

## The Search for Effective Comprehension Instruction

Prior to the 1970s, comprehension was generally considered to be—and was taught as—a set of discrete skills for students to practice and master (National Reading Panel, 2000). In a landmark study of reading comprehension instruction conducted in the 1970s, Dolores Durkin revealed that in most elementary classrooms, typical instruction focused on specific skills (e.g., identifying main ideas, distinguishing fact from opinion, cause and effect relationships) thought to be important to comprehension and followed what she called a mentioning, practicing, and assessing procedure. That is, teachers *mentioned* a specific comprehension skill that students were to apply, such as identifying main ideas; had students *practice* the skill by completing workbook pages; then *assessed* them to find out whether they could use the skill correctly (Durkin, 1978–79). Durkin concluded that such instruction did little to help students learn how or when to use the skills, nor did it promote comprehension.

### From Skills to Strategies

Spurred by Durkin’s findings, a number of researchers started to look for better comprehension instruction (for research reviews, see Dole, Duffy, Roehler, & Pearson, 1991; Pearson & Fielding, 1991; Pressley, 2000). At first, researchers focused attention on the higher order reading processes used by good readers to construct meaning as they read. What they found was that good readers achieve comprehension because they are able to use certain procedures—labeled *comprehension strategies* by the researchers—to relate ideas in a text to what they already know; to keep track of how well they are understanding what they read; and, when understanding breaks down, to identify what is causing the problem and how to overcome it (e. g., Brown, Bransford, Ferrara, & Campione, 1983; Levin & Pressley, 1981).

### What Are Comprehension Strategies?

Comprehension strategies are specific cognitive procedures that guide readers to become aware of how well they are comprehending as they attempt to read and write.

(National Reading Panel, 2000)

By the 1990s, commercially developed reading programs used in the elementary grades had added strategy use as an element of their comprehension instruction, with each program adopting a set of strategies for instruction, and with the specific sets of strategies often differing from program to program. As researchers examined the results of this new instructional focus, however, some began to express reservations about how well strategy-based instruction was achieving the desired results.

## **Content-Focused Instruction**

In observing some classrooms, researchers found that strategy instruction sometimes focuses on the memorization and application of strategies in much the same way that comprehension skills once were taught (Murphy & Alexander, 2002). Such instruction, they observed, sometimes causes students to devote too much of their thinking to the features of strategies at the expense of the true purpose of reading—getting meaning from text (Beck, McKeown, Hamilton, & Kucan, 1997; Duffy, 1993; Sinatra, Brown, & Reynolds, 2002). Other researchers observed that strategy instruction is often far more complicated than the reading selection it accompanies (Pearson & Fielding, 1991).

Given such findings, a number of researchers now maintain that instruction focused on helping students understand the ideas and representations in a text will contribute more to their comprehension than will instruction devoted to strategies for processing or thinking about the text.

Drawing on the reading process theories of Kintsch (1988), Beck and colleagues argue that the “big issue” in comprehension instruction is how to help students build coherent representations of text ideas (Beck & McKeown, 2004). Such instruction, they maintain, should not do anything that can distort the reader’s developing ideas and representations. In addition, Beck and colleagues argue, such instruction should avoid talk about strategies that directs students’ cognitive efforts toward thinking about text processing instead of involving them directly in understanding the text. In essence, this approach holds that if teachers help students understand the text in front of them, the comprehension strategies will “take care of themselves” (Carver, 1987).

# From Research to Practice: The Components of Effective Comprehension Instruction

**A**s the brief look at comprehension research suggests, effective comprehension instruction is instruction that helps students use both cognitive strategies and text content to arrive at deeper understandings of what they read. And it does so in ways that motivates students not just to read but to *want* to read.

Effective instructional approaches usually vary in emphasis for primary grade students and for students in the middle and upper grades, as well as for English language learners. In the following discussion, we first give an overview of a general instructional approach and then, when appropriate, describe variations for each group of students.

## Teaching Comprehension Strategies

Although strategy-based instruction may not be sufficient by itself to ensure proficient comprehension, it should be a part of good comprehension instructional programs. For students in grade 3 and up, instruction in specific cognitive strategies can improve reading comprehension for all students and, most particularly, can help poor readers learn to retain, organize, and evaluate the information that they read (RAND Reading Study Group, 2002). What remains at issue in strategy-based instruction are (1) *what* strategies to teach and (2) *how* to teach them (Armbruster, Lehr, & Osborn, 2001).

## What Strategies Should Be Taught?

In its review of more than 200 such studies, the National Reading Panel (2000) concluded that of the 16 categories of strategy instruction surveyed, seven appeared to have a firm scientific basis “for concluding that they improve comprehension in normal readers” (p. 4-42). Among these strategies are comprehension monitoring, using graphic and semantic organizers, using the structure of stories, answering questions, generating questions, and summarizing.

## The National Reading Panel and the Research on Reading Comprehension Instruction

It is important to stress that the issue examined by the National Reading Panel was whether sufficient research evidence existed in support of *strategy-based instruction* as a way to improve comprehension. The panel did not examine other kinds of comprehension instruction, such as content-based instruction.

*(National Reading Panel, 2000)*

### *Comprehension Monitoring*

Comprehension monitoring is a form of metacognition. That is, it is readers' thinking about their comprehension processes as they read. Comprehension monitoring instruction teaches students to be aware of their understanding as they read. Specifically, it teaches them to notice when they do understand, to identify what they do not understand, and to use appropriate "fix-up" strategies to resolve problems when they do not understand something they read (Taylor & Frye, 1992). Among these "fix-up" strategies that students learn are:

- Identifying where in the text the difficulty occurs. ("This paragraph doesn't make sense to me.")
- Restating a difficult sentence or passage in their own words. ("Oh, the author means his grandmother, because he's talking about how she took care of her baby daughter on the trip to America—and that baby would've been the author's mother.")
- Looking back (or forward) through the text. ("I know the author mentioned Bridget in the last chapter I read, but I don't remember much about her. Maybe if I reread that chapter, I can figure out why she's acting so badly now.")

### *Recognizing Story Structure*

Story structure refers to the way the content and events of a story are organized into a plot. Students who can recognize story structure have greater appreciation, understanding, and memory for stories. Story-structure instruction helps students learn to identify story content—setting, initiating events, internal reactions, goals, attempts, and outcomes—and how this content is organized to make up a coherent plot. In addition, instruction can help students

learn to infer cause-and-effect, compare-and-contrast, problem-solution, and other relationships among parts of the text. This learning gives students both knowledge and techniques for reaching a deeper understanding of stories (Baumann & Bergeron, 1993; Idol, 1987; Idol & Croll, 1987).

### *Using Graphic and Semantic Organizers*

Graphic and semantic organizers allow readers to represent graphically (write or draw) and to organize the meanings and relationships of the ideas in the text. They come in many forms, including maps, graphs, charts, frames, webs, and clusters. The main value of these organizers to comprehension appears to be their ability to improve a reader's memory of the content of what they read.

Instruction in the use of graphic and semantic organizers is particularly helpful in conjunction with the reading of informational writing in the content area texts. Used with informational writing, organizers can help students see how concepts fit into particular text structures (Englert, Raphael, Fear, & Anderson, 1988). In the form of story maps, organizers may also be used with narrative writing as a way to focus students' attention on story grammar components—characters, settings, problems, plot events, and themes—and on the relationship among these components (Saunders & Goldenberg, 1999).

## **Simple Story Map**

Story Title \_\_\_\_\_

<b>Beginning</b> The story starts when—	→	<b>Middle</b> After that—	→	<b>End</b> The story ends—
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### *Question Answering*

Question-answering instruction can help students get more from their reading by showing them how to find and use information from a text to answer teacher questions (Levin & Pressley, 1981).

Learning question-answering strategies can also help students locate information in a text that is related to the question.

## Question-Answer Relationships (QAR)

Developed by Raphael (1986) as a way to help students improve their ability to answer comprehension questions, the QAR procedure is based on a three-way relationship among the question, the text, and the reader's prior knowledge. The procedure helps students learn to focus on the way that questions are written, and so helps them identify and make distinctions among the sources of information they can use to answer questions. The procedure follows a gradual-release model of instruction, moving from entirely teacher directed to entirely student directed.

QAR gives students four types of question-answer relationships to use as they organize their thinking. Two of the question types use "In the Text" as the source of information:

**Right There:** The answer to the question is in one sentence in the text.

The question and answer have the same wording.

**Think and Search:** The answer requires searching through the text.

The question and answer have different wording.

One question type uses "In the Text" and "In My Head" as sources for information:

**Author and Me:** The answer comes from existing knowledge and from text clues.

The fourth question type uses "In My Head" as the source of information.

**On My Own:** The answer comes entirely from existing knowledge and can be answered without using the text.

*Adapted from Raphael (1986).*

### *Question Generation*

Question-generation instruction focuses on helping students learn to ask themselves questions about what they read. Teaching students to ask their own questions improves their active processing of text and so improves comprehension. By generating questions,

students become aware of whether they can answer the questions and, thus, whether they understand what they are reading (Oakhill, 1993; Rosenshine, Meister, & Chapman, 1996).

### *Summarization*

Summarizing requires students to determine what is important in what they are reading, to condense this information, and to put it into their own words. Instruction in how to summarize contributes to comprehension by making students more aware of the way a text is organized and how its ideas are related. It helps students to identify main ideas in a text and to make connections among main ideas (Armbruster, Anderson, & Ostertag, 1987; Brown & Day, 1983; Taylor & Beach, 1984).

In addition to these strategies, the National Reading Panel found varying degrees of scientific research support for several additional strategies, including cooperative learning, activating and using prior knowledge, and using mental imagery and mnemonics.

Cooperative learning involves students working together, instructing each other in strategy use and application. Studies indicate that the cooperative learning process can increase strategy learning as well as reading comprehension (Guthrie et al., 1996; Stevens, Madden, Slavin, & Farnish, 1987).

The strategy of activating and using prior knowledge (Hansen & Pearson, 1983) produces varied results. The Panel noted, however, that prior knowledge is often elicited as part of other strategies that have proven effectiveness, such as question answering and generating questions.

The strategy of using mental imagery and mnemonics has proven reliable in improving memory for text (Gambrell & Bales, 1986; Pressley, 1976), and the Panel concluded that the strategy can be useful in helping readers recall specific information.

### *Multiple-Strategy Instruction*

Although the National Reading Panel identified specific strategies as helpful to comprehension, it also emphasized that good readers do not rely on any single strategy to comprehend what they read. Rather, they have a repertoire of strategies and apply different strategies at different points in a text, switching strategies as the text or reading activity demands (e.g., Brown et al., 1983; Levin & Pressley, 1981). Effective strategy-based instruction, the Panel

concluded, is instruction that teaches students how to integrate and use multiple strategies flexibly. *Reciprocal teaching*, *Concept-Oriented Reading Instruction (CORI)*, and *transactional strategy instruction*, are three examples of multiple-strategy instructional techniques that have demonstrated classroom success.

**Reciprocal teaching** Developed by Palincsar and Brown (1984), reciprocal teaching is an instructional activity designed to help students apply multiple strategies flexibly to gain meaning from a text and to self-monitor the success of their reading. Reciprocal teaching involves four instructional procedures:

- Explicit teaching of four strategies: clarifying, question generation, predicting, and summarizing
- Extensive student practice in applying the strategies to real text
- Scaffolding of instruction, with gradual release of the leadership role from teacher to students and
- Cooperative learning and peer support for learning

The procedure begins with the teacher and a group of students discussing a text. The discussion is structured by four strategies—summarizing, questioning, clarifying, and predicting—with the teacher modeling each strategy. After the modeling, students take turns leading the discussion about specific parts of text. One student serves as the discussion leader, asking questions about key ideas in the text, and the other students answer the question and ask questions of their own. The student leader helps the group clarify difficult words or passages that might hinder comprehension. Next, the leader summarizes the text just read and predicts what might come next. The process continues for each part of the text, with students taking turns leading the discussion (Palincsar & Brown, 1984; Rosenshine & Meister, 1994).

## Reciprocal Teaching

Here are some examples of student-teacher dialogues in which the teacher provides prompts, models, and feedback on how to use the strategies of questioning and summarizing.

### *Questioning*

Student: How do . . . spinner's mate is smaller than . . .  
How am I going to say that?

Teacher: Take your time with it. You want to ask a question about spinner's mate and what he does, beginning with the word how.

Student: How does he spend most of his time sitting?

Teacher: You're very close. The question would be, "How does spinner's mate spend most of his time?" Now you ask it.

Student: How does spinner's mate spend most of his time?

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### *Summarizing*

Teacher: That was a fine job, Ken, but I think there might be something to add to our summary. There's more information that I think we need to include. This paragraph is mostly about what?

Student: The third method of artificial evaporation.

Teacher: Right, so let's add that to the summary.

*Adapted from Rosenshine & Meister (1994).*

**Transactional strategy instruction** Transactional strategy instruction (TSI) combines a number of strategies and instructional techniques identified by the National Reading Panel (2000) as having solid scientific bases for improving comprehension. TSI, which takes place in small groups, is *transactional* in that it concerns the transaction during reading of the reader, the text, and the context. Specifically, TSI (1) helps students link their prior knowledge to a text through discussion, (2) involves constructing meaning as a result of the collaboration of students in a group rather than from individual interpretations, and (3) the dynamics of the group determines the responses of all group members, including the teacher (Brown & Coy-Ogan, 1993; Brown, Pressley, Van

Meter, & Schuder, 1996; Schuder, 1993). To accomplish these tasks, students are taught to use a set of reading strategies, including the following:

- Relating prior knowledge to text content
- Making and confirming predictions based on prior knowledge
- Generating and asking questions
- Using text structure
- Visualizing
- Summarizing

**Concept-Oriented Reading Instruction** Developed by Guthrie and colleagues (Guthrie et al., 1996; Guthrie et al., 1999; Guthrie, Wigfield, & VonSecker, 2000), CORI integrates comprehension strategies for which the National Reading Panel (2000) found firm scientific bases for effectiveness (e.g., cooperative learning, comprehension monitoring, summarizing) with inquiry science.

Inquiry science includes hands-on activities such as observation of real-world phenomena and experimentation, designed to support student understanding of scientific concepts (The Inquiry Synthesis Project, 2004). Students use texts to confirm and extend the knowledge they gain through the hands-on activities. The inquiry science components of CORI provide students with a motivational and conceptual base for developing and applying strategies as they read texts.

CORI has been used successfully with a range of middle and upper elementary grade students, including low achieving students and students from diverse social and cultural backgrounds (Guthrie & Ozgungor, 2002).

## CORI

In a third grade science unit on adaptations and habitats of birds and insects, students begin the unit by observing insects brought into the classroom and birds outside the classroom, then incorporate information from their observations into events built around their read-alouds. Throughout this period, the teacher encourages students to ask questions such as, “Why does that bird have such a long beak?”

Students are supported in locating books that deal with their interests, such as descriptions of the migrations of butterflies or the city homes of birds, and they receive direct instruction in strategies to use for locating information in a variety of sources (e.g., libraries, the Internet, family, community members). They also learn how to integrate information across sources including texts, illustrations, references, and human experts.

At the end of a unit, students make presentations to demonstrate their expertise. Presentations include a variety of forms, with some students working in pairs or small groups to make and share a poster or display or write a book.

*Based on descriptions in Guthrie et al. (1999).*

## How Should Strategies Be Taught?

In addition to identifying what comprehension strategies should be included in instruction, the research reviewed by the National Reading Panel (2000) also provides guidelines for how strategy-based instruction should be conducted. This research shows that instruction is most effective when teachers explicitly teach strategies, following an explain/model/scaffold-practice-apply model (Palinscar & Brown, 1984; Rosenshine et al., 1996).

In this model of explicit strategy instruction, the teacher chooses for instruction only those strategies that align closely with the text students are reading. The teacher begins instruction by identifying a strategy and explaining what it is and why it is important to comprehension. As the teacher reads, he or she models and thinks aloud about how and when to use the strategy. After this reading and modeling, the teacher works with students to guide them in determining how and when to use the strategy on their own. As students read, the teacher provides feedback and engages them in discussion. In subsequent lessons, the teacher asks students to apply the strategy on their own to other texts (Palinscar & Brown, 1984).

Scaffolding is one of the most important features of this model of instruction, with the teacher gradually releasing to students the responsibility for strategy use (Pearson & Gallagher, 1983). However, teachers do not ask students to work on their own until the students have demonstrated that they understand a strategy and know how and when to use it (Dole et al., 1991).

## **A General Framework for Comprehension Strategy Instruction**

- 1. Select the text:** Choose an appropriate piece of text from the students' reading assignment.
- 2. Select the strategy:** Determine a strategy that is relevant to the understanding of that text.
- 3. Give a clear explanation:** Tell students what the strategy is and why it is useful.
- 4. Model the strategy:** Help students learn how, when, and where to use the strategy by demonstrating or thinking aloud about how to use the strategy to better understand the text.
- 5. Support student practice:** Work with students to help them figure out how and when to use the strategy themselves. Engage them in discussion about how they are applying the strategy; as necessary, provide corrective feedback.
- 6. Have students apply the strategy:** In subsequent lessons, ask students on their own to apply the strategy to other texts. (Be prepared to do additional modeling and guided practice.)

*Based on descriptions in Duke and Pearson (2002, pp. 208–209).*

## **Strategy Instruction for Young Students**

Most studies of comprehension strategy instruction reviewed by the National Reading Panel involved students in third grade and beyond—that is, the point at which most students have moved beyond beginning reading (National Reading Panel, 2000). Among the studies reviewed by the Panel, however, are several that indicate that at least some forms of strategy instruction can be beneficial in the primary grades (Duke & Pearson, 2002). Although it is important to incorporate into comprehension instruction strategy procedures that have proven effective with

young students, it is equally important to use caution when incorporating procedures that have little or no research base (Stahl, 2004).

One strategy that does appear to be effective with young students is that of identifying story elements—one of the seven strategies identified as scientifically based by the National Reading Panel (2000). Baumann and Bergeron (1993) found that when first grade students were taught explicitly how to identify story grammar elements (setting, characters, problem, event sequence, and solution), they improved their ability to retell and summarize stories, and to transfer these abilities to other stories. The use of story structure in retelling stories also has proven to be an effective technique for improving the comprehension of young children (Morrow, 1985; Pellegrini & Galda, 1982).

Young students also can be taught to generate their own questions (another strategy identified as scientifically based by the National Reading Panel). As part of a reciprocal teaching program, even first graders were able to generate their own questions (Palincsar & David, 1991). Their success reflected models that provided support and were concrete and easy to use. One such model involved having students combine question signal words (*who, what, where, when, why, how*) with question stems, or frames (How are \_\_\_\_\_ and \_\_\_\_\_ alike? What caused \_\_\_\_\_? Why \_\_\_\_\_ is important?).

Answering teacher questions—especially when the questions require students to use sources beyond the “right there” information in a text (Raphael, 1986)—has also proven effective in improving young students’ comprehension (Morrow & Gambrell, 2001).

A handful of studies also show that, as with older students, young students can benefit from guidance in multiple-strategy use. As well as reciprocal teaching (Palincsar & David, 1991), a form of transactional strategy instruction, called SAIL, has been used effectively with young students (Pressley et al., 1992).

## SAIL

SAIL—Students Achieving Independent Learning—is a form of transactional strategy instruction in which teachers use explicit instruction in and modeling of strategy use and focused discussion to teach students when, why, and how to apply the strategies. Students then practice strategy use in various settings and with different kinds of texts, presenting and explaining their personal interpretations of a text to each other. Although most often used with middle and upper grade students, SAIL has been used successfully with primary grade students also (Pressley et al., 1992).

Based on extensive classroom observations, Stahl (2004) found that the practices just described are not often used in primary grade classrooms. On the other hand, she found that practices with little or no research base for effectiveness with young students are used widely. Among these practices are the K-W-L procedure (Ogle, 1986) and picture walks (Fountas & Pinnell, 1996). K-W-L was designed to enable teachers to access students' prior knowledge and to help them develop their own purposes for reading expository text. Although the procedure has been shown to be effective with older students, its effectiveness with primary grade students has not yet been demonstrated. Picture walks, or having students leaf through the pages of a book to look at the pictures and talk about what they see before reading, are widely used by teachers to activate prior knowledge and build students' interest in a book. However, this procedure has limited research support.

### **Strategy Instruction for English Language Learners**

In its review of comprehension instruction research, the National Reading Panel (2000) limited its analysis to instruction intended for native English speakers. Evidence indicates, however, that English language learners also benefit from strategy instruction (Fitzgerald, 1994; Weber, 1991).

Strategy instruction that includes approaches such as reciprocal teaching and question-answering procedures, such as QAR (Raphael, 1986), has shown promise with English language learners (Muñiz-Swicegood, 1994; Padrón, 1992). Studies of adaptations for English language learners and bilingual students of Success for All (SFA) have found positive effects for SFA on comprehension with students from first through fifth grade (Slavin & Cheung, 2003). SFA emphasizes cooperative learning (Slavin &

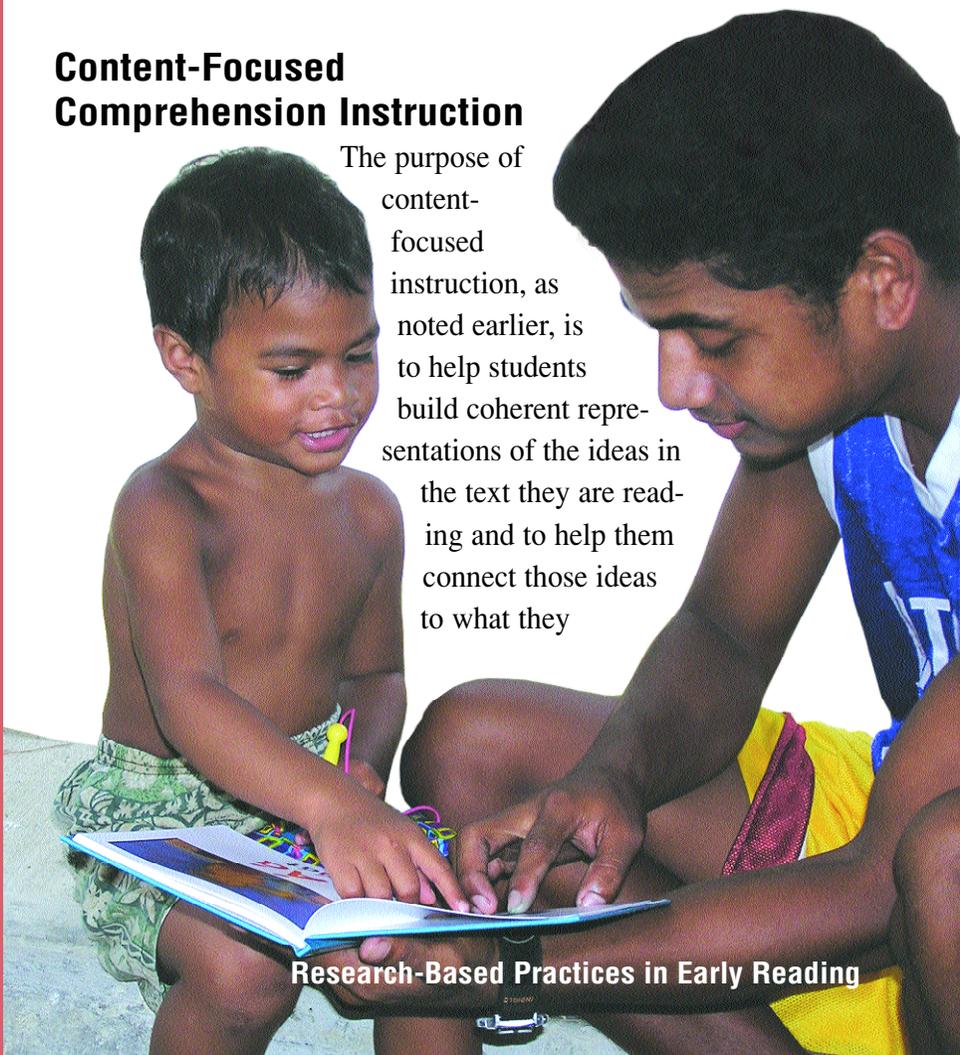
Madden, 1999) as well as other strategies, such as question asking and generating and summarizing, identified by the National Reading Panel as having firm scientific bases for effectiveness.

Significant differences between first and second language learners exist, of course, and strategy instruction must take these differences into account. English language learners, for example, know fewer English words and may have less background knowledge that relates to topics in their English language texts. García (1991) found, however, that when students had background knowledge of the topics, students performed well on reading achievement tests, suggesting that test results may seriously underestimate the comprehension potential of English language learners.

In their studies of the ways in which English language learners make sense of reading in both their first and second languages, Jiménez, García, & Pearson (1996) found that successful English language learners tended to apply strategies and knowledge from their first language as a way to understand their reading in the second language. Successful readers also used information related to both languages, such as cognates and paraphrased translating. Jiménez and colleagues found that less successful English readers were not able to transfer strategies from one language to another.

## **Content-Focused Comprehension Instruction**

The purpose of content-focused instruction, as noted earlier, is to help students build coherent representations of the ideas in the text they are reading and to help them connect those ideas to what they



already know from previous reading and personal knowledge (Beck & McKeown, 2004; Kintsch, 1988). Studies have demonstrated that comprehension can be increased when instruction focuses students' attention on text content through *directed discussion* (Beck et al., 1997).

Although students benefit from talking about what they read and listening to others' reactions and interpretations, time limitations in most classrooms make it difficult for all students to participate in discussions about a text, even in small group situations. For this reason, effective instruction provides students with a variety of other methods to respond to reading. Chief among these response methods is *writing*.

### *Directed Discussions*

Asking students questions about what they have read is common across classrooms. However, for students to appreciate the levels of meaning in a text and to extend their understandings, teachers must ask questions that go beyond recall of literal information or require only a single answer (that the students know the teacher knows). Many techniques exist for conducting student-teacher discussions. To be most effective, however, discussion techniques should involve a dialogue that captures and extends students' text interpretations. One such technique is Questioning the Author (QtA).

Developed by Beck, McKeown, and colleagues (Beck, McKeown, Worthy, Sandora, & Kucan, 1996; Beck et al., 1997), QtA encourages students to grapple with and reflect on what an author is trying to say and, from this reflection, to interpret and understand what they read. This is accomplished by having students consider segments of text in the course of initial reading and respond to teacher-posed queries such as “What is the author trying to tell you?” “Did the author say it clearly?” and “What do you think the author means by that?” The queries are designed to invite “understanding, interpretation, and elaboration” by having students explore the meaning of what is written in the texts they read.

QtA also recognizes that students sometimes struggle with content not because they are failing as readers but because the author has failed as a writer. When students begin to understand the idea of the “fallible author,” they can begin to realize that a failure to understand is not always their fault. This allows them to approach text with a “reviser's eye,” shifting attention away from trying to understand text to making text more understandable.

## Questioning the Author

Students have read a passage about the different amounts of light in Antarctica in winter and summer. In the QtA that follows, the teacher has gotten students to think about *why* the amounts of sunlight are different at different times of the year, an explanation that the author has not included.

After a student has identified the tilt of the earth, the teacher asks how this connects with the different amounts of sunlight. Several students respond, building on one another's explanations.

Finally, one student named Shanelle puts the ideas together: "When the Earth is going around and the sun is coming, it's hitting—the lower part of Antarctica is showing, 'cause it's tilting more. So then it has sunshine 24 hours," (p. 40).

Following Shanelle's description, the teacher acknowledges the students' contributions and summarizes the conclusion.

*Adapted from Beck et al. (1997).*

Among other questioning techniques that have research support for guiding teachers in promoting effective discussions are several that have formats similar to those of the book clubs in which many adults participate. Such settings involve the use of appropriate "literary language" to talk about books and to exchange interpretations and opinions. This latter point is important, because students become more engaged in reading when they can respond to and challenge one another's interpretations (Almasi, McKeown, & Beck, 1996).

These discussions also feature teacher scaffolding of ways that students can extend their understanding by identifying such things as the author's point of view and how it influences the content and by identifying when reading problems are caused by an unclear or inconsiderate text (Armbruster, 1984). Whatever the specific technique used, getting students to express their understandings by talking about a text or by thinking aloud during and after reading are important jumping-off points for the kinds of dialogues that lead to successful comprehension.

### *Responding through Writing*

Writing about reading can improve students' comprehension in two ways. First, reading and writing are both "composing"

processes—writers compose meaning as they write; readers compose meaning as they read (Raphael & Englert, 1989; Tierney & Pearson, 1983). Expressing opinions and interpretations in writing helps readers organize their thoughts about a text. Second, writing provides students with an insight into the tools of the literary trade—how an author’s choice of genre influences his or her writing style, vocabulary use, and text organization—and how the author uses these tools to make text understandable.

## **NAEP and the Connection of Writing to Reading**

More than half of the items on the current form of the NAEP reading tests require students to use extended writing as a way to respond to and integrate information across reading selections.

## **Content-Focused Instruction for Young Students**

Content-focused instruction for primary grade students is most effective in the context of classrooms filled with books and other print materials and with many and varied opportunities for students to participate in reading (Morrow & Gambrell, 2001). Effective instruction also helps students develop the level of vocabulary knowledge that is essential for understanding the texts they will read throughout their lives.

For young students, reading aloud is an effective way to foster comprehension of written language, concept development, and oral language development (Bus, van Ijzendoorn, & Pellegrini, 1995; Dickinson & Smith, 1994). At the same time, classroom observations reveal that a read-aloud session by itself is not sufficient to increase comprehension. Why? Because to understand a text, students must be able both to relate their existing knowledge to the words and ideas in the text and to understand how different kinds of text “work.” This can be a challenging task, especially for students with limited oral language vocabularies (Whitehurst et al., 1994).

For read-aloud sessions to be most productive, they should be accompanied with focused teacher-student talk. The value of talk around book reading lies in the way that it helps students gain experience with abstract and decontextualized language (i.e., the language used in books to represent ideas and concepts) (Beck & McKeown, 2001).

## **A Focus on Comprehension**

## Text- and Content-Based Instruction for English Language Learners

For English language learners, reading comprehension is necessarily tied to their comprehension of the language and concepts discussed in a text. Recent research has revealed several programs that are successful in addressing the language- and text-knowledge needs of these students. Two of the programs are the *SIOP Model* and *instructional conversations*.

### ELL School Populations

- From the 1992–1993 school year through 2002–2003, the number of limited English proficient (LEP) students in public schools grew 84%, whereas total enrollment increased only 11%. In 18 states, LEP enrollment grew more than 200% between 1992–1993 and 2002–2003 (National Clearinghouse for English Language Acquisition, 2005).
- The U.S. Census Bureau reported that in 2000, one in five school-aged children was a nonnative English speaker (Jamieson, Curry, & Martinez, 2001).
- As of the 2002–2003 school year, there were more than 5 million English language learners in U.S. pre-K–12 schools, approximately 10% of the total enrollment (National Clearinghouse for English Language Acquisition, 2005).

#### *The SIOP Model*

Developed by Echevarria and colleagues (Echevarria & Short, 2004; Echevarria, Vogt, & Short, 2004) at the Center for Research on Education, Diversity & Excellence (CREDE), the Sheltered Instruction Observation Protocol (SIOP) is a model for delivering sheltered instruction to English language learners in mainstream classrooms. *Sheltered instruction* is a means for making grade-level academic content (e.g., science, social studies, math) more accessible for English language learners while at the same time promoting their English language development. It extends the time students have for getting language support services as they participate in their content-area classes. Sheltered instruction highlights key language features of texts and incorporates learning strategies that make the content comprehensible to students. These strategies include identifying the language demands of the content-area class; planning language objectives for all lessons and making them explicit to students; emphasizing academic vocabulary develop-

ment; identifying and strengthening background knowledge; and reviewing vocabulary and content concepts (Echevarria, 2004).

The SIOP model has proven effective with English language learners throughout the United States and with students at all grade levels across subject areas (Guarino et al., 2001).

### *Instructional Conversations*

Conversations that both instruct and stimulate thinking can be particularly important for English language learners, many of whom have had few opportunities to develop understandings of the concepts and linguistic features found in their English texts.

*Instructional conversations* are a way to provide students with opportunities to engage in interactions that promote analysis, reflection, and critical thinking, and so help to deal with their English language texts (Saunders & Goldenberg, 1999). In addition, they bring together elements of both strategy and content-based instruction.

Instructional conversations are both instructional in intent and conversational in quality—they appear to be natural and spontaneous interactions, free from the teacher-directed discussions that are often associated with formal teaching. In a typical instructional conversation, the talk revolves around an idea or concept that has meaning for students. The teacher and students listen carefully and are responsive to what others say, so that each contribution builds upon, challenges, or extends a previous one. The teacher questions, challenges, coaxes, or keeps quiet, providing clarification and instruction as needed and making sure that each student participates. Students can extend the conversations, both with the teacher and among themselves (Tharp & Gallimore, 1988).

In one study involving fourth- and fifth-grade English language learners, instructional conversations were combined with the keeping of literature logs (journals in which students wrote responses to their reading) to determine their effect on students' story comprehension and thematic understanding. Results showed that for many students, the technique led to improved story comprehension and improved written language proficiency (Saunders & Goldenberg, 1999).

## The Importance of Opportunities to Read

**T**he cognitive processes that are necessary for reading develop slowly (Kintsch, 1998). Without frequent opportunities to apply these processes, students are not likely to gain expertise in reading comprehension. Indeed, there is strong research evidence of the relationship between the amount of reading and reading achievement (see, e.g., Leinhardt, Zigmond, & Cooley, 1981). For example, recent data collected by NAEP about the number of pages students read each day as part of school work show that students who reported reading more than 11 pages each day had the highest reading achievement scores. Students who read five or fewer pages a day had the lowest scores (Guthrie, Schafer, & Huang, 2001).

Common sense dictates that people who are good at something—playing a musical instrument, dancing, playing football—typically spend a great deal of time developing their proficiency. Such is the case with reading proficiency. As Pressley (2000, p. 556) puts it, “The frequent admonition for children to ‘Read, read, read,’ makes sense in that extensive reading promotes fluency, vocabulary, and background knowledge.” And, greater fluency, vocabulary, and background knowledge support greater comprehension (Cunningham & Stanovich, 1990, 1991, 1998; Stanovich & Cunningham, 1993; Stanovich & West, 1989; Stanovich, West, & Harrison, 1995).

The data on the relationship between the amount of reading and reading achievement are almost entirely correlational (i.e., the data do not prove that amount of reading causes increased achievement, only that there is a relationship between the two). Simply requiring students to read more on their own is unlikely to be successful in increasing either achievement or reading engagement (Carver & Liebert, 1995; Holt & O’Tuel, 1989; Vollands, Topping, & Evans, 1999). For such gains to occur, studies suggest, students need teacher support and guidance in a number of areas, including choosing books that match students’ interests and abilities, setting specific goals and purposes for reading, and responding to what they read (Guthrie et al., 2001).

## How Much Do Students Read on Their Own?

Across grade levels, students differ dramatically in how much they read on their own. One widely cited estimate is that fifth grade students' outside-of-school reading ranges from over 2 million words a year to less than 8,000 words a year.

*From Anderson, Wilson, and Fielding (1988).*

Without opportunities for frequent reading, students may learn to read but have little interest in reading, either for information or for enjoyment. A survey conducted in 2002 by the National Endowment for the Arts (2004) shows that the number of *aliterates*—people who can read but rarely choose to do so—is on the rise.

## Reading at Risk

In 2002, the National Endowment for the Arts (NEA) conducted a survey entitled Reading at Risk that gathered information about the reading activities of more than 17,000 respondents. The NEA had conducted a similar survey in 1982. A comparison of the results provides us with an alarming picture of the decline in reading over that 20-year period.

For example, the survey found that adults who described themselves as readers of literature (defined as novels, short stories, plays, or poetry) dropped from approximately 57% to 47% from 1982 to 2002. Among young adults (aged 25–34), the percentage of readers went from approximately 62 to 48 over this same period.

*(National Endowment for the Arts, 2004)*

## Finding Good Children's Books

Each year, some 5,000 new children's trade books are published in the U.S. Many sources are available for keeping up with these new titles (including content-area specific titles), including the following websites:

- American Library Association:  
*[www.ala.org/ala/alsc/awardsscholarships/childrensnotable/notablecbooklist/currentnotable.htm](http://www.ala.org/ala/alsc/awardsscholarships/childrensnotable/notablecbooklist/currentnotable.htm)*
- Children's Book Council: *[www.cbcbooks.org](http://www.cbcbooks.org)*
- International Children's Digital Library: *[www.icdlbooks.org](http://www.icdlbooks.org)*
- National Council for the Social Studies:  
*[www.socialstudies.org/resources/notable](http://www.socialstudies.org/resources/notable)*
- National Science Teachers Association:  
*[www.nsta.org/ostbc](http://www.nsta.org/ostbc)*
- *The Scoop*: *<http://friend.ly.net/users/jorban/main.html>*