Chapter 13

Metacognition and Self-Regulated Comprehension

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Suppose that you ask a sixth grader (or a twelfth grader for that matter) to read a chapter in his or her science or social studies text in order to understand and remember what is in the chapter. What does the student do? Most students begin at the beginning of the chapter and read it sentence by sentence, if not word by word, from beginning to end. By grade 6, most children's decoding abilities are good enough that they can read chapters in their textbook from beginning to end. The problem, however, is that many of those same students do not understand well what they read, let alone remember the content of the chapter later.

A few interrelated points will be made in this chapter: (a) Skilled reading involves fluent word recognition, but also much more. Good comprehenders are extremely active as they read, using a variety of comprehension strategies in an articulated fashion as they read challenging text. (b) As part of reading instruction that includes word recognition and teaching of vocabulary, comprehension strategies can and should be taught beginning in the primary grades, with it now understood that long-term instruction of sophisticated comprehension strategies clearly improves student understanding and memory of texts that are read. (c) Comprehension strategies often are not taught.

After these points are made, the nature of effective comprehension instruction will be reviewed in metacognitive terms. Metacognition is knowledge of thinking processes, both knowledge of the thinking occurring in the here and now (e.g., "I am really struggling to figure out how to write this introduction; I believe that the introduction I have just written makes sense") and in the long term (e.g., "I know a number of specific strategies for planning a composition, rough drafting it, and revising the draft"). In the case of reading, the most important here-and-now metacognition is awareness of whether a text is being understood (or conversely, awareness of when text is not being understood and probably will not be remembered). Long-term metacognition pertaining

to reading includes knowledge of comprehension strategies (i.e., knowing that good readers predict, constructing images representing ideas encountered in text and summarizing what they have read), as well as the knowledge that good readers use the strategies consciously when they read. Metacognition, which is needed to use comprehension strategies well, can begin during direct teacher explanations and modeling of strategies but develops most completely when students practice using comprehension strategies as they read. It seems especially helpful if such practice includes opportunities to explain one's strategies use and reflect on the use of strategies over the course of semesters of schooling. That is, in Vygotskian (1978) terms, the internalization of comprehension strategies involves long-term practice with the strategies, including opportunities to reflect on strategies use with others.

The Nature of Skilled Comprehension

The perspective in this chapter (see also Adams, Treiman, & Pressley, 1998; Pressley, 1998) is that skilled reading comprehension is complicated, depending on letter-, word-, and above-the-word-level processes. The focus in this chapter, however, will be on above-the-word-level comprehension strategies.

Letter- and Word-Level Processes in Comprehension

One of the most striking characteristics of skilled reading is that word-by-word reading requires little effort. That is, reading of words is fluent, with most words being recognized by sight rather than sounded out. This is important because reading, both decoding and comprehension, takes place in and depends on short-term memory, and short-term capacity is very limited. The typical high school senior can only hold approximately seven pieces of information in mind at any one time (Miller, 1956). If that student is not fluent in word recognition, or if he or she is still sounding out words, much short-term capacity is consumed by decoding. The nonfluent reader is thinking about the sounds of the individual letters and letter combinations while trying to blend them. When that is the case, there is not much capacity left for comprehension, either of the individual words being read or for understanding the sentences, paragraphs, or whole text being read (e.g., LaBerge & Samuels, 1974). In contrast, because the fluent reader dedicates little capacity to word recognition, most of his or her capacity is available for comprehension. Word recognition skills matter in comprehension.

Thus, the emphasis in recent years on improving decoding instruction, as reflected by other chapters in this volume, should improve the comprehension of young readers. In fact, it does. Tan and Nicholson (1997) contributed one especially important study examining the link between instruction in word recognition and comprehension. They studied children from age 7 to 10 years who were experiencing difficulties in beginning reading. Tan and Nicholson believed that if these students learned to recognize words fluently, their reading comprehension would improve. Therefore, in one condition of the study, students were drilled on the recognition of a set of words until each of the words was recognized effortlessly. The participants in the control condition were given instruction about the same set of words, although the instruction they received focused on the meaning of the words, with the students and teacher discussing in some depth the meaning of each of the words. Thus, with respect to comprehension, the control condition was one that might be expected to affect comprehension positively, making this a demanding control condition.

Even so, after training, when the students read a passage containing the target words, the students given the fluency drilling understood the passage better than the control students who had participated in discussions of the meanings of the words. Specifically, the fluency-trained students answered comprehension questions on the chapter more capably than did the meaning-instructed control participants. This study provided powerful evidence that word recognition processes are important in comprehension (see also Breznitz, 1997a, 1997b).

Of course, that the fluency-trained students comprehended better than the participants taught the definitions of the words does not imply that instruction in the meaning of words is not important. It is well established that good comprehenders generally have good vocabularies (e.g., Anderson & Freebody, 1981; Nagy, Anderson, & Herman, 1987). Beyond that, however, there is evidence that teaching students vocabulary, in fact, increases their comprehension abilities.

Beck, Perfetti, and McKeown (1982) provided one well-known experiment establishing the causal relationship between teaching of vocabulary and improvement of comprehension. Fourth-grade students were taught 104 new vocabulary words over the course of half a school year. The words were taught thoroughly to these students, with them encountering the words in multiple contexts and using them in multiple ways over the course of the semester. Otherwise comparable students

served in a control condition, which did not include the teaching of the 104 word meanings. At the end of the study, the vocabulary-instructed students outperformed the controls on a standardized comprehension test. Thus, developing students' vocabulary is also a way to improve their comprehension (see also McKeown, Beck, Omanson, & Perfetti, 1983; McKeown, Beck, Omanson, & Pople, 1985).

In summary, comprehension depends on letter- and word-level processes. That is only the beginning of the story of skilled comprehension, however.

Above-the-Word-Level Comprehension Processes

One methodology more than any other has revealed much about the active comprehension strategies of good readers as they make sense of text. There have been more than 40 published studies in which readers were asked to think aloud as they read text. Pressley and Afflerbach (1995) reviewed this literature, and in doing so, were able to catalog the many strategies that are used by good readers as they go through a text. Those strategies include processes that occur before a text is read, as it is read, and after the front-to-back reading of the text is completed.

Before reading. A good reader does not just dive into a text, proceeding from beginning to end. First, the good reader is clear about her or his goal in reading the text (e.g., to learn material well enough to recall it in class tomorrow, to find a specific piece of information). Second, the reader often skims the text in advance of reading or at least looks through it. A prereading skim can reveal information about the length and structure of the text, where the important parts of the text are located, and whether the text is relevant to the reader's goals (e.g., does it contain the information the reader wants to find?). In short, a great deal of here-and-now metacognition can be developed through prereading, for example, making the reader aware of which parts of the text should be read in detail and which parts might be ignored.

Third, before reading, good readers often activate prior knowledge, which can then be related to the ideas in the text. Such activation of prior knowledge, of course, will affect comprehension of the text during reading (Anderson & Pearson, 1984). A prereading skim of the text often results in the formation of hypotheses, based on prior knowledge, about what is going to be covered in the text. Such hypotheses are the beginning of understanding of the meaning of the text, with the hypotheses

often revised as information in text is encountered during careful reading of the text.

During reading. Once actual reading begins, skilled readers generally do read texts from front to back. Often, however, they are selective in doing so, for example, skipping information that is not relevant to their current reading goals. As they read, good readers at times reread information that seems especially important or is difficult to understand. Sometimes they take notes or pause to reflect on an idea presented in the text. Sometimes they make predictions about what is coming up in the text, and those predictions are sometimes modified as the reader gets deeper into the text. That is, hypotheses about what might be in the text based on prior knowledge can be evaluated and updated as the reader comes to understand the messages in the text.

As good readers proceed through a text, they identify important information in the text (e.g., they read more carefully parts of the text presenting "news"). That is, good readers not only look for important information, they process that important information differentially (e.g., rereading it, underlining it, paraphrasing it). Good readers are especially attuned to topic sentences and topic paragraphs.

Prior knowledge permits many unconscious inferences during reading (e.g., when reading that a book slipped off a table, the reader infers that it dropped a few feet to the floor below). Good readers also make conscious inferences as they read, however. Sometimes they try to figure out the referent for a pronoun or what words mean based on context clues. Often, good readers try to figure out how information in a text relates to their prior knowledge (e.g., inferring that the family in a story is a lot like the Brady Bunch). Good readers sometimes attempt to make inferences about the author (e.g., wondering which team this writer cheers for). They sometimes attempt to make inferences about the characters in the text (e.g., guessing the character's intents, background, or state of mind).

Good readers attempt to integrate the ideas in text to get the main ideas out of the text. This can involve analyzing the structure of the text as the reader reflects on the meaning of each part of the text. Sometimes the reader will jump around in text to construct a main idea, perhaps looking back at some information read quickly the first time and looking ahead to read something that was noted to be in the text during the prereading skim. Sometimes good readers make notes about ideas in different parts of the text to assist integration of the text.

Good readers are highly interpretive as they read. Their interpretations are in their paraphrases. They are reflected in the mental images they report as they read. Good readers come to conclusions about ideas in the text based on when the text was written, their perception of the author's purpose, the tone of the text, and the author's choice of examples. Sometimes the interpretations are evaluative (e.g., I do not believe what this author is claiming).

Good readers are also highly evaluative of the text, deciding whether a text is interesting or the arguments made in it are credible. They make evaluations of the style of the text (e.g., the quality of the writing), as well as its content. They often have affective reactions, from positive ones (e.g., satisfaction with the content of the text) to negative ones (e.g., boredom, frustration).

Good readers monitor as they read, with the result that the good reader is very metacognitively aware during reading. That is, good readers are aware of the characteristics of the text (e.g., noting whether the text is relevant to their reading goals, how the different parts of the text are related to one another). This monitoring plays an important role in determining the reader's processing of and thinking about text. Thus, noting that the text is irrelevant to the reader's purpose can stop the reading of it in favor of looking for a more pertinent text. Recognition of the text's structure can affect how the reader jumps around the text in pursuit of the main ideas in the text.

Good readers also monitor problems they experience as they read. For example, good readers are very aware when they are reading a challenging text, one demanding all their capacity. They are aware of when their concentration wanes during a reading and when they are reading too quickly to understand the text. An important form of problem monitoring is awareness that a text is not being understood. Such awareness of comprehension problems can lead to shifts in reading strategies, for example, prompting more careful reading of text or rereading of parts of a text that are especially challenging.

In summary, as good readers go through a text, they are active. They relate ideas in text to their prior knowledge, construct images, and generate summaries. They do a lot of monitoring, with their awareness during reading affecting how they process the text. Such here-and-now metacognition in the form of awareness is always being generated as the good reader reads, with such awareness going far in determining the nature of the reader's activity.

After reading. Once the good reader makes it through a text one time, there is additional processing of text. Often there is selective rereading. Sometimes the good reader will attempt to recite the text, constructing a summary of it. Good readers often will reflect on what they have just read, perhaps evaluating the credibility of the material. Sometimes they will think about how they are going to use the information in the text (e.g., This can help with that section of my paper dealing with...).

Monitoring also occurs at the conclusion of a reading. Thus, good readers can be aware of whether their understanding of the text is consistent with all the ideas expressed in it. When the reader senses that something is missing from their understanding, this can motivate additional reading of the text to flesh out the reader's understanding.

Good comprehenders are capable and active readers. Good comprehension depends on fluent reading, because nonfluent reading demands valuable mental capacity that is required for comprehension to occur. Good comprehension also depends on an extensive vocabulary, for above-word-level comprehension cannot occur if individual words are not understood. The most salient comprehension processes of good readers involve comprehension above the word level, however. Good readers derive the meanings of whole texts by engaging the text before they read it, while they read it, and after a first reading is completed (Levin & Pressley, 1981). Before reading, good readers often skim a text and make predictions about it based on their prior knowledge. As the good comprehender reads, he or she reads selectively, reading some parts carefully (i.e., those particularly pertinent to the reader's purpose, sections that are difficult) and reading others more quickly and with less care. During reading, good comprehenders respond to text, asking questions about the content, constructing mental images representing the meaning in text, and paraphrasing the text. Once a first reading is concluded, good comprehenders continue to reflect on text, reviewing it, and perhaps rereading some parts of the text that seem especially important to the reader's purpose or parts that were not well understood during the first pass.

The importance of fluency and vocabulary in comprehension was established in part in true experiments, with instruction that improved fluency and vocabulary also improving comprehension, making the causal connections between fluency and vocabulary and comprehension clear. As it turns out, the most extensive experimental literature evaluating

instructional effects on comprehension is with respect to comprehension strategies. There has been much experimental evidence establishing that when readers are taught to use comprehension strategies, their comprehension, in fact, improves. This is powerful evidence of the causal relationship between comprehension strategy use and comprehension, with the relevant research outcomes discussed in the next section. The conclusion from this section, however, is a different one: Good readers use comprehension strategies consciously when they read. When burgeoning readers are taught comprehension strategies, they are being taught to read as good readers do.

Comprehension Strategies Instruction

There have been many studies of comprehension strategies instruction conducted since the middle 1970s. When this literature is reviewed chronologically, there are huge differences in the nature of the studies conducted earlier in the period (i.e., in the 1970s and 1980s) and those conducted in the 1990s. Thus, research in this section is reviewed chronologically, although much more attention is given to the more recent work, as it reflects instruction that can fit well in schools and that can go far in stimulating students to engage text in the ways in which good comprehenders engage text.

Strategy Instruction Experiments in the 1970s and Early 1980s

Many experiments were conducted in which some children were taught a strategy that the researcher believed would improve comprehension and memory of text while other children were left to their own devices to read and understand text. Some of the strategies that were validated as positively affecting comprehension and memory of text included the following (Pearson & Dole, 1987; Pearson & Fielding, 1991; Pressley, Johnson, Symos, McGoldrick, & Kurita, 1989):

- Relating text to prior knowledge: When children in the elementary grades are taught to relate the ideas in text to what they already know, their comprehension and memory of text improves (e.g., Dewitz, Carr, & Patberg, 1987; Hansen & Pearson, 1983). Prior knowledge can be related to text by making predictions about what is likely to be in a passage based on what the reader already knows. Prior knowledge also can be related as first reading; then, prior

knowledge can be related to text after reading as readers reflect on what they have read.

- Mental imagery: When children in the middle and later elementary grades are taught to construct images representing the ideas related by text, their memory and comprehension of text improves (Gambrell & Bales, 1986; Gambrell & Jawitz, 1993; Pressley, 1977; Sadoski, 1983; 1985).
- Question generation: When elementary students are taught to question themselves as they read, their understanding of text improves. For example, Davey and McBride (1986) taught grade 6 students how to generate questions that integrate important ideas presented in a passage, with this especially improving the kinds of inferences the readers made as they read.
- Summarization: When children are instructed to summarize as they read, their understanding and memory of text improves. For many young readers, it helps to be provided explicit procedures for summarization. Thus, Bean and Steenwyk (1984; inspired by Brown & Day, 1983) taught grade 6 students to summarize by (a) deleting trivial information, (b) deleting redundant information, (c) substituting superordinate terms for lists of terms, (d) integrating a series of events with a superordinate action term, (e) selecting a topic sentence, and (f) making up a topic sentence if there is not one in the passage.

In summary, by the mid-1980s there was a great deal of evidence favoring the teaching of comprehension strategies, although most of it pertained to the instruction of individual strategies. The think-aloud studies reviewed earlier, however, had made clear that good readers were not single strategy users, but rather orchestrated a variety of strategies as they read. Thus, it made sense for researchers to begin exploration of the possibility that children could be taught repertoires of comprehension strategies, which they could use fluently. The best known of these interventions is reciprocal teaching.

Reciprocal teaching as designed by Palincsar and Brown (1984) occurs in small reading groups, with the students in the group taking turns as leader. The student leader specifically guides the group to use a small repertoire of comprehension strategies: predicting, questioning during reading, seeking clarification when confused, and summarizing. Although an adult teacher monitors what goes on in the groups, the

adult's role is limited to providing support and assistance on an as-needed basis. The idea is for students to become familiar with the strategies and comfortable with regulating the use of strategies on their own. The theory is that by practicing the use of the strategies in the peer group, student members of the group eventually will internalize the strategies, coming to own them and use them on their own as they read.

In fact, 20 sessions or so of reciprocal teaching does produce young readers who know how to use the strategies that are part of the reciprocal teaching package. Moreover, although the effects often are not large, there typically is some improvement in comprehension and memory of text (Brown & Palincsar, 1989; Rosenshine & Meister, 1994).

When the earliest studies of reciprocal teaching appeared (i.e., Palincsar & Brown, 1984), they did much to stimulate teaching of strategies in schools. However, often the resulting instruction did not much resemble reciprocal teaching. Hence, my colleagues and I invented another name for the teaching of multiple comprehension strategies in school: transactional strategies instruction. This label captures multiple characteristics of comprehension instruction as it occurs in classrooms committed to teaching comprehension strategies.

Strategies Instruction in the Late 1980s and Early 1990s: Transactional Strategies Instruction

In the late 1980s and early 1990s, my colleagues and I intensively and extensively studied three schools that focused their reading instruction in grades 2 through 6 on comprehension strategies instruction (e.g., Pressley et al., 1992). Somewhat to our surprise, there was great similarity in the instruction observed in the three settings, with the following characteristics of instruction consistently observed:

- Strategies were taught: Both decoding and comprehension strategies were taught, with the comprehension strategies being the ones validated in the experiments on individual strategies, including those that were part of reciprocal teaching (i.e., activating prior knowledge by making predictions and relating what is being read, asking questions, constructing mental images, clarifying, summarizing).
- Strategies were taught during small-group instruction but used throughout the day: The small group provided a forum for the teacher to explain strategies and model their use and for students to practice applying strategies to texts and report to classmates the

strategies they were using (e.g., discussing images that came to mind as they read, relating their summaries, indicating to classmates how the text relates to their own worlds). As students did so, they were explaining strategies use and modeling it for their peers. Teachers provided assistance as students needed it, although in time the students were very autonomous in the reading group, choosing strategies on their own and fluidly reporting their strategies use to groupmates.

- Strategies were taught as interpretive vehicles: Students were taught that strategies can help them to get beyond literal understanding of the text and that use of strategies promotes personal understandings (e.g., unique mental images, summaries reflecting what the reader perceived as important in the text).
- Students were taught to coordinate strategies: Students were not taught to use strategies in a rigid order—for example, to predict before reading, question and clarify during reading, and summarize after reading, as occurs in reciprocal teaching—but rather were encouraged to use strategies when it seemed appropriate to them and when they felt they needed to be strategic. The goal was for students to become self-regulated strategies users, with the heart of self-regulation being choice, both choosing to be active in general during reading and choosing when to employ particular strategies.

Although the ethnographic studies, interviews, case studies, and analyses of classroom discourse that informed this portrait of transactional strategies instruction suggested that comprehension strategies instruction was effective (e.g., lots of interpretive activity was observed, students who previously experienced reading difficulties seemed to really "get into" reading), such analyses and data do not convince many scholars and educators of the worth of an intervention. These qualitative studies, however, informed a controlled comparison of transactional strategies instruction versus more conventional reading instruction.

Comparative Studies of Transactional Strategies Instruction Versus Conventional Teaching

Brown, Pressley, Van Meter, and Schuder (1996) compared the performance of weak grade 2 readers who were enrolled in classrooms featuring transactional strategies instruction versus classrooms that did not emphasize comprehension instruction. There were five classrooms in each condition of this quasi-experiment. Four of the five control classrooms

were more consistent with whole language than any other perspective; one control classroom was skills oriented.

The study occurred over the course of a year, with checks throughout the year to determine whether the classes were consistent with their condition. They were. Although the students in the two types of classrooms were comparable on a variety of reading measures at the beginning of the year, they were not comparable at the end of the year.

At the end of the year, the students in the transactional strategies instruction condition outperformed control students on standardized tests (i.e., tests of word-level skills and, most pertinent here, comprehension). When transactional strategies instruction students were asked at the end of the year to think aloud as they read, they reported using many more strategies than did the students in control classes. Especially impressive at the end of the year, when students in the transactional strategies instruction classes read a story, they remembered more of it later than did participants in control classrooms. In short, at the end of the year, there were many indications of better, more active comprehension and memory for students in the transactional strategies instruction classes compared with students in the control classes.

In addition to the Brown et al. (1996) study at grade 2, there have been two other well-controlled comparisons of students in transactional strategies instruction classrooms and students in more conventional classes. Collins (1991) validated such instruction at the grade 5 and 6 levels. Anderson (1992) did so with middle school and high school students. Moreover, this body of work is consistent with other work establishing that long-term direct explanation and modeling of strategies followed by student practice of the strategies positively affects reading (e.g., Duffy et al., 1987).

That transactional strategies instruction works was established in the quantitative, comparative studies. That transactional strategies instruction can be used profitably in real classrooms also was established in studies like Brown et al. (1996), and in the qualitative studies that preceded it. Even so, that does not mean that transactional strategies instruction is common in the schoolplace, something that was apparent in a recent observational study.

Comprehension Instruction in Elementary Classrooms in the 1990s

It is clear based on the literature reviewed thus far that by the middle elementary grades, students can learn comprehension strategies and

can learn to use them to increase understanding and memory of text. Moreover, from even a cursory examination of many published reading programs or professional journals (e.g., *The Reading Teacher*), it is obvious that elementary teachers have been encouraged to teach their students to use comprehension strategies. However, do teachers, in fact, teach comprehension strategies?

As was the case two decades ago (Durkin, 1978/1979), it seems that they do not. Over the course of school year 1995–1996, Pressley, Wharton-McDonald, Mistretta, and Echevarria (1998) observed nine fourth- and fifth-grade classrooms, focusing on the reading instruction occurring in the classrooms. What they found was that each classroom had a very different approach to the teaching of reading. What they did not find was any of the classroom teachers teaching comprehension strategies in anything like the fashion discussed in this chapter.

In fact, the situation seemed much as Durkin described it. Teachers did not teach students how to comprehend; rather, they tested comprehension. To be certain, the tests seemed a bit different from the ones Durkin observed, with the tests informed by the comprehension strategies instructional work even if students were not taught the strategies. We observed many tests requiring students to summarize, identify parts of texts that confused them, generate questions that might be asked of the text, and make predictions based on prior knowledge. The problem, of course, was the tests stimulated such processing of text after the students had completed their reading rather than while students were reading. There was little evidence of students being encouraged to become self-regulated readers in the sense of using on their own the comprehension strategies that good readers use. There was the expectation that students would be self-regulated in their reading, with test questions that tapped the kind of information that a self-regulated reader might be expected to recall from text, but no instruction of those self-regulation processes. The assumption of the teachers seemed to be that if their students simply read, read, and read, and then were tested, tested, and tested, they would become good comprehenders—they would become self-regulated readers who used comprehension strategies. Of course, if that were true, then it would not be the case that whenever students have been taught to use comprehension strategies, their comprehension improves, for such instruction could only have an effect if students were not using such strategies on their own.

Summing Up: Metacognition of Skilled Readers and Skilled Reading Teachers

If the goal is to develop elementary-age children into metacognitively skilled readers, their teachers must first possess some metacognition about reading. Thus, I close this chapter with a discussion of what metacognition is in the skilled reader and the metacognition that teachers need to possess if they are to stimulate the development of appropriate metacognition about comprehension in their students.

The Metacognitively Skilled Reader

What is specifically metacognitive about skilled, self-regulated reading? Recall that metacognition is knowledge about thinking, and metacognition about reading is specifically knowledge about reading and how reading is accomplished. Skilled readers know how to get meaning from text. At the letter and word levels, they know how to decode words and are very cognizant of the need to attend carefully to the individual letters and letter combinations in words that are not immediately recognizable, that sounding out words and blending the sounds is how to recognize unfamiliar words.

Because skilled readers can automatically recognize most of the words they need to read, not much effort is required to decode, however, and hence there is a great deal of cognitive capacity available for comprehension, both of individual words and of the ideas represented by phrases, sentences, and paragraphs. Such cognitive capacity is put to good use by the skilled reader, with the metacognitively sophisticated reader knowing that comprehension is most likely by reading actively; that is, the good reader knows to relate what is being read to prior knowledge, and he or she is aware that good readers predict what might be in upcoming text and relate ideas encountered in text to their prior knowledge. The metacognitively sophisticated reader also knows to ask questions while reading, construct images of ideas being conveyed in text, and summarize what is being read. The metacognitively sophisticated reader knows that good reading involves being alert to the possibility that some parts of text are confusing. He or she knows to react to confusion with fix-up strategies, such as rereading. The metacognitively sophisticated reader knows comprehension strategies, knows to use them, and often does use them.

It is not known how 35-year-old metacognitively sophisticated readers became metacognitively sophisticated. That is for future research

to determine. It is known, however, that not many high school graduates and beginning college students are metacognitively mature with respect to reading. In particular, high school students rarely report use of the active comprehension processes described earlier (Pressley & Afflerbach, 1995).

One possibility is that those who advocate the read, read, and read philosophy are correct that decades of extensive reading will result in exceptionally skilled reading, even metacognitively sophisticated reading. If it is accepted that there are nontrivial numbers of high school students who have followed that advisement, however, and accepted as well that there are not nontrivial numbers of metacognitively skilled high school readers, it seems that a single decade of reading, reading, and reading, however, is not enough to produce readers who know comprehension strategies, know to use them when they read, and do use them.

To be certain, one thing that the metacognitively sophisticated reader knows is that it is a good thing to read, read, and read. Such reading increases fluency, which increases comprehension. It also benefits prior knowledge, including vocabulary knowledge (Sternberg, 1987), which facilitates comprehension as well. The point here, however, is that the metacognitively sophisticated reader knows that much more than fluency and prior knowledge is required to understand text. The really good, metacognitively sophisticated reader knows that high comprehension requires active reading: predicting, questioning, imaging, clarifying, and summarizing while reading.

One of the great accomplishments of reading research in the past quarter century is the portrait of the metacognitively sophisticated reader reviewed in this chapter. Unfortunately, less attention has been paid to the metacognition possessed by the sophisticated teacher, so what follows is more speculative because there is no directly relevant data. It is offered as a set of hypotheses that deserves serious study as part of the development of instruction that will result in better readers.

The Metacognitively Sophisticated Reading Teacher

The metacognitively sophisticated reading teacher should know that good readers know, can use, and do use decoding and comprehension strategies when they are needed. He or she also should know that it is important for students to read, read, and read excellent books, for fluency depends on extensive reading and development of background knowledge depends on quality reading. The sophisticated reading teacher

recognizes that both fluency and extensive background knowledge contribute to comprehension skill.

Beyond that, however, the metacognitively sophisticated teacher should understand that students are most likely to develop decoding strategies if they are provided explicit instruction as a starting point, including explanations of decoding and word recognition strategies and modeling of their use. That is, the metacognitively sophisticated teacher should be aware at some level of the conclusions offered in other chapters of this volume that explicit decoding and word recognition instruction is more effective than leaving students to discover decoding skills on their own.

The metacognitively sophisticated teacher also should know that comprehension skill does not develop very well on its own, but that the comprehension strategies used by good comprehenders can be taught, beginning with teacher explanations and modeling of the strategies followed by scaffolded student practice of comprehension strategies during reading. Of course, the overarching purpose of placing this chapter in this book is to begin the development of this type of metacognition in teachers. I say "begin" because of some advisement I received from an accomplished comprehension strategies teacher in one of my studies. She told me that she really never understood comprehension until she started to teach comprehension strategies using the transactional strategies instructional approach. Once she started teaching students comprehension strategies, she found herself being more cognitively active during reading and much more aware of what she did to understand demanding texts. If you follow the advisement provided in this chapter and begin to teach comprehension strategies to your students, I suspect that you, too, will experience a dramatic improvement in your comprehension, an increase in your metacognition about comprehension, and new metacognition about the nature of effective teaching of comprehension.

Questions for Discussion

1. Try thinking aloud as you read a magazine article. Do you predict what is going to be in the text? Ask questions? Create mental images? Summarize? In short, how are you active before, during, and after reading?

2. Try being more strategically active when you read. How does it affect your comprehension? If you do become more active as you

read, how might you be in a better position to teach reading comprehension strategies to your students?

3. Can you think of occasions when it is difficult for you to read and understand individual words in a text? Are there ways you can cope so that you can get the most meaning out of the text?

4. Find out how teachers you know are attempting to teach comprehension strategies to their students. Are students being encouraged every day to use comprehension strategies? Are students being taught to use a small repertoire of comprehension strategies? Are they being taught to apply the strategies they learn during reading instruction across the school day?

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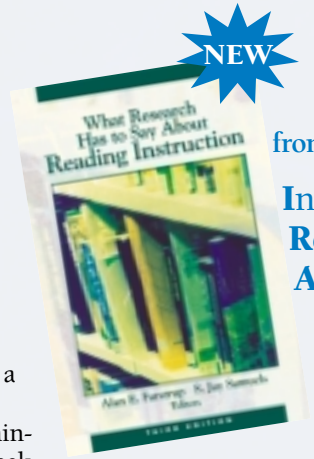

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