Comprehension Strategy Instruction That Works

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Some students are thrown "off course" on the road to skilled reading because they fail to acquire and use effective comprehension strategies (Snow, Burns & Griffin 1998). Learning how to use comprehension strategies increases readers' abilities to understand text, engage in critical thinking, and gain new knowledge from text. Fortunately, a number of research studies in recent years have demonstrated that students can be taught strategies to improve their comprehension of both fiction and nonfiction texts (National Reading Panel 2000; Block, Gambrell & Pressley 2002; Pressley 2000). Students who actively use comprehension strategies understand and recall more of what they read. As readers practice and use comprehension strategies, the strategies become internalized and incorporated into their automatic reading processes, which in turn transfers to other reading situations. This process supports students in their journey toward the independent use of the strategies, which will enhance their understanding of text.

Clearly, the nature and quality of comprehension strategy instruction is a significant factor in preventing reading failure. The goal of this paper is to provide information about research-based strategies so that teachers can make informed decisions about comprehension strategy instruction. The perspective taken here is that only the strategies that have clear scientific research support should be recommended to teachers.

The following strategies have proven their worth in studies that permit cause-and-effect conclusions for improving reading comprehension: monitor and clarify, make connections, visualize, ask questions, infer and predict, and summarize. These strategies help the reader concentrate on what is being read, encourage active engagement with the text, and support sustained effort to understand the meaning of the text. Most importantly, the use of comprehension strategies encourages strategic reasoning when the reader confronts barriers to comprehension.

Strategy instruction works best when it focuses on a few well-taught, well-learned strategies that have been shown to be effective in improving comprehension of text (Pearson & Raphael 2003; Pressley 2002). Once students are comfortable with specific strategies, Pressley (2002) suggests that students will then move toward becoming metacognitively sophisticated readers who know that strong comprehension requires both knowledge of strategies and moment-to-moment awareness of their text processing. When students are taught and can use a repertoire of comprehension strategies, they become more active readers and better comprehenders.

The constructivist theories of Vygotsky (1978) and Bruner (1960) support the notion that comprehension strategies are best taught through teacher modeling and scaffolded instruction. According to Vygotsky (1978), much of what children learn takes place through interactions with others, and in particular, interactions with adults and more-skilled learners. Therefore, when teachers model comprehension strategies for students, the students begin to learn the strategic behaviors as they model the tactics of the teacher. Bruner (1960) makes the point that adults do not just model behavior and then expect children to be able to perform; rather, they provide scaffolding to support learning success. In keeping with the learning theories of Vygotsky and Bruner, current theorists argue that students need instructional opportunities that will support them in becoming "… meaning makers, text users, and text critics" (Muspratt, Luke & Freebody 1997).

Comprehension Strategies: What? How? and When?

Current models of comprehension strategy instruction incorporate teaching of *declarative* knowledge, *procedural* knowledge, and *conditional* knowledge (Duffy 1993). Declarative knowledge involves teaching students *what* the strategy is, procedural knowledge involves teaching students *how* to use the strategy, and conditional knowledge involves teaching students *when* the strategy is most beneficial to use. Comprehension strategy instruction is most effective when declarative, procedural, and conditional knowledge are developed during actual engagement with text.

Explicit instruction that focuses on specific strategies, how to use them, and when to use them, promotes the development of independent strategy use. This type of teaching involves extensive teacher modeling of sophisticated strategy use and application. During teacher modeling, students have opportunities to see and understand that comprehension strategies can be learned and applied in a variety of reading situations with a variety of texts. As students try these strategies and notice that their reading comprehension improves, motivation to use the strategies independently will increase.

Comprehension Strategy Instruction: The Gradual Release of Responsibility Model

Effective comprehension strategy instruction also makes use of a gradual release of responsibility model (Pearson & Raphael 2003). In the gradual release of responsibility model, the teacher begins instruction with explicit modeling and teaching, followed by guided practice. Over time the responsibility for independent use of the strategy is released to the student. In the gradual release of responsibility model the teacher serves as a coach who models, guides, and encourages strategy use by reminding students about *when* and *how* comprehension strategies can be applied to new reading situations and different texts. Throughout the school day students can be reminded of occasions where a particular strategy might be effective. As students get more practice in using reading comprehension strategies, the strategies become more automatic. Thus, less mental capacity is taken up in their execution, leaving more mental capacity for actual understanding—and comprehension increases as a result (Block, Gambrell & Pressley 2002).

Research-Based Reading Comprehension Strategies

According to Pressley (2002), comprehension strategy instruction is decidedly about teaching students how to construct meaning from text rather than simply finding the meaning put there by the author. In other words, the goal of comprehension strategy instruction is to engage students in critical thinking and higher-level comprehension. The following section briefly describes six strategies that have a research base supporting their use to improve students' reading comprehension: monitor and clarify, make

connections, visualize, ask questions, infer and predict, and summarize (National Reading Panel 2000; Block, Gambrell & Pressley 2002; Pressley 2000). Students can employ these strategies during the process of reading text in order to facilitate the comprehension process in general, or when they realize that comprehension failure has occurred and additional effort is needed in order to gain full meaning of the text.

The use of comprehension strategies encourages active participation on the part of the reader during the reading process. Some students have difficulty understanding what they read because they do not focus their concentration on the task. They do not put forth the sustained effort required for the complex task of comprehending the text. The comprehension strategies described in the following section encourage both active participation and sustained effort during the reading process. Instruction on the use of these six comprehension strategies should result in students possessing ownership of these strategies, as well as the ability to determine how and when to use the strategies to enhance comprehension.

1. Monitor and Clarify Strategy

Good readers know that reading must make sense and that they need to be attentive to the meaning of the text they are reading. Students can learn to become aware of when they are confused while reading text and can be taught how to seek clarification of meaning. Readers can make attempts to correct comprehension failure only if there is an *awareness* that failure has occurred. In order for students to accomplish this, they must first become accustomed to "putting on the brakes" when something does not make sense. Then students must be able to make decisions about what to do to clarify the comprehension failure.

The ability of readers to monitor their understanding of text combines the interacting processes of self-appraisal and self-management and has been found to be a critical component of reading comprehension (Paris & Winograd 1990).

Teaching the monitor and clarify strategy helps students pay attention to whether they understand the ideas in a text. If they do not understand, then they must take action to clarify their understanding of the text ideas. Ways to seek clarification include rereading, thinking about what is already known, looking at text aids such as illustrations, and asking for help.

2. Make Connections Strategy

The comprehension of text is jointly determined by the ideas in the text and the prior knowledge of the reader. Readers rely heavily on their prior knowledge during interactions with text to help them understand what they are reading. Keene and Zimmerman (1997) suggest that students be taught to make three specific kinds of connections: text-to-self, text-to-text, and text-to-world. Text-to-self connections are the personal connections that readers make between a text and their own life experiences. An example of a text-to-self connection might be, "The character in this book reminds me of my grandfather because…." Text-to-text connections are the connections that readers make between the text they are reading and another text they know about. An example of a text-to-text connection might be, "This story takes place in a row house in Baltimore, just like in the story 'Aunt Betty's Porch.' Text-to-world connections are the broader connections readers bring to the reading of a text that extend beyond personal experiences. An example of a text-to-world connection might be, "I know that mountain lions are dangerous because I saw a special on the Disney Channel about how they defend their young."

Merely making connections is not sufficient for deep understanding. Students need to be able to analyze how their connections contribute to their understanding of the text. Helping students make connections to prior experiences (self, text, world) results in increased memory and recall of text information. The make connections strategy also helps students learn to use prior knowledge effectively in order to make specific connections

to text and helps them navigate text that they may have limited knowledge about (Stahl 2004).

3. Visualize Strategy

The old saying "A picture is worth a thousand words" may explain why the visualize strategy enhances reading comprehension. When students make visual images in their minds, the "pictures" provide the framework for organizing and remembering information from the text. There is consistent and impressive evidence that when students visualize the actions and ideas in text it helps them remember and retrieve the information, resulting in improved comprehension (Gambrell & Bales 1986; Gambrell & Jawitz 1993; Pressley 2000). However, research suggests that students do not spontaneously use the visualize strategy to enhance their comprehension unless they are provided with instruction on how to do so. One reason students may not use the visualize strategy for comprehension enhancement may be that the strategy is frequently associated with aesthetic appreciation of prose. Therefore, students may not be familiar with the strategy as an aid to comprehension.

While visual imagery has been found to increase both listening and reading comprehension, it is clear that students need direct, explicit instruction on how and when to apply this strategy. Studies document that the visualize strategy benefits all readers, but that average and below-average readers benefit most (Gambrell & Bales 1986; Gambrell & Jawitz 1993; Gambrell & Koskinen 2002.)

4. Ask Questions Strategy

When students ask themselves questions, it helps to guide their thinking about the ideas in the text. Research indicates that when readers ask themselves questions, it leads to improvement in remembering the text ideas, locating information in text, and deeper processing of text (Taylor, Pearson, Walpole & Clark 1999). A number of studies have determined that students benefit from instruction in asking questions about the text they are reading (Beck et al. 1997; Ezell, Hunsicker, Quinque & Randolph 1996; Raphael 1986). These studies revealed that students at all ability levels profit from strategy instruction on asking questions, but even more importantly, average and below-average readers profit most. These studies also indicate that the effects of instructing students in the ask questions strategy were maintained over time and that the instruction was effective with both narrative and expository text. Asking questions about text can foster higher levels of thinking and the development of critical thinking skills (Stahl 2004).

5. Infer and Predict Strategy

Reading comprehension is affected by readers' prior knowledge. Readers who possess rich prior knowledge about the topic of a text will comprehend better than readers who have low prior knowledge (Anderson & Pearson 1984). When readers relate their world knowledge to the content of a text, they can make inferences based on both their prior knowledge as well as the information provided in the text.

As they read, good readers build up expectations about what is to come in a text. Good readers monitor and either confirm or revise their predictions as the text provides new information. Use of the infer and predict strategy engages students in making inferences and using those inferences to make predictions, or a series of predictions, about what is going to be revealed in subsequent text. The infer and predict strategy occurs in a continuous cycle as students read, inferring and predicting throughout the reading of the text. The use of the infer and predict strategy promotes deep engagement, clarifies misconceptions, and helps student create an accurate representation of text consistent with their prior knowledge (Gaskins et al. 1993).

6. Summarize Strategy

Research suggests that many students do not know how to summarize text but they can learn how to do so if provided with instruction about how to construct such summaries (Brown, Day & Jones 1983). The summarize strategy helps students identify the most important information in the text. Instruction involves showing them how to select key information, to ignore what is not important, and to paraphrase information in the text. Using the summarize strategy involves summing up the important information along the way as one reads. Research has documented that using the summarize strategy increases what students remember about what they have read as well as their ability to respond to questions about the content of the text. In a comprehensive review of research, Pressley (2002) concluded that the evidence to date in favor of summarizing as a facilitator of comprehension and memory is so striking that the procedure can be recommended to teachers without hesitation.

Concluding Comments

Comprehensive instruction in reading comprehension strategies supports students in developing a repertoire of strategies that they can apply fluidly and adaptively as needed during the reading of all kinds of texts. We know that good readers use a variety of comprehension strategies to deal with difficult text. However, we also know that good readers do not use these strategies one at a time; rather they use them in an orchestrated fashion as needed. There is evidence to support the teaching of single comprehension strategies, and then moving instruction toward helping students orchestrate a full repertoire as they become more comfortable with the range of strategies. Teachers who provide instruction in these strategies will support their students in using the most defensible comprehension strategies available.

The ultimate goal of comprehension strategy instruction is that strategies (i.e., monitor and clarify, make connections, visualize, ask questions, infer and predict, and summarize) will be internalized and used habitually by the students. Research suggests that good comprehension strategy instruction includes teacher explanation and modeling of strategies, followed by teacher-scaffolded use of the strategies, culminating in student use of the strategies during independent reading (Pressley 2000). Strategy instruction has been most effective when it is provided in a consistent and long-term manner across the school year.

In conclusion, there is reason to believe that the six comprehension strategies described in this paper have very favorable benefits for students that make them attractive candidates for inclusion in reading programs. There is ample evidence that providing instruction in the use of these strategies will improve the reading comprehension performance of elementary students and help them along the road to becoming independent and proficient readers for life.

References

Anderson, R.C. & Pearson, P.D. (1984). A Schema-theoretic View of Basic Processes in Reading. In P.D. Pearson, R. Barr, M.L. Kamil & P. Mosenthal (Eds.), *Handbook of Reading Research.* White Plains, NY: Longman.

Beck, I. L., McKeown, M.G., Hamilton, R. L. & Kucan, L. (1997). *Questioning the Author: An Approach for Enhancing Student Engagement with Text.* Newark, DE: International Reading Association.

Block, C., Gambrell, L.B. & Pressley, M. (Eds.) (2002). *Improving Comprehension Instruction.* San Francisco, CA: Jossey-Bass.

Bruner, J. (1960). *The Process of Education.* Cambridge, MA: Harvard.

Brown, A.L., Day, J.D. & Jones, R.S. (1983). The Development of Plans for Summarizing Texts. *Child Development*, 54, 968–979.

Duffy, G. (1993). Rethinking Strategy Instruction: Four Teachers' Development and Their Low Achievers' Understanding. *The Elementary School Journal*, 93, 231–247.

Ezell, H.K., Hunsicker, S.A., Quinque, M.M. & Randolph, E. (1996). Maintenance and Generalization of QAR Reading Comprehension Strategies. *Reading Research and Instruction*, 36, 64–81.

Gambrell, L. B. & Bales, R. J. (1986). Mental Imagery and the Comprehension Monitoring Performance of Fourth and Fifth Grade Poor Readers. *Reading Research Quarterly*, 21, 454–464.

Gambrell, L.B. & Jawitz, P. (1993). Mental Imagery, Text Illustrations and Young Children's Reading Comprehension. *Reading Research Quarterly*, 28, 264–276.

Gambrell, L.B. & Koskinen, P.S. (2002). Imagery: A Strategy for Enhancing Comprehension. In C. Collins-Block & M. Pressley (Eds.). *Improving Comprehension Instruction.* San Francisco, CA: Jossey-Bass.

Gaskins, I.W., Anderson, R.C., Pressley, M., Cunicelli, E. & Satlow, E. (1993). Six Teachers' Dialogue During Cognitive Process Instruction. *The Elementary School Journal*, 93, 277–304.

Keene, E. & Zimmerman, S. (1997). *Mosaic of Thought.* Portsmouth, NH: Heinemann.

Muspratt, W., Luke, A. & Freebody, P. (1997). *Constructing Critical Literacies.* Cresskill, NJ: Hampton.

National Reading Panel. (2000, April). *Teaching Children to Read; An Evidence-based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction* (NIH Publication No. 00-47699). Washington, DC: National Institute of Child Health and Human Development.

Paris, S.G. & Winograd, P. (1990). How Metacognition Can Promote Academic Learning and Instruction. In B.F. Jones & L. Idol (Eds.), *Dimensions of Thinking and Cognitive Instruction*, 15–51. Hillside, NJ: Earlbaum.

Pearson, P.D. & Raphael, T.E (2003). Toward a More Complex View of Balance in the Literacy Curriculum. In L. M. Morrow, L. B. Gambrell & M. Pressley (Eds.) *Best Practices in Literacy Instruction.* NY: Guilford.

Pressley, M. (2000). What Should Comprehension Instruction Be the Instruction Of? In M.L. Kamil, P.B. Mosenthal, P.D. Pearson & R. Barr, (Eds.), *Handbook of Reading Research: Vol. III*, 545–551. Mahwah, NJ: Erlbaum.

Pressley, M. (2002). *Reading Instruction that Works: The Case for Balanced Teaching* (2nd ed.). New York: Guilford Press.

Raphael, T.E. (1986). Teaching Question-answer Relationships, Revisited. *The Reading Teacher*, 39, 516–522.

Snow, C. E., Burns, M.S. & Griffin, P. (Eds.) (1998). *Preventing Reading Difficulties in Young Children.* Washington, D.C.: National Academy Press.

Stahl, Katherine A. D. (2004). Proof, Practice, and Promise: Comprehension Strategy Instruction in the Primary Grades. *The Reading Teacher*, 7, 57, 598–609.

Taylor, B.M., Pearson, P.D., Walpole, S. & Clark, C. (1999). *Schools that Beat the Odds* (DIERA Report). Ann Arbor, MI: Center for the Improvement of Early Reading Achievement.

Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes.* Cambridge, MA: Harvard University Press.

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