

Current Research
IN READING / LANGUAGE ARTS



Understanding and Supporting
Comprehension Development
in the Elementary and
Middle Grades

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Introduction

“...reading comprehension has come to be viewed as the “essence of reading”

—(National Reading Panel, 2000, p. 4-1)

Although educators often disagree about many other aspects of literacy, there appears to be universal agreement that the primary goal and purpose of reading is to comprehend text—to understand what we read. Even more impressively, there is a consensus about the nature of comprehension. Comprehension is not just the by-product of accurate word recognition. Instead, we know that comprehension is a complex process which requires active and intentional cognitive effort on the part of the reader.

What Do Children Comprehend?

One of the most intriguing things that we have discovered about comprehension, among adults as well as children, is that it varies. Both the outcomes of comprehension and the process itself are interactive and dynamic. What children comprehend is influenced by their own development, by the texts they are reading, and by the reading tasks they set for themselves or that others require (see Figure 1).

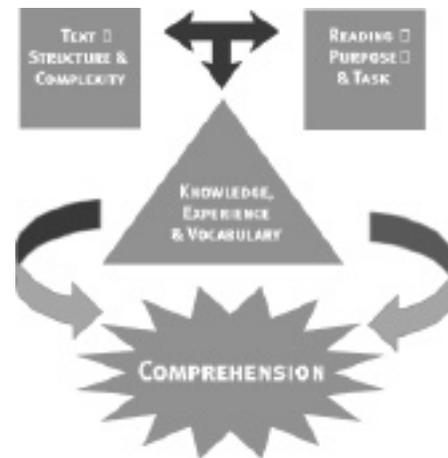


Figure 1. What Do Readers Understand?
Influences on Comprehension

Development: Prior Knowledge, Background Experience, and Vocabulary

It is difficult to over-estimate the influence of children's prior knowledge and their experience. In their review of children's learning from text, Alexander and Jetton (2000) conclude: "Of all the factors (involved in learning from text), none exerts more influence on what students understand and remember than the knowledge they possess" (p. 291).

Over the past three decades, research findings have consistently demonstrated how prior knowledge and experience influence reading comprehension (Lipson, 1982, 1983). Simply put, the more accurate and elaborated knowledge readers have about the ideas, concepts, or events described in the text, the better they will understand it. On the other hand, limited information and/or misconceptions create obstacles to comprehension. When people (not just children or poor readers) read unfamiliar text, they read more slowly, they remember less, they construct meanings that are inconsistent with the author's, and they sometimes reject the text information outright.

In their important book, *Preventing Reading Difficulties in Young Children* (Snow & Griffin, 1998), a panel of nationally renowned experts concluded that

The breadth and depth of a child's literacy experiences determine not only how many and what kinds of words she or he will encounter but also the background knowledge with which a child can conceptualize the meaning of any new word and the orthographic knowledge that frees that meaning from the printed page. Every opportunity should be taken to extend and enrich children's background knowledge and understanding in every way possible, for the ultimate significance and memorability of any word or text depends on whether children possess the background knowledge and conceptual sophistication to understand its meaning. (p. 219)

This conclusion highlights the strong connection between readers' prior knowledge and their vocabulary development.

The importance of vocabulary development as a major contributor to reading comprehension has long been acknowledged and widely studied (See Beck,

McKeown, & Omanson, 1999). In *Preventing Reading Difficulties in Young Children*, the authors describe why vocabulary development might predict reading comprehension:

Written text places high demands on vocabulary knowledge. Even the words used in children's books are more rare than those used in adult conversations and prime time television. Learning new concepts and words that encode them is essential to comprehension development. (Snow, Burns, & Griffin, 1998, p. 217)

There is a reciprocal relationship between readers' prior knowledge/vocabulary development and their ability to read and understand a wide variety of texts. Not surprisingly, the research suggests that English Language Learners (ELL) "... who develop a strong linguistic and cognitive base in their primary language tend to transfer those attitudes and skills to the other language and culture (they are learning)" (Ovando, 1993, p. 225) and are more successful at learning to read and write in English (Hudleson, 1987).

Good prior knowledge and appropriate experiences certainly enhance comprehension; but wide and engaging reading also expands *vocabulary* and promotes conceptual development. The massive amounts of vocabulary that children need to learn and that most do learn has led many researchers to the conclusion that most vocabulary must be acquired incidentally through wide, frequent reading. There is evidence that reading materials are far richer in vocabulary content than oral language. There is also some evidence that students can be taught strategies that increase their ability to derive the meaning of words that they encounter in their reading.

Experience with books helps develop students' vocabulary, but it also helps children to develop a different sort of prior knowledge, equally important for comprehension. Young children often do not fully understand how stories work—especially complex stories with multiple problems. Researchers have found that young children often understand and remember only some parts of stories (Lipson, Mosenthal, & Mekkelsen, 1999). Whereas the primary-grade readers in that study regularly recalled action and action-driven events when retelling stories, they tended not to include the internal plans or internal responses of the characters. Emotionally charged internal responses, such as "Grumble got mad" or "Roger cried" were hardly ever included in students'

retellings, and even internal plans, which tend to be linked to action/attempts were rarely detailed in children's retellings of the stories.

To an extraordinary extent, when young children recall stories, the characters lack motivation, and it is often difficult to tell whether children have understood the casual links and/or tensions that mature readers would expect from stories (Lipson et al., 1999; Stein & Gleen, 1979). They are, however, filled with action.

As children grow, they read and hear increasingly complex texts, and they become more able to grasp the subtler aspects of them. Not surprisingly, children not only understand them better while reading, but they are also more likely to include these components in their own writing. By sixth grade, young readers and writers should be able to use a wide range of knowledge, extensive vocabulary, and broad experience to understand and write texts.

The Influence of Text: Understanding Different Types of Texts

Even when readers have much experience and good prior knowledge, their comprehension varies depending on the type of text they are reading. Certainly it is no surprise that "harder" material is more difficult to understand than "easier" material. But what makes a text harder or easier to read and understand?

Some of the factors are important for all readers, and others are more important for beginning readers than for more mature and highly skilled readers. For example, the relationship between the pictures and text can make a big difference in how well very young children understand a story. Indeed, research suggests that pictured events and concepts are significantly more likely to be recalled than non-pictured events (Lipson et al., 1999). If the pictures are central to and support the main themes and ideas of the story, this is good. If, however, the pictures are not supportive, or draw children's attention to unimportant side events (called "seductive details") this can pose problems (Alexander & Jetton, 2000). Older, more mature readers do not rely so heavily on pictures to comprehend the stories/texts they read.

Some features of text influence comprehension for all readers. Aspects of text such as its **structure**, **complexity**, and **genre** affect understanding even when readers are very accurate decoders (Goldman & Rakestraw, 2000; Lipson et al., 1999).

Text Structures: Narrative

Generally speaking, we organize texts in two large categories: narrative (stories) and exposition (explanation of facts and concepts). These two types of text are different in both purpose and organization (see Figure 2). For example, people generally read stories for entertainment, although we may learn from them as well. We read expository text to learn

NARRATIVES	
Story Structure	
Fantasy	<i>Julius</i> , by Angela Johnson: <i>Lost and Found</i> , Mark Teague
Realistic Fiction	<i>Mariah Keeps Cool</i> , M.P. Walter, <i>The View from Saturday</i> , E.L. Konigsburg
Historical Fiction	<i>By the Shores of Silver Lake</i> , L. I. Wilder
Folk Tales	<i>The Great Ball Game</i> , J. Bruchac
Mystery	<i>Encyclopedia Brown</i> , <i>The Case of the Earthenware Pig</i> , D. Sobol
EXPOSITION	
Text Structure	
Cause-Effect	<i>Wildfires</i> , S. Simon; <i>Passage to Freedom</i> , K. Mochizuki
Compare/Contrast	<i>Chuck Close Up Close</i> by Chuck Close
Description	<i>Ants</i> , R. Steffoff, <i>Anthony Reynoso: Born to Rope</i> by G. Gordon
Time Order	<i>Nights of the Pufflings</i> by B. McMillan
TEXTORGANIZATION	
Adjunct Aids (illustrations, headings, boldfaced type, charts, figures, maps, summaries, etc.)	
Coherence and Unity (devices to help clarify, connect, and relate the ideas in text — e.g. connectives, pronouns, linking words)	

Figure 2. Different Types of Text Organization and Features

new or clarify old information, although these texts can be extremely interesting and entertaining.

Narratives typically share a common set of features and structures called a “story grammar” (Stein & Glenn, 1979). Readers who understand how stories are organized can use this information to help them understand better. When the features of narrative texts are “mapped,” children often read and comprehend the stories better and more easily. All narrative texts have

- A setting, either physical or psychological (time/place/mental state)
- Characters, the major players in the story
- A problem, or initiating event, something that gets the story started
- Important events, related to the problem
- An outcome or resolution, events or consequences that resolve the problem.

In addition, most narratives have a *theme*, a major idea or important concept that the author is trying to convey. There may be more than one theme in a complex narrative, and these ideas are generally more universal than concrete (e.g. “friends stand by each other and help out when needed”).

Although children often find narratives easier to read, they may not always understand the more subtle aspects of stories such as the motives or goals of characters or the theme of the story. In addition, there are different genres of narrative texts, and children do not usually have extensive experience with all these different types of stories. For example, they may be quite comfortable reading and understanding simple realistic fiction, but they may not have encountered historical fiction or more sophisticated fantasies. Both exposure and good instruction are usually needed to help children read and understand a broad range of different genres.

Text Structures: Exposition

Expository texts are organized differently than narratives because they are written for a different purpose (see Figure 2). We read exposition to learn new information, about a different point of view, or to clarify confusions.

The ideas within a text can be organized in a number of different ways. Teachers and children often focus on the sequence of events and, indeed, these are important in many narrative stories. In exposition, however, the major ideas and events in the text are

often not organized according to sequence, but rather by some other text structure. For example, in Seymour Simon’s fascinating book *Volcanoes*, the text is *not* organized by sequence. Instead, like many informational texts, it uses *examples, description, cause-effect, and ordered lists (4 types of volcanoes)* to inform the readers. To understand the “main idea” of this selection, the reader must be able to identify these text structures. Otherwise, the material is not at all comprehensible.

Not all text structures are equally easy to understand. Stories tend to be easier to understand than exposition for many young readers and, within expository texts, certain organizational patterns are easier than others (Armbruster, 1984). For example, cause-effect is more challenging for children than sequence (see graphic organizers in the discussion of Instruction below).

Complexity

Not surprisingly, the complexity of the materials affects comprehension. As effective classroom teachers know, the difficulty of a text is determined by many things. Stories with multiple characters and events, complex problems and solutions, and substantive character motivations are much more difficult for all readers than stories that maintain the focus on one character or simple events. Although the delightful book *Officer Buckle and Gloria* (by Peggy Rathmann) and Jerdine Nolen’s terrific *Raising Dragons*, are both fantasies, they are not equally difficult texts. Certainly, *Raising Dragons* is longer, with more complex vocabulary. However, there are also several characters whose motivations need to be understood, and the elements of fantasy are far more extensive and interrelated. Even if it were read to children, it would be more difficult to comprehend.

Although this fact is hardly startling, given the early work on story comprehension (McConaughy, 1982; Stein & Nezworski, 1978; Thorndyke, 1977), it does have substantial implications for the use of authentic texts in instruction and assessment. Much of the literature in contemporary programs is written by highly regarded children’s authors. The good news is that these well-written and well-constructed stories are more easily comprehended than less well organized stories (Brennan, Bridge, & Winograd, 1986; Olson, 1985). The challenge comes when the texts may be more complex than some children can manage without support and instruction. It is important to

examine carefully the stories and texts students will read, noting what aspects of the structure or the author's style may influence children's understanding. Unlike readability formulas that simply count words or syllables, an analysis of the complexity of a narrative story or an expository text requires close reading and attention to the relationships between and among ideas. A good reading program should reveal this analysis and match it to appropriate instructional plans.

Reading Tasks and Purposes

As we have already suggested, children's understanding of texts is affected by their purposes for reading. In addition, comprehension varies depending on the types of tasks associated with the reading. If, for example, we are reading a novel simply because we want to—for recreation only—we read and understand it one way. If we were to read that same novel to prepare for a book group discussion later in the week, we might read and understand it a different way.

In school, children's comprehension and recall of text are profoundly affected by the tasks related to their reading. Children may be told to prepare to answer questions, to do a retelling, to find the main idea, to discuss it with a friend, or prepare for a presentation. Each of these, and many other tasks, affect students' understanding of the text. For example, if children are directed to read for the main idea, they are much more likely to provide an appropriate statement after reading than if they were not told about this before reading. Similarly, children are more likely to answer questions correctly if they know the tasks before reading than if they do not. Even after reading, the task can affect comprehension. Children who are asked inferential questions after reading are more likely to remember more inferential content later on than children who were asked more literal questions (Wixson, 1984), and children who have many experiences with answering inference questions become better at inferential understanding over time than children who are not asked these types of questions (Hansen, 1981).

In a study which examined the influence of tasks on students' motivation and strategic development, Turner (1995) found that students used more strategies, persisted longer, and controlled their attention better during open as opposed to closed literacy tasks. Closed tasks are those in which the informa-

tion to be used as well as the outcomes are clearly defined by the teacher. Closed tasks offer limited opportunities for students to make decisions, and the goal is often to get students to do automatic application of practiced skills. In contrast, open tasks are those in which students themselves can select relevant information and/or decide how to use the information to solve a problem. They invite more metacognition and decision making, which promotes higher level thinking. Turner and Paris (1995) concluded that tasks that provided opportunities for challenge and personal control, and that required collaboration were most likely to result in motivated, strategic, and reflective literacy behaviors (see literature discussion below).

The point is not that one type of task or another is always preferred, but rather that tasks should be matched to purposes so that students have the opportunity to develop a full array of necessary skills and abilities to understand a wide range of texts.

How Do Children Comprehend?

Not too long ago, both reading experts and teachers assumed that reading comprehension occurred as a natural by-product of accurate word recognition. However, over the past three decades researchers have pointed to a more complicated explanation. There is strong agreement that comprehension is a complex cognitive activity that relies on excellent fluency, vocabulary, and prior knowledge. In addition, "active interactive strategic processes are critically necessary to the development of reading comprehension. . . ." (National Reading Panel, p. 4-11). Good readers **intend** to understand—it is not a passive activity that occurs without effort. Teachers and students alike must understand the active, purposeful nature of comprehension.

The Role of Fluency

Educators have focused more and more attention on fluency because it has become increasingly clear how important it is to effective comprehension. Teachers have always attended to fluency as it is related to word accuracy, but we have come to understand that "word recognition accuracy is not the end point of reading instruction. Fluency represents a level of expertise beyond word recogni-

tion accuracy, and comprehension may be aided by fluency” (NPR, p. 303). Indeed, recent research suggests that accuracy and fluency are separable skills, and that fluency is more strongly related to comprehension ability than to decoding (Baker, Torgesen, & Wagner, 1992). In a study using a special sample of students and national data (National Assessment of Educational Progress, NAEP), researchers found that 44% of fourth-grade students were not fluent when reading grade-appropriate material, and that fluency and comprehension were closely related.

Why should fluency (rate, smoothness, and attention to phrase boundaries) affect comprehension? Generally researchers have argued that weak decoding skills cause the reader to use so much cognitive effort and attention that the reader cannot focus attention on comprehending the text. In this view, fluency is important because it involves rapid recognition of words (through instant recognition or quick analysis using orthographic spelling patterns). More recent research suggests an even larger role for fluency in comprehending text. This research demonstrates that fluency involves not just rapid word recognition, but also attention to phrase (meaning) boundaries (Schreiber, 1980; 1987). As the National Reading Panel (2000) notes:

It is clear that fluency may also include the ability to group words appropriately into meaningful grammatical units for interpretation. . . . Thus fluency helps enable reading comprehension by freeing cognitive resources for interpretation, but it is also implicated in the process of comprehension as it necessarily includes preliminary interpretive steps. (p. 3-6)

The Panel goes on to say that teachers should guard against the temptation to accept recognition accuracy as the goal of instruction, noting that although accuracy is important it is not enough to ensure fluency and, ultimately, comprehension. Interestingly, fluency has been shown to have a reciprocal relationship with comprehension, with each fostering the other (Strecker, Roser, & Martinez, 1998, p. 307) so it is not surprising that children appear to acquire fluency through extensive reading practice (see Instruction section).

The Role of Strategies

Reading ability—both comprehension and word recognition—is facilitated when readers use strategies. Even very young children can and do employ strategies during reading, so a solid reading program should introduce and sustain a strategic approach to reading throughout grades K-6. For children in grades 4-8, strategic reading is absolutely essential. The texts and tasks that readers regularly encounter in those grades are more conceptually demanding, are more complex in both form and function, and often address topics or domain knowledge that is unfamiliar. Importantly, even able readers can benefit from explicit instruction and effective instructional support (National Reading Panel, 2000, p. 4-47).

The obvious next question is, “Are there some strategies that really help readers and writers to be more competent—to read and write better?” The answer is clearly “Yes,” although the particular list of essential strategies might vary slightly from one educator or researcher to another. There are two things that most experts agree are essential to understand. First, the number of these strategies is small—it isn’t a long list of discrete abilities. Second, these strategies, individually, are not as important as a “strategic approach.” As Dole and others have argued, “The goal of instruction would be to develop (in students) a sense of conscious control, or metacognitive awareness, over *a set of strategies* that they can adapt to any text they read” (*emphasis added* Dole et al., p. 242). The hallmark of truly effective readers and writers is that they are able to use their strategic knowledge flexibly, coordinating and adapting the various skills and strategies to fit a particular reading or writing task and purpose (Duffy, 1993; Dole et al., 1991; Paris, Lipson, & Wixson, 1983; Pearson et al., 1992).

Becoming strategic is a developmental process; it occurs over time as students encounter increasingly difficult texts and new situations. The same relatively small set of strategies emerges quite early in children’s development (See Figure 3). Among the most highly useful strategies are (1) making predictions and drawing inferences; (2) self-questioning; (3) monitoring comprehension; (4) summarizing; and (5) evaluating. These strategies, individually, are not as important as a “strategic approach” which allows readers to respond differently to different topics, text, genres, and tasks.

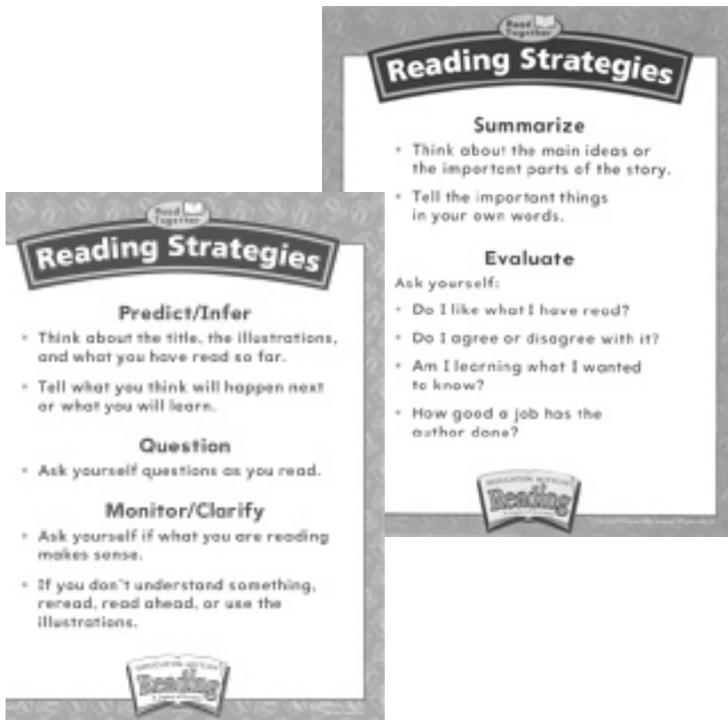


Figure 3. Strategies Chart

Effective comprehenders often use several strategies at one time. In addition, good readers use strategies in a *flexible* manner. Reading requires the orchestration of a number of skills and strategies.

The Skill and Strategy Connection

According to Pearson, Dole, and their colleagues (1991/1992), strategies are “conscious and flexible plans that readers apply and adapt to a variety of texts and tasks. . . . Skills, by contrast, are viewed as highly routinized, almost automatic behaviors.” (Dole, Duffy, Roehler, & Pearson, 1991, p. 242). Skills are generally thought to be less complex than strategies which, in fact, generally require the orchestration of several skills.

For example, while summarizing is an effective comprehension strategy, readers cannot summarize texts well without an array of skills. Summarization is likely to help young readers understand and appreciate Mark Teague’s lovely fantasy, *Lost and Found*. However, in order to do this successfully, children would need to pay careful attention to the *sequence* of events and they need to *note* surprising *details*.

Similarly, children’s comprehension of the outrageous book, *Dogzilla* (by Dav Pilkey), will likely be enhanced if they use an Evaluate strategy. This story is an exaggerated spoof of horror movies of the 1950s and 1960s, featuring a community of mice and a menacing creature (an oversized dog with bad-smelling breath). In order to understand and enjoy the story, students will need to make inferences about the events in the story and use their knowledge about realism and fantasy to draw conclusions about the ideas in the story (see Figure 4). Each event draws on the ideas and language of horror movies and fantasy stories. As students evaluate the events, they will need to use skills such as inference or drawing conclusions so that they can enjoy the humor and the author’s use of exaggeration to entertain.

Strategies require using several skills or abilities *in concert*. Individual skills can be very important under some circumstances, but they are generally not, by themselves, sufficient to accomplish the complex jobs required of mature readers and writers. No one set of skills is always linked to a particular strategy. Instead, strategies comprise skill combinations which involve a degree of critical thinking, thoughtful selection, and self-control that is not true for skills. Thus, they are cognitively more complex, but also more versatile.

As important as strategies are, they generally are not acquired without at least some explicit instruction and attention from the teacher. Effective and mature readers can recruit a variety of skills under any number of circumstances to respond to the varying demands of different texts and different tasks. Even highly skilled readers may not have a flexible and strategic approach to reading. Unlike other aspects of reading, exposure and experience alone do not appear to ensure controlled knowledge and use of strategies.



All at once, the volcano began to tremble.

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And suddenly, up from the very depths of the earth came the most terrifying creature ever known to mousekind: the dreadful Dogzilla!

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Immediately, soldiers were sent out to stop the mighty beast. The heroic troops were led by their brave commanding officer, the Big Cheese.

"All right, you old fleabag," squeaked the Big Cheese, "get those paws in the air — you're coming with us!"

Without warning, the monstrous mutt breathed her horrible breath onto the mice.

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"Doggy breath!" screamed the soldiers. "Run for your lives!" "Hey, come back here," shouted the Big Cheese to his troops. "What are you, men or mice?"

"We're MICE," they squeaked.

"Hmmm," said the Big Cheese, "you're right! . . . Wait for me!"

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Figure 4. Excerpt from *Dogzilla*

The Role of Author's Craft

Powerful comprehension and profound enjoyment of texts comes only when readers appreciate and use an array of devices employed by authors to build meaning. The techniques and devices shown in Figure 5 are used by authors to add interest, but they are also critical for comprehension. Readers who do not, or cannot, use author's craft effectively are likely to struggle with both comprehension and motivation. For example, look again at Figure 4 and notice how the author has used a variety of exaggerated descriptive words to add to the fun and encourage comparison to fantastic horror movies. Words and phrases like *depths of the earth*, *terrifying*, *dreadful*, *heroic*, *mighty*, *monstrous*, and *horrible* all contribute to our appreciation for the humor and drama of this story. When children make good use of author's craft, their comprehension and enjoyment are enhanced. When they do not, they frequently misunderstand or fail altogether to assign meaning to the events and actions of the story.

Author's Craft

Authors use a variety of devices and tools to enhance readers' understanding and enjoyment of text. The following devices are common in narrative fiction, and effective reading programs include increasingly sophisticated instruction in these components in grades K-8.

Author's Voice	Literary Elements
Exaggeration	Character
Dialogue	development
Flashback	Setting
Foreshadowing	Plot
Humor	Conflict
Imagery	Theme
Irony	Surprise ending
Language	Suspense
Poetic	Story within a story
Descriptive	Style
Idioms	Suspense
Metaphor	
Similes	
Alliteration	

Figure 5. Features of Author's Craft

What Should Comprehension Instruction Look Like?

Fortunately, students can acquire fluency, learn to be strategic, and learn to comprehend more deeply. Even better, we have fairly good information about the type of instruction that promotes good comprehension in students. It is very clear that extensive reading practice is essential in building both fluency and knowledge. It is equally clear that good, explicit instruction in some areas provides additional benefit to students. The National Reading Panel (2000) concluded that there are eight types of instruction that are especially effective in teaching students to comprehend. We will discuss each of these types of instruction (highlighted below) within this somewhat broader framework of instruction

- *Reading Opportunity*
- *Instructional Support for Comprehension* in which we discuss **(1) graphic organizers** and **(2) story structure**, but also pre-reading activities and guided reading and questioning strategies; and fluency
- *Explicit Instruction* in which we discuss **(3) comprehension monitoring**, **(4) summarizing**, and **(5) multiple-strategy teaching**
- *The Added Value of Discussion*, in which we describe appropriate **(6) cooperative learning** opportunities for reading instruction and also discuss **(7) question answering** and **(8) question generation approaches**.

Provide Extensive Opportunities for Exposure and Practice.

Both our own common sense and decades of research highlight the importance of practice in learning to read. There is a strong association between voluntary reading and writing and general reading and writing achievement (Greaney, 1980; Morrow, 1983). The amount of time children spend reading books is strongly linked to reading comprehension and reading achievement gains (Anderson, Wilson, & Fielding, 1988; Taylor, Frye, & Maruyama, 1990).

What may not be quite so evident is how important reading practice is to developing both the ability to comprehend and general cognitive competence. As Stanovich (1992) has argued, "... reading does

make people smarter” (pg. 226). In part, this conclusion comes from the fact that wide reading promotes vocabulary development. Research summaries by two recent commissions concluded that both overall exposure to print and independent reading promote and develop vocabulary, reading fluency, and comprehension (National Reading Panel, 2000; Snow, Burns, & Griffin, 1998). Importantly, “. . . exposure to print is efficacious regardless of the level of the child’s cognitive and reading abilities. We do not have to wait for ‘prerequisite’ abilities to be in place before encouraging free reading” (Stanovich, 1992, p. 226).

Recent research also suggests that extensive reading practice as part of a planned instructional program is a distinguished characteristic of successful schools in all demographic regions. In successful schools, primary grade children engaged in continuous text reading between 20 and 30 minutes each day, while intermediate grade children read as much as an hour a day (see Lipson et al., 2000; Taylor & Pearson, in press). In less successful schools, the amount of text reading time was significantly less. Therefore, effective reading programs must include ample opportunity for students to read appropriately-leveled texts. To accomplish this, classrooms must include a large and accessible collection of books (Morrow et. al., 1999; Mosenthal et al, in press; Neuman, 1999).

Students must read and create authentic materials if they are going to become genuinely strategic (Brown, Collins, & Deguid, 1989; Duffy, 1993; Resnick, 1987). Although short, contrived texts can be helpful in introducing a skill or strategy to students, students will not be able to develop effective comprehension strategies like monitoring, summarizing, and self-questioning unless they are reading increasingly complex material of appropriately substantial length. Nor will they develop and acquire the rich vocabulary and broad understanding of text structure required to become a reader with excellent comprehension.

This balance is especially delicate in the early grades and for students acquiring English as a second language (ESL), when they may not be able to read materials that will challenge and develop their comprehension abilities and background knowledge. Consequently, many authors recommend using teacher read-alouds for comprehension instruction while at the same time using more controlled text for beginning readers to practice word-level skills and

strategies (Honig, Diamond, & Gutlohn, 2000).

Oral reading, combined with teacher-directed discussion, expose students to the widest possible range of literature, familiarize them with various text structures, enrich their vocabularies, and help them become more adept at comprehending *written* texts. (p. VII-iii, emphasis in the original)

Importantly, different materials require different approaches, combinations, and degrees of effort. The flexible and intentional aspects of strategy instruction really only develop when students read (or hear) fine literature, excellent nonfiction, and a wide range of other real-world materials.

Support Comprehension.

Because opportunity and experience are so central to the development of vocabulary and comprehension, teachers must find ways to provide access to texts. Independent reading of texts is important, and a regular silent or quiet reading time should be a part of every classroom routine. In addition, however, teachers need to support students so that they can read and comprehend materials that are just out of their independent reach.

Teachers can support students’ comprehension by providing support for reading before they begin reading; by **building background, introducing key vocabulary, and activating existing knowledge**. Good instruction should involve solid pre-reading engagement with ideas, words, and organizational schemes so that students’ comprehension is improved. According to Anderson et al. (1985), “using instructional time to build background knowledge pays dividends in comprehension” and “useful approaches to building background knowledge prior to a reading lesson focus on the concepts that will be central to understanding the upcoming story, concepts that children either do not possess or may not think of without prompting” (p. 50). Although none of these instructional activities is new or novel, teachers usually do not spend enough time on these parts of their instructional plan.

In addition, teachers can enhance students’ understanding through instructional scaffolding. Scaffolding had been described as any assistance that allows someone to solve a problem, carry out a task, or achieve a goal that he or she could not accomplish

without support (Wood, Bruner, and Ross, 1976). Graphic organizers and visual maps are among the very best types of scaffolding for literacy (National Reading Panel, 2000).

For narrative texts, story maps work very well. At first, children can be taught a generic map that includes the major elements of story grammar (see earlier discussion of stories). Later on, children can be supported in reading more complex stories by providing maps that frame the particular story they are reading. Sometimes stories are best understood by attending to relationships among the events and not in terms of classic story grammar. For example, the classic story *The Little Red Hen* requires attention to cause-effect, and a map for this story would focus on the causes and effects of the events in the story. A good story map helps students to identify the important aspects of the story and, therefore, provides real support for comprehension.

Expository texts are often more complex and variable, so graphic organizers can be especially helpful to young or less-skilled readers. Again, it is important to make sure that the graphic organizer highlights the major organizational pattern of the specific text being read so that the children's comprehension is supported as they "fill in" the parts that will guide them through the selection (see Figure 6). The cluster diagram in Figure 6 reveals the main idea and supporting detail structure of the text *Dancing Rainbows*, about Native American traditional dances. Although this structure is common among nonfiction texts, the organizer is not generic; rather, it matches the selection exactly and will, therefore, be more helpful especially for students who are struggling readers. As children gain expertise, they should be encouraged to create their graphic depictions of the material they are reading.

Finally, teachers should develop and assess fluency. The evidence suggests that teachers can improve student performance by using guided or supported reading during reading (NPR, 2000). Although the panel concludes that children need considerable practice in supported settings, they also conclude that traditional round-robin procedures do not provide students with enough exposure and practice to be helpful to students. Several newer approaches do have promise, however. Of course, it is important to recognize that students of different ages and abilities may need different instruction.

Not all children need extensive support during reading, and the degree of support will likely vary

depending on the type of text and the students' familiarity with the content of the piece. Many ELL students can benefit from enhanced support. For students who need it, teachers can help promote comprehension by supplying additional information about vocabulary and key concepts; can model appropriate comprehension strategy use or support students' efforts to use strategies themselves; and can prompt discussion through skillful use of questioning (see discussion below).

In the early grades, fluency instruction should involve many text rereadings. These should include reading of decodable text to acquire accuracy, but also shared reading, repeated readings of familiar texts, etc., to develop other aspects of fluency such as

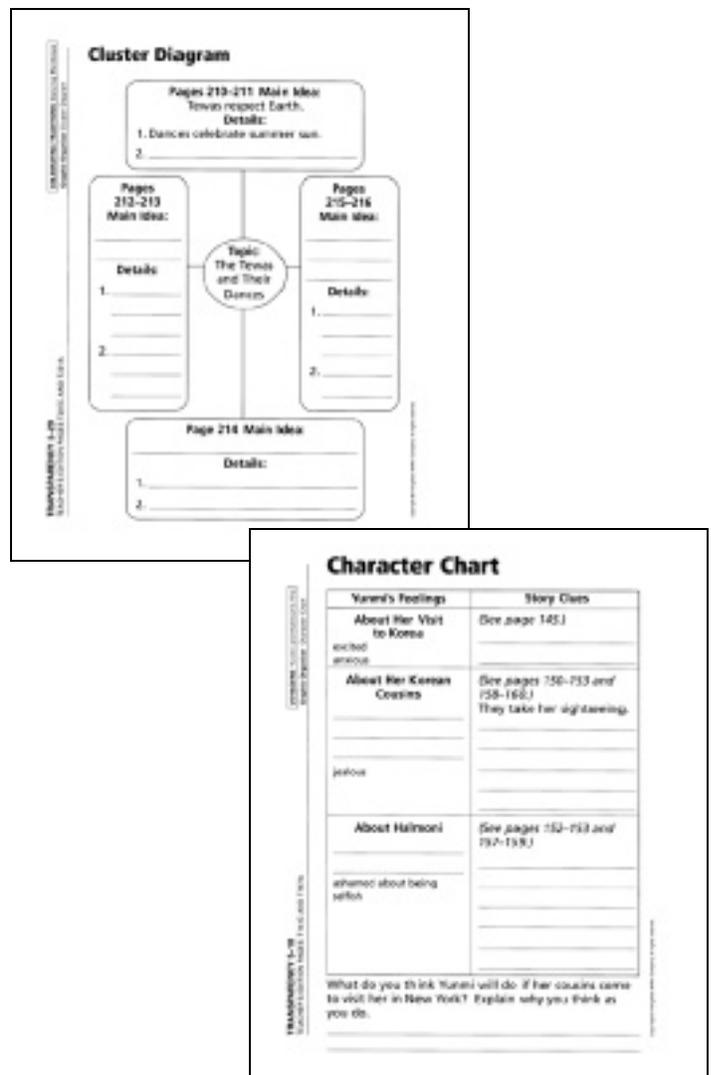


Figure 6. Graphic Organizers

rate and expression. Older students who are struggling with fluency will also benefit from these practices. Special strategies to promote and develop fluency include partner reading, rereading with a tape recording, and choral reading.

A comprehensive reading program should include provisions for flexible and varied supported guided reading of text and effective graphic supports. In addition, it should highlight key concepts and build background for students who need it. The program should also make provisions for text rereadings using tapes and/or simplified summaries for additional experience and practice. Finally, teachers should evaluate students' fluency as a distinct component because its impact on comprehension can be so significant. Periodic evaluation of students' fluency using the classroom materials can provide invaluable diagnostic information.

Teach Comprehension Explicitly.

Although extensive practice and good supportive reading opportunities are necessary and generally effective, they are not sufficient for many children. Many children require explicit instruction in **how** to comprehend.

Some students do acquire strategies and learn to use them efficiently without explicit instruction. As we noted earlier, however, sophisticated use of strategies and coordinated skills usually require explicit teaching (Paris, Lipson, & Wixson, 1983; Paris, Wasik, & Turner, 1991). A good reading program must attend to students' strategic reading development throughout the grades. Since it appears that a relatively small set of strategies is used across many ages/grades/tasks, it makes sense to teach these strategies in **all** grades. The strategies don't change, but students (kindergarten and first grade) can use a summary strategy, for example, that includes telling the beginning, middle, and end. By sixth grade, student summarizations would attend to character, plot, problem-solutions, and resolutions.

During explicit instruction, teachers employ a variety of techniques: direct explanation, modeling, guided practice, feedback, and application (Dickson, Collins, Simmons, and Kameenui, 1998). **Direct explanation** is important, because researchers have demonstrated that many students do not seem able to extract critical information from their experiences. They need the teacher to explain exactly *what* (strategy, e.g.) they are learning, *how* to use it, and *why* it is important. In addition, students benefit from teacher modeling of

complex strategies. As teachers "think aloud" about their cognitive actions, students can see how they could replicate these activities. **Guided practice** is especially important, because strategic reading seems to require that students have "conditional" knowledge regarding the strategies they are learning (Paris, Lipson, & Wixson, 1983). This explicit instruction should make clear to students the value of using a particular strategy(ies) and should model for students appropriate mental processes. Then, during guided practice, teachers should let students know when and why (conditional knowledge) to use these strategies during reading and writing tasks. As children use their newly acquired strategies in supported contexts, teachers can provide **feedback**. Finally, children must have ample opportunities to **apply** the strategies to new texts so that they can acquire independence and self-control.

Explicit instruction can be used to help children acquire other reading abilities as well. For example, explicit instruction is very effective in helping children to acquire an appreciation of text structure and use it to improve comprehension (National Reading Panel, 2000). Similarly, students often do not acquire expertise in using the dimensions of author's craft without explicit instruction. Effective reading programs highlight the relevant aspects of author's craft, link this knowledge to skills, and help students orchestrate all of this using appropriate strategies (see box)

Explicit Instruction Opportunities for *Dogzilla*

- Use explicit instruction to teach children about the genre of fantasy.
- Teach children about author's craft: exaggeration and humor.
- Teach the Evaluate Strategy and link it to explicit instruction in noting details and drawing conclusions.

Discussion Provides Added Value.

Researchers have recently found that literature discussion promotes motivation for reading and can also improve students' comprehension. There are any number of possible ways to promote literature discussion, and different approaches appear to benefit chil-

dren in slightly different ways. As the National Reading Panel (2000) has noted, research supports the effectiveness of cooperative grouping and also any approaches that improve students' question-answering and question-generating abilities. Two approaches to literature discussion that have strong research foundations are "Book Club," developed by Raphael and her colleagues (see McMahon, Raphael, Goatley, & Pardo, 1997) and "Question the Author" (QtA) developed by Isabel Back and her colleagues (Beck et al., 1996; Beck, McKeown, Hamilton, & Kucan, 1997).

Whereas discussion is just one component of Book Club, it is the major feature of QtA. Since the primary purpose for QtA is to help students build understanding from text to increase and improve comprehension, we will describe this approach in some detail. The research base for QtA is impressive. Beck et al. (1996) report that, in QtA classrooms, teacher questions and student responses become more meaning-oriented and that students become more active participants in discussion. In addition, when students responded to teacher queries, they were more likely than other readers to go beyond verbatim responses, integrating their own prior knowledge, inferences, or hypotheses in their answers. Importantly, during discussions, students were also much more likely to initiate their own questions and comments.

In order to implement QtA, teachers should be aware of several key features of this instructional strategy. First, QtA takes place during reading (unlike Book Club, for example, where students have collaborative discussions after they have read). That's because it is focused specifically on clarifying and understanding the ideas of the text – on having students construct meaning through the ongoing discussion. Teachers' questions (called Queries) are not designed to assess students' comprehension of text after reading. Instead, Queries help children to "grapple" with ideas in the text. Finally, these conversations take place among all the students in a group who are reading the same text. As the researchers explain:

In QtA, the goal is to assist students in their efforts to understand as they are reading for the first time. Not only is this orientation a better reflection of how a reader needs to address text content to build understanding, but it is also an opportunity for valuable teaching and learning experiences... Teachers can model confusion, identify problematic language

and difficult ideas in text, and ask Queries that focus student thinking. All these actions can serve as comprehension strategies that students ultimately learn and use on their own. (Beck et al., p. 19)

Importantly, the authors emphasize that discussion itself is not the goal. Rather, "discussion in a QtA lesson is the means toward achieving a goal and that goal is always the same: constructing meaning" (p. 21). In addition, it is done cooperatively as students are all engaged in reading the text.

Because QtA is meant to promote comprehension, the questions, or Queries, are constructed differently. Instead of asking for particular information from the text, QtA queries often ask what the information means. For example, instead of asking, "What change occurred in this story?" the teacher might ask, "How has the author let you know that something has changed?" or, "Given what the author had told us already about this character, how do you think he will react to this change?" In essence, these questions are designed to help children think about the significance of the information they are gleaning, which helps students to connect ideas, integrate information with prior knowledge, and fill in missing pieces.

The important idea is to promote group discussion and engagement with the text so that students can "problem solve" their way through their reading—constructing meaning as they go. These approaches may be especially helpful to ELL students (see Goatley, Brock & Raphael, 1995) who can benefit from the group interactions. Where appropriate and possible, researchers suggest that students' comprehension of English text can be improved by discussing the text in their first language (see Rigg & Allen, 1989; Freeman & Freeman, 1994, 2000). The challenge of communicating these ideas to others is removed, allowing students to entertain more sophisticated ideas and language which support text comprehension. Some students, especially younger ones, may enjoy dramatizing the reading, and all can benefit from visual interpretations.

Conclusion

Successful comprehension instruction requires a sophisticated literacy program: one that includes diverse literature, both fiction and nonfiction; many opportunities for independent and supported practice; thoughtful instruction before, during, and after reading; explicit teaching of comprehension skills and strategies; and cooperative, collaborative discussion of texts. Because there is such overwhelming consensus about good, research-based instruction in the area of comprehension, educators should expect their commercial programs to support effective practice in each of these areas.

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