and engage in a process to make sense of what they read. This is referred to as *meta-cognition*, meaning a reader's awareness of himself as a reader and knowledge about the use of strategies. Many poor readers lack this skill. They do not realize what they do not understand, and they have no strategies for making more sense of the text. All students benefit from strategy instruction, but struggling readers in particular need direct, explicit instruction in comprehension strategies to become meta-cognitive. Finally, all students need guided practice with comprehension strategies before they can apply them independently (Carlisle & Rice, 2002; Sweet & Snow, 2003).

## What Factors Can Affect Reading Comprehension?

A variety of factors may affect reading comprehension (Biancarosa & Snow, 2004; Jetton & Dole, 2004). Teachers should keep these factors in mind as they attempt to teach comprehension. For some students, instruction in comprehension strategies such as those in The Key Comprehension Routine will not be enough to improve comprehension if other factors are not also addressed. Figure B illustrates factors that affect comprehension, along with a brief explanation of each.

Figure B



### ***Meta-Cognition and Motivation***

As noted above, weak self-monitoring skills and a lack of useful strategies can impede reading comprehension. Furthermore, students will be more successful if they are motivated to understand and engage in text they read (RAND, 2002). Instructional practices that improve motivation and engagement in reading include the provision of goals to achieve while reading and opportunities to collaborate with peers to achieve those goals (Guthrie & Humenick, 2004). Teachers can also influence students' motivation by structuring assignments, being attentive to text difficulty, and providing scaffolding for complex text (Moje, 2006; Torgesen, J. K. et al. (2007).

### ***Decoding/Fluency***

Research has shown that a core linguistic deficit underlies poor reading at all ages and that poor readers exhibit weaknesses in phonemic awareness, phonics and word attack (decoding), and fluency skills (Shankweiler et al., 1999; Moats, 2001). For many students in grades 4 and up, weaknesses in these areas are the main causes of poor reading comprehension. They devote so much energy and attention to basic reading skill components that they are unable to focus on comprehending what they are reading.

### ***Background Knowledge***

A lack of significant life experience and/or vast reading experience can affect the amount of background knowledge a student can access when reading. Without background knowledge of the reading content, students cannot relate to the information sufficiently to construct meaning.

### ***Knowledge of Text Structure***

To comprehend, a reader must also have knowledge of text structure at the sentence, paragraph, and discourse levels. Students must be able to understand individual sentences and to link the ideas in a sentence to those in the sentences before and after it. Students who have good grammatical awareness also tend to be good readers (Carlisle & Rice, 2002). Difficult sentences, such as those that contain complicated word order or complex sentence structure, can hinder comprehension. Teachers must be aware of complex sentences in reading they assign and provide scaffolding for students who may struggle with these sentences.

### ***Vocabulary and Language Skills***

One of the oldest findings in educational research is the strong relationship between vocabulary knowledge and reading comprehension. Comprehension entails far more than recognizing words and remembering their meaning. However, comprehension is impossible for a student who does not know the meanings of a sufficient proportion of the words in the text (Stahl, 1999; Samuels, 2002).

In addition to a comprehension strategy routine, content literacy instruction should include a routine for teaching vocabulary. *The Key Vocabulary Routine* (Sedita, 2003, 2009) is a professional development program that includes both direct and indirect methods for teaching vocabulary words and vocabulary learning strategies. Information about this program is available at Keys to Literacy's website, [www.keystoliteracy.com](http://www.keystoliteracy.com).

### Other Factors

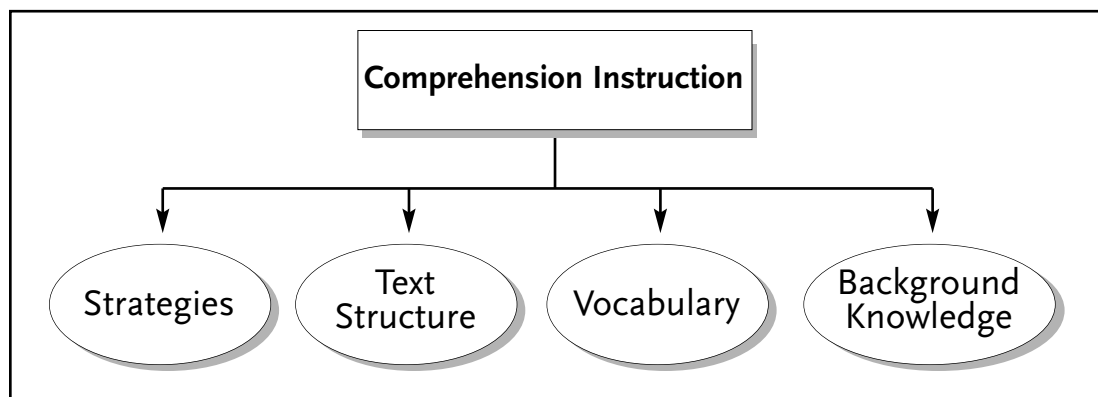
Some students may have additional learning weaknesses that affect comprehension. These may lie in the following areas:

- \* Attention
- \* Short or long-term memory
- \* Visualizing and creating images
- \* Expressive language skills
- \* English as a second language

### What Constitutes Effective Comprehension Instruction?

A complete plan for teaching comprehension should address four components: comprehension strategies, text structure, vocabulary, and background knowledge (see Figure C). The Key Comprehension Routine focuses on the first two components (strategies and text structure).

Figure C



### What is Strategy Instruction?

Teaching a relatively small set of comprehension strategies can improve comprehension (National Reading Panel, 2000; Snow, 2002). These strategies are typically used by strong readers, and they include:

- \* **Comprehension monitoring.** Readers learn to react if they do not understand, rather than simply continuing to read or skipping over text. Monitoring strategies provide a set of tools that can be used to identify and “fix” misunderstanding while reading.
- \* **Use of graphic and semantic organizers (including story maps).** Readers create or complete graphic representations of topics and main ideas in a text, showing how those topics and ideas are related to one another.
- \* **Question answering.** Readers answer questions posed by the teacher or by peers and receive immediate feedback on their responses. They determine whether the answer to a question is located in the text or if the answer must be inferred.

- \* **Question generation.** Readers ask questions of themselves or their peer group before, during, and after reading. They learn to consider how these questions fit into a framework of understanding, as in Bloom's Taxonomy (Bloom 1956), and to anticipate test questions.
- \* **Story structure.** Readers use the structure of the story as a means to predict or recall story content in order to retell, summarize, or answer questions about what they have read.
- \* **Summarization.** Readers select and paraphrase the main ideas of text and integrate those ideas into a brief paragraph or several paragraphs that capture the most important ideas in the reading.
- \* **Cooperative learning.** Readers learn and practice strategies together through peer interaction, dialogue with each other, and with the teacher in whole-group activities.

Although each of these strategies is beneficial when used alone, learning is significantly improved when several strategies are combined (Gaskins, 1998; Pressley, 2000; Duke et al., 2004). More specifically, the National Reading Panel (2002) found that strategies can improve results in standardized comprehension tests when used in combination. The Key Comprehension Routine incorporates all of the strategies noted above and encourages the combining of two or more strategy activities.

In the 2007 report, *Academic Literacy Instruction for Adolescents* (Torgesen et al.), it is noted that "increasing explicit instruction and support for the use of comprehension strategies is perhaps the most widely cited current recommendation for improving reading comprehension in all studies, particularly for those who struggle with comprehension." (p. 17)

The report also notes that "evidence for the utility of explicit instruction in comprehension strategies has been found not only in controlled experimental studies but also in benchmark studies of more and less effective schools and teachers." (p.18) A number of reviews and syntheses of research offer key information about effective comprehension strategy instruction, from which The Key Comprehension Routine was developed. The following are many of the strongest experimental studies and meta-analysis on comprehension strategy instruction:

- \* Lysynchuk, Pressley, and Vye (1990)
- \* Alvermann and Moore (1991)
- \* Dole, Brown, and Trathen (1996)
- \* Klingner, Vaughn, and Schumm (1998)
- \* The National Reading Panel (2000)
- \* The RAND Reading Study Group (Snow, 2002)
- \* Carlisle and Rice (2002)
- \* Meltzer, Smith, and Clark (2003)
- \* Alfassi (2004)

The consensus of opinion is summarized well by Noles and Dole (2004):

Researchers have collected much evidence that supports explicit strategy instruction ... The teaching of strategies empowers readers, particularly those who struggle, by giving them the tools they need to construct meaning from text. Instead of blaming comprehension problems on students' own innate abilities, for which they see no solution, explicit strategy instruction teaches students to take control of their own learning and comprehension. (p. 179)

### ***Strategy Instruction for Adolescent Readers***

Research identifies several specific skills that are particularly effective when teaching reading to adolescent students. Curtis and Longo (1999) describe the reading curriculum for struggling adolescent readers used at the Boys Town Reading Center in Nebraska and replicated in affiliated public schools. Their research found that students made impressive gains in reading (about two years for every year of instruction), and it was possible to bring most of them up to grade level. In addition to instruction in word identification, analysis, fluency, and vocabulary skills, the following comprehension and study skills were most effective:

- \* Teaching the difference between topics and main ideas
- \* Teaching that there are many study skills with different functions, and that these tools can be used during both reading and writing
- \* Teaching the two-column note taking technique
- \* Teaching mapping, hierarchies, and other kinds of graphic organizers
- \* Teaching students to generate their own questions during reading, and providing them with the skills to answer these questions

Alvermann and Moore (1991) identified the following specific skills to be especially effective in building independence in reading and studying in adolescent students:

- \* Rehearsing (underlining, taking notes verbatim)
- \* Elaborating (taking notes by paraphrasing text, forming mental images, creating an analogy, summarizing)
- \* Organizing (outlining, mapping)
- \* Comprehension monitoring (meta-cognitive training, self questioning)

Of these four skills, Alvermann and Moore found that summarizing is generally the most difficult strategy for students to master. However, it becomes easier with explicit instruction over time and scaffolding. All skills noted above are embedded in one or more activities of The Key Comprehension Routine.

### ***Writing to Learn***

Writing activities have been shown to enhance reading and comprehension. Based on a

meta-analysis of the research, Graham and Hebert (2010) found that a cluster of closely related instructional practices are very effective in improving students' reading. These are:

1. Have students write about the texts they read, including writing summaries of text, notes about text, and creating and answering written questions about a text.
2. Teach students the writing skills and processes that go into creating text, including teaching the process of writing, text structures for writing, and paragraph or sentence construction skills.
3. Increase the amount of time students write.

All three findings support The Key Comprehension Routine. Activities 2, 3, and 4 of the Routine (two-column notes, summary, and question generation) are exactly the kinds of writing practices identified in Graham and Hebert's research. Chapters 3 (*Main Idea Skills*) and 4 (*Thinking Out Loud, Discussion and Text Structure*) address text structure, in particular at the paragraph level. Finally, the Routine focuses on active learning through frequent discussion and writing.

### **When Should Strategies Be Taught, and Who Should Teach Them?**

Ideally, comprehension instruction should begin as early as grades 1-3. Basic comprehension strategies can be introduced while students are learning beginning reading skills. In grades 4-8, strategy instruction should become a major area of focus as students make the change from "learning to read" to "reading to learn" (Chall, 1996). Strategy instruction should continue during high school as students encounter increasingly more complex text structures and concepts.

#### ***Teaching Strategies in the Content Classrooms***

Research indicates that teachers who provide comprehension strategy instruction that is deeply connected within the context of subject matter learning, such as history and science, foster comprehension development (Snow, 2002; Biancarosa & Snow, 2004). If students learn that strategies are tools for understanding the conceptual context of text, then the strategies become more purposeful and integral to reading activities. Unless the strategies are closely linked with knowledge and understanding in a content area, students are unlikely to learn the strategies fully, may not perceive the strategies as valuable tools, and are less likely to use them in new learning situations with new text.

Curtis and Longo (1999) note that the ability to practice the strategy with a purpose is even more important than the specific study technique itself. They found that students need numerous opportunities to apply the strategies they are learning and that the practice must occur in situations that are meaningful to students. The research does not show strong results for students who learn skills in isolation and are subsequently expected to apply or transfer those skills appropriately at their own discretion (Meltzer et al., 2003). In their summary of the research on secondary school teaching specific to reading, Alvermann and Moore (1991) concluded that the use of strategies such as taking notes, mapping, and paraphrasing should be built into the curriculum of all content areas and that instilling these strategies is the responsibility of all educators alike.

The Key Comprehension Routine embeds strategy instruction in content classroom lessons using discipline-specific texts and other reading materials.

### **The Need for Professional Development in Strategy Instruction**

A major finding of the National Reading Panel (2000) was that professional development is essential for teachers to develop a knowledge of reading comprehension strategies, to understand which strategies are most effective for different students, and to learn how to teach and model strategy use. In addition, the panel found that teaching reading comprehension at all grade levels is complex. The RAND Reading Study Group (Snow, 2002) noted that recent studies have underscored the importance of teacher preparation as a way to deliver effective instruction in reading comprehension strategies, especially when the students are low-performing.

Some content teachers do not believe that their role includes reading instruction. Many educators, especially content classroom teachers, assume that students have learned to read by the time they reach the 5th grade and that struggling readers need intervention that can only be provided by support staff. Many of the content teachers who are willing to teach comprehension strategies may not know how. Too often, middle and high school teachers have received minimal preservice training in reading instruction; once teachers are in the classroom, opportunities for professional development in content reading instruction are difficult to find. In their report summarizing the research on literacy instruction in middle and high school content areas, Heller and Greenleaf (2007) concluded:

Perhaps the greatest challenge of all has to do with the scarcity of ongoing, high-quality professional development for teachers. In spite of the many workshops and textbooks dedicated to literacy across the curriculum... relatively few of the nation's secondary school teachers have had meaningful opportunities to learn about the reading and writing practices that go on in their own content areas. More optimistically, though, when they do receive intensive and ongoing professional support, many content teachers find a way to emphasize reading and writing in their classes. (p. 18)

Specifically, “teachers need training in explaining to students when and how to apply strategies, how to model the thinking process and provide examples from classroom lessons, and how to keep students engaged” (National Reading Panel, 2000, p. 16). Quality professional development must be more than individual workshops or training days in order to have a sustainable impact on instruction. From their meta-analysis of effective professional development for teachers, Snow-Renner and Lauer (2005) found that “professional development that is most likely to positively affect a teacher’s instruction is:

- \* of considerable duration,
- \* focused on specific content and/or instructional strategies rather than general,
- \* characterized by collective participation of educators (in the form of grade-level or school-level teams), and
- \* infused with active learning rather than a stand-and-deliver model.” (p. 6)

The recommended professional development model for implementing The Key Comprehension Routine provides in-depth, hands-on training that enables teachers to apply the research on reading comprehension strategy instruction in their classrooms.

**NOTES:**