This article reviews the research on comprehension strategy instruction in the primary grades (K-2) and makes recommendations for teachers.

Until recently, I believed that my job as a first- or second-grade teacher was to develop fluent readers with the ability to decode novel text automatically. This would put them in good stead for comprehension instruction in the intermediate grades. This is no longer enough. The U.S. government's Reading First grants will support literacy instruction in kindergarten through third grade that includes systematic and explicit instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension.

The abundance of research in the primary grades relating to phonological awareness and phonics makes those aspects of a program fairly easy to define and substantiate. However, more recently theorists have demonstrated that even the youngest readers need opportunities to be "code breakers, meaning makers, text users and text critics." (Muspratt, Luke, & Freebody, 1997). Less research has been conducted on young children comprehending, using texts to acquire new knowledge, and critiquing texts.

There is a research base to support comprehension instruction in the early primary grades, although most of the research on reading comprehension instruction has been conducted with third grade and up (National Institute of Child Health and Human Development, 2000). The purpose of this article is to review that research on comprehension strategy instruction for K-2 students and to make recommendations for teachers regarding which instructional techniques can be used with confidence and which may need to be used more cautiously because they lack empirical support.

The preliminary literature review involved computerized searches of Educational Research Information Center (ERIC) and PsychLit databases for quantitative and qualitative studies of comprehension strategy instruction in primary classrooms. I also used the reference sections of these articles to find other studies involving primary students. All of the studies reviewed for this article involved students in grades K-2. Some studies cited in this review did not have control groups.

The role of comprehension strategies

Comprehension strategies can be important to a reader because they have the potential to provide access to knowledge that is removed from personal experience. The unstated premise is that children who actively engage in particular cognitive strategies (activating prior knowledge, predicting, organizing, questioning, summarizing, and creating a mental image) are likely to understand and recall more of what they read. Strategies can be tools in the assimilation, refinement, and use of content. It is assumed that as children practice these strategies in a group setting, they will habituate them and transfer them to other appropriate settings independently.

The keys to children's acquisition of comprehension strategies are the instructional techniques
used by the teacher. Most models of strategy instruction incorporate teaching of declarative knowledge, procedural knowledge, and conditional knowledge (Duffy, 1993; Paris, Lipson, & Wixson, 1983). Declarative knowledge involves teaching the children what the strategy is. Instruction in how to use the strategy develops procedural knowledge, and instruction in when the strategy is most useful (or not applicable) constitutes conditional knowledge.

Effective strategy instruction also uses a gradual release of responsibility (Pearson & Gallagher, 1983). In this model, teachers begin instruction with explicit teaching and guided practice. Over time the responsibility for cognitive decision making and putting strategies into practice is released to the students.

Research has demonstrated that comprehension strategy instruction can enhance the reading comprehension of novice readers. I categorized the use of strategies by teachers based on the review of literature, informal interactions with teachers, classroom observations, and reports by preservice teachers participating in field experiences. This process yielded four general categories of comprehension strategy instruction in the primary grades (see Table).

1. Strategy instruction that is substantiated by research and widely practiced
2. Strategy instruction that is substantiated by research but less widely practiced
3. Strategy instruction that is not substantiated by research but widely practiced
4. Strategy instruction that has not been researched with novice readers and is not widely used but may hold promise based on other evidence

Substantiated by research and widely practiced

There is a base of research conducted in the primary grades that supports teaching story elements, Question-Answer Relationships, and Reciprocal Teaching. Substantial evidence indicates that teacher questioning can play a key role in enhancing student comprehension. Over the years these practices have gained wide acceptance by classroom teachers.

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Text structure

Text structure studies with younger children have typically involved listening comprehension or a combination of listening and reading narrative texts (Baumann & Bergeron, 1993; Mandler & Johnson, 1977; Morrow, 1984a, b; Stein & Glenn, 1979). Much of the research dealing with instruction in text structure uses visual representations, such as graphic organizers or story maps, to form a visual representation of the text’s organization.

Researchers have defined and empirically tested story grammars (Mandler & Johnson, 1977; Stein & Glenn, 1979). There are differences among story grammars but most share major similarities. The well-structured story includes a setting (characters, time, and place), an initiating event, the development of single or multiple episode systems (reaction to the initiating event, goals, attempts, outcomes), and an ending or resolution. In primary classrooms, story maps are used frequently to visually represent the story grammar.

Several treatment studies guided children in increasing their awareness of story structure through retelling, questioning strategies, or story maps. Morrow (1984a) found that the listening comprehension of kindergartners improved when they participated in a directed reading activity that included the teacher asking questions about story structure elements before and after reading. Morrow (1984b) also determined that comprehension improved when kindergartners were coached in retelling the story around story grammar elements. This suggests that guiding retellings and questioning around story structure elements is likely to improve the listening comprehension of emergent readers and listeners. Low achievers may need more explicit instruction. Techniques like the five-finger retelling might provide a concrete means for fostering the inclusion of story structure elements with young children. In the five-finger retelling each finger is used as a prompt to tell about a particular story element (characters, setting, problem, plot, resolution). This can be taught with a poster as a reminder.

Baumann and Bergeron (1993) found that story map instruction influenced the ability of first graders to successfully identify the most important story elements and their ability to respond to story element questions at statistically significant levels. Although all retelling scores were generally low, the story mapping groups were able to provide retellings that were somewhat more complete and well-formed than the children who had not received story map instruction.

Thus, the evidence about the effectiveness of using story maps in primary grades is positive but limited. (No studies involving students below third grade were included in the 2000 report of the National Reading Panel.) Even though these methods are included in basal readers and commonly used in classrooms in a guided or group format, little is known about the capabilities of young children to formulate full retellings and independent completion of story maps or specific teaching strategies that are likely to foster these abilities.

Teacher-generated questions

Question answering and question-answering instruction can lead to an improvement in memory for what was read, improvement in finding information in text, and deeper processing of text (McKeown & Beck, 2003; Menke & Pressley, 1994; National Institute of Child Health and Human Development, 2000; Pressley & Forrest-Pressley, 1985; Taylor, Pearson, Walpole, & Clark, 1999). Asking a variety of questions, lower level and higher level, is important in prompting thinking at all levels of reading development (Pressley & Forrest-Pressley; Taylor et al., 1999). Raphael’s (1984) instructional intervention, Question-Answer Relationships (QAR), can support students in thinking about questions generated by teachers or others. QAR teaches students to consider and use the information in text and their personal knowledge when responding to questions surrounding a text they have read. Four question types described by Raphael incorporate these information sources (1986).

- Right There answers are found in a single sentence in the text.
- Putting It Together or Think and Search answers must be found across sections of text.
- Author and You answers require the reader to infer the meaning from the text because the answer to the question is not stated explicitly.
- On My Own answers rely on the reader’s experience and knowledge.
A series of studies determined that students in grades 2 through 8 could benefit from instruction in QAR (Ezell, Hunsicker, Quinque, & Randolph, 1996; Ezell, Kohler, Jarzynka, & Strain, 1992, Raphael, 1984). These studies determined that students at all ability levels could benefit from instruction in QAR. Average and below-average readers reap the greatest benefits when required to answer Right There, Think and Search, and Author and Me questions. QAR instruction was of little help with On My Own questions that required more background knowledge about a topic. The opposite effect was true for high-ability students for whom QAR acted as a tool for making important connections between text and their more extensive knowledge base. They made the greatest gains in correctly answering On My Own questions. Younger students seem to need more time and practice in becoming familiar with QAR (Raphael, 1984). Effects of the technique are maintained over time and are effective with both narrative and expository text (Ezell et al., 1996).

The questions that teachers ask and instruction in QAR or other teacher-led questioning can act as a springboard and a model for critical thinking and complex student-generated questions. Teacher-led questioning can be a powerful vehicle in moving text interactions toward higher levels of thinking and critical literacy.

**Reciprocal Teaching**

Reciprocal Teaching (Palincsar & Brown, 1984) is an instructional activity that takes place during reading with the purpose of gaining meaning from text and self-monitoring. The teacher and students engage in a discussion about a segment of text structured by four strategies: summarizing, questioning, clarifying, and predicting (Palincsar, 1991; Palincsar & Brown, 1984; Palincsar, David, & Brown, 1992). Initially the teacher models each of these strategies individually for the students. After the strategies have been modeled, the students take turns leading the discussion about each segment of text. The student leader facilitates a dialogue that focuses on the four strategies. Typically, the students read a segment of text. Then a student discussion leader asks a question about the important information in the text, and the other students answer the question and are encouraged to suggest others. The student leader leads the group in clarifying any impediments to comprehension. Then the leader summarizes the text and predicts what is likely to come next. The process continues for each section of text, followed by discussion led by a different student. Reciprocal Teaching has been used effectively with all grade levels, with good and poor readers, and in small-group and whole-group contexts (Rosenshine & Meister, 1994).

Palincsar (1988, 1991) found ambiguous results for Reciprocal Teaching with first graders. In the earlier study, she found that Reciprocal Teaching used with teacher read-alouds did not improve comprehension. However, she found that many of the teachers did not “buy into” the program and were not carrying it out as suggested. In a second study, with teachers committed to Reciprocal Teaching, she found that it did significantly improve comprehension. She concluded that Reciprocal Teaching was effective in first grade as long as the teachers were committed to the effort needed to implement the program.

Novice readers are likely to require developmental accommodations, as described by Sharon Craig, a first-grade teacher (Coley, DePinto, Craig, & Gardner, 1993; Marks et al., 1993). She spent three months teaching her students the individual strategies before introducing the dialogue procedure. The children engaged in the dialogue after reading several pages of text, usually a narrative. The teacher assigned a role to each group member. The children prepared their questions, summary, or prediction with a partner and the teacher before joining the discussion group. They jotted their ideas on a card to prepare for the discussion. First graders were able to successfully engage in Reciprocal Teaching with Craig’s modifications. Craig evaluated the children’s participation as successful on the basis of informal observation, but no formal qualitative or quantitative evidence is presented (Coley et al., 1993; Marks et al., 1993).

**Substantiated by research but less widely practiced**

In this section, I review comprehension strategy instruction that has been conducted and proven effective in improving comprehension in the
primary grades. Due to a number of reasons, these practices do not show up as regularly in classrooms or professional development as the procedures in the previous section. Primary teachers can use the comprehension strategy instructional techniques described in this section with confidence to expand their instructional repertoire.

Targeted discussion of background knowledge

Currently the evidence indicates that young children rely heavily on background knowledge in their interactions with text. Helping young readers activate relevant background information is an important support, but as teachers we must be sensitive to dialogue that indicates that a child may be relying on inaccurate or irrelevant knowledge. We want instruction that will help children learn to use prior knowledge effectively to make specific connections to text, and teaching strategies that will help them navigate multiple genres of text about which they may have limited background knowledge.

Beck and McKeown's (2001; McKeown & Beck, 2003) work with interactive read-alouds in kindergarten and first grade actually limits discussion of background knowledge to fit tightly around the topic of the text. In studies leading to development of Text Talk, the read-aloud procedure, they found that extensive discussions of the students' prior knowledge often led the youngsters far from the text and what was recalled was based on shared recollections rather than the text. The lesson components of Text Talk, targeted prereading discussion and open-ended questioning during the read-aloud, increase the students' reliance on the text in both understanding and recalling the text (McKeown & Beck). Text Talk also emphasizes the development of meaning vocabulary.

Directed Reading-Thinking Activity

The strategy of prediction is directly related to the activation of prior knowledge and familiarity with narrative or nonnarrative structures. A prediction activity may take a variety of instructional forms. Typically, in a classroom, the teacher engages the children in a dialogue that promotes the generation of a prediction or series of predictions. Later the children verify the predictions from the text reading. Instruction might take the form of a Directed Reading-Thinking Activity (DR-TA) or Directed Listening-Thinking Activity (DL-TA). In a DR-TA lesson the teacher and students make a prediction, justify the prediction, read a section of text, verify and discuss the text, and make a new prediction, then continue the procedure throughout the text (Stauffer, 1969). Studies have confirmed the effectiveness of the DR-TA with novice readers (Baumann & Bergeron, 1993; Baumann, Seifert-Kessell, & Jones, 1992; Reutzel & Hollingsworth, 1991; Stahl, 2003).

Despite the age of DR-TA, the procedure has several components that recent studies have associated with higher levels of achievement (Gaskins, Anderson, Pressley, Cunnicelli, & Satlow, 1993; McKeown & Beck, 2003; National Institute of Child Health and Human Development, 2000; Taylor, Pressley, & Pearson, 2002). DR-TA procedures tend to demand high levels of thinking by requiring justification and verification of predictions (National Institute of Child Health and Human Development; Taylor et al.). Both the students and the teacher initiate the conversations (Gaskins et al.; Taylor et al.). Tangential information rarely enters the conversations, because the conversations occur immediately before or after reading a section of text (McKeown & Beck). The immediate interaction around the text promotes consistent engagement, clarifies confusions, and provides a vehicle for creating an accurate representation of text as well as assimilation with prior knowledge (Gaskins et al.).

Literature webbing

Literature webbing is a prediction technique that has been demonstrated to be effective with first graders using predictable, narrative texts. The teacher writes the events of the book on cards (or uses pictures) and mixes them up. The children read all of the cards and predict the order of events by placing the cards in clockwise order around the web. The teacher reads the book to the children. Afterward, the teacher and children return to the web to confirm or correct their predictions based on the reading. The children have an opportunity to read their own copy of the book with the teacher. Later, additional information is added to the web through discussion about (a) text-to-text
connections, (b) responses to the book, and (c) extensions to other reading-writing activities.

Reutzel and Fawson (1991) found that first-grade readers using the webbing procedure read the text with higher percentages of accuracy and were also more successful in answering specific questions about the text than a control group. Reutzel and Hollingsworth (1991) determined that literacy webbing also had a positive influence on the use of story structure elements in the formulation of predictions and the completeness of a story retelling.

Visual imagery

Visual imagery instruction seems to help young readers and older, poor comprehenders store and retrieve information they have read. Older, competent readers may not benefit from this strategy due to their independent use of more complex organizational and retrieval systems.

Typically, instruction in visualization uses some standard procedures to evoke images (Center, Freeman, Robertson, & Outhred, 1999; Gambrell & Jawitz, 1993; Gambrell & Koskinen, 2002). Center et al. incorporated visualization training as part of a listening lesson for second-year students whose scores on a listening comprehension measure were in the bottom third of their school group. On Day 1 of the training, students discussed and practiced “painting a picture in their minds” of several common objects that were on display. Then the teacher used a think-aloud to demonstrate how to make a mental picture of a sentence. Teacher and student think-alouds surrounding target sentences opened the next six lessons. The techniques were also generalized to the listening comprehension passage for the day. The last five lessons simply consisted of reminders to use visualization techniques and the reasons for doing so during the narrative listening lesson. Extensive discussion always surrounded the students’ images and their explicit links to the text. The children receiving visualization training outperformed the control group on measures of listening comprehension, reading comprehension, and a retelling measure. This demonstrated that children performing below the expected level benefit from visualization training. The simplicity of the training procedures and reminders enable visualization training to be incorporated seamlessly with an existing classroom program by teachers, while yielding student improvement in reading comprehension.

Video

The use of video has recently been explored as a means of bootstrapping literacy skills. Children with limited literacy backgrounds and young children may have difficulty sustaining attention on the type of lengthier, complex story that is necessary for comprehension instruction. The richness of video as a medium and its familiarity to children has made it an effective tool in the development of a visual representation, especially for young at-risk readers with limited literacy backgrounds. Goldman, Varma, Sharp, and Cognition and Technology Group at Vanderbilt (1999) found that the use of video to tell a lengthy, complex story to kindergartners was more advantageous for at-risk students than those not at risk. In a retelling, those at-risk students who were introduced to the story via video retold nearly twice as many statements as the children who only heard the story and viewed illustrations. In a question-answer measure kindergartners demonstrated greater memory for the presented story information, as well as greater understanding of causal relationships. The use of video enables students to engage with higher level thinking while developing competency with print-based skills. Video may be a powerful tool that has the potential to act as a bridge between the world of experience and the world of formal school learning and symbolic language systems. The challenge in a classroom is to find quality videos or computer technology that can be used as a link to texts and to provide instruction that enables young children to make bridges to text comprehension.

Transactional Strategy Instruction

Transactional Strategy Instruction (TSI) is a term used to describe a body of comprehension strategy instruction practices (e.g., Schuler, 1993). Instruction is transactional in three senses: (1) readers link the text to prior knowledge; (2) meaning construction reflects the group and differs from personal interpretations; and (3) the dynamics of the group determine the responses of all members, including the teacher. TSI is long term, and the strategies act as the vehicle for text
discussions. The programs also use a gradual release of responsibility instructional model (Pearson & Gallagher, 1983) in order to foster independent, self-regulating readers.

Evidence collected on TSI indicates that strategy repertoire programs can be successful with novice readers. The Students Achieving Independent Learning (SAIL) program used TSI with struggling readers in second grade. Listening and reading comprehension strategies were taught explicitly during reading and content area instructional periods. Ten strategies were included in the repertoire: (1) setting purposes, (2) activating and using prior knowledge, (3) getting the gist, (4) using text structure, (5) making and verifying predictions, (6) generating questions, (7) creating mental images and graphic representations, (8) summarizing, (9) using think-alouds, and (10) using problem-solving (fix-up) strategies (Brown & Coy-Ogan, 1993; Schuder, 1993).

Brown, Pressley, Van Meter, and Schuder (1995) followed the progress of 60 students who started second grade reading below grade level. The students were in five paired SAIL or traditional classrooms. At the end of the year, the students in the SAIL classrooms showed more growth than the students in the traditional classrooms on a wide variety of measures. During a strategy interview, SAIL students reported using more comprehension and word-level strategies. First-grade standardized word skill and comprehension tests were given to both groups. Statistically significant differences on word skill tests, comprehension tests, and yearly gains favored the SAIL group.

There do seem to be some issues surrounding comprehension repertoire programs that deserve attention and additional research. The manipulation of multiple strategies is cognitively demanding of students. The cost of these cognitive demands may be too high for younger, disfluent readers (Sinatra, Brown, & Reynolds, 2002). The complexity of the process also makes it especially difficult to negotiate in a classroom (Duffy, 1993; El-Dinary & Schuder, 1993; Gaskins et al., 1993). Some evidence indicates that experienced teachers may be better able to balance process-content instruction than novice teachers (Gaskins et al.). Teachers report the evolution of their programs occurring over the course of two to three years, with continuous modifications for improvement (Brown & Coy-Ogan, 1993; Coley et al., 1993; Duffy, 1993; Marks et al., 1993).

**Not substantiated by research but widely practiced**

While it is important to incorporate strategy instruction that has been proven effective with young children, it is equally important to use caution and deliberation when incorporating comprehension instructional procedures with little or no research base. Isolated identification of main ideas, K-W-L, and picture walks are popular instructional techniques. These teaching techniques may be effective in addressing particular teaching goals. However, at this time there is no research base substantiating their effectiveness for improving the reading comprehension of novice readers.

A great deal of the research seems to agree that even preschool-age children recall main ideas and ignore trivia when retelling stories they have heard (Sulzby, 1985) or stories they have seen on video (van den Broek, 2001). However, investigations of the activities in basal reader series revealed that students were most frequently assigned low-level tasks such as identifying a main idea with a simple mark, perhaps underlining or selecting one of multiple choices (Baumann, 1984; Miller & Blumenfeld, 1993). Because of the limitations of main idea activities in basal readers, teachers are advised to design their own opportunities for observing and discussing the selection or generation of the important ideas in a variety of texts for a variety of purposes. These activities should be constructed in response to the children’s needs and might range from the simple selection of a stated main idea and the supporting details in a picture or paragraph (Baumann, 1984) to discussions surrounding more complex views of the main idea, such as note-taking or studying for a test. Social interactions around specific texts could center on the lure of seductive details, variations of importance based on a variety of reading purposes, background knowledge, or interest.

The K-W-L strategy was originally developed by Ogle (1986) to enable teachers to access students’ prior knowledge and to help them develop their own purposes for reading expository text. The procedure is popular with teachers and students.
(Stahl, 2003). However, there is a surprising paucity of research investigating K-W-L procedures. The studies involving students in the primary grades were not able to substantiate the effectiveness of K-W-L on measures of comprehension, metacognition, or content acquisition (McLain, 1990; Stahl). The absence of evidence supporting the use of K-W-L does not mean it is ineffective, only that it has not been proved to be effective. In light of its popularity with teachers and students, it seems important to have research that investigates this practice both as it was originally conceived and as executed in classrooms.

The guided reading book introduction or picture walk is based on the work of Marie Clay and her descriptions of an effective book introduction for novice readers (Clay, 1991) and has been extended by Fountas and Pinnell (1996). Picture walks are widely used in today’s classrooms to activate prior knowledge and generate predictions. In Taylor’s (2002) extensive work with effective practice and school reform, she found that low-performance classes more commonly used picture walks than high-performance classes. A recent study found that picture walks were effective in promoting fluency, but not comprehension (Stahl, 2003). More research needs to be done on the use of this common procedure and its variations in implementation.

### Promising strategy instruction

Many comprehension strategies have been studied with older readers, but not with novices. The value of student-generated questions and summarization in fostering engagement and aiding recall has a research base, but the research has not actually been conducted in kindergarten through second grade. However, if we want to explicitly teach comprehension from the very beginning, these instructional practices may be useful with younger readers, especially with the developmental adaptations described here.

The review of 26 interventions by Rosenshine, Meister, and Chapman (1996) revealed that the most effective procedures for teaching students to generate their own questions seemed to be those that were most concrete and easy to use. Strategies that taught students the use of signal words (who, what, where, when, why, and how) or generic question stems (How are _____ and _____ alike? What is the main idea of _____? How is _____ related to _____? Why is it important that _____?) were most successful with the youngest students. Using a story grammar model to develop questions was also fairly effective. The least effective prompts were question types (QAR) and prompts surrounding the main idea. These studies were conducted with older students. It makes sense that the least complex procedures would be most effective with novice readers. However, empirical evidence is needed in this area.

Currently, there do not seem to be any studies that focus on teaching summarization skills to novice readers. The current emphasis on informational text and the writing process in the primary grades make this an area that beckons for further investigation. A strategy that has been used successfully with older students and might be useful with younger students is the Generating Interactions Between Schemata and Text (GIST) procedure (Cunningham, 1982). In GIST, students begin creating summaries for sentences using 15 spaces. The teacher gradually increases the amount of text being summarized in the 15 spaces. GIST is conducted as a whole-class procedure first, then in small groups, and, finally, individually. This concrete, visual procedure may hold potential as a summarization strategy for younger children. Brown, Day, and Jones (1983) found that the use of limited spaces forced students to summarize and display sensitivity to levels of importance that had not been displayed using other formats.

### What does this mean for teachers?

The research demonstrates that instruction in phonological awareness and decoding are not enough if we want students to be able to read and make sense of multiple genres for multiple purposes. Teachers of the youngest readers can enhance comprehension instruction during teacher read-alouds using techniques like Text Talk. Teaching students to activate relevant background knowledge, to filter irrelevant or inaccurate background knowledge, and then use the text to make meaningful connections and to expand their existing

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"Proof, practice, and promise: Comprehension strategy instruction in the primary grades"
knowledge base can be important steps leading to independent reading comprehension.

Videos can be used with children to bolster limited background knowledge. They can also be used to introduce complex themes or lengthy texts in comprehension strategy programs, because leveled readers and other texts designed for early readers may lack the grist for high-level thinking. The video might be followed by a combination of student retelling, teacher questioning, and guided discussion.

Teachers of more adept readers in late first grade, second grade, and third grade can feel confident that beginning to work toward a multiple-strategy approach, but starting with a focus on a few well-taught strategies, will benefit their students. The strategies can be taught using the texts that are already in place in the classroom literacy program. However, comprehension strategies should be matched to their usefulness in making meaning and remembering the text. Literature webbing and story maps should be used with folk tales or other stories that adhere closely to the components of a narrative text structure. The instruction of ideational prominence (main idea) and levels of importance should be matched with the reading of informational texts, such as a unit on nature, that might be found in a basal reader or constructed as a theme unit by the teacher. The strategies can be connected to student reading, teacher read-alouds, and student writing.

Teachers can feel confident that the use of the Directed Reading-Thinking Activity to generate predictions, justify those predictions, and verify the predictions after reading a section of text will result in a close reading of text. Stauffer (1969) designed the procedure for use with narrative and informational text. The teacher should push the children to higher levels of thinking using thought-provoking prompts and questions. Recent studies have found that the most effective reading teachers encourage high-level responses through questioning and verbal scaffolding, whether as part of a DR-TA or another form of text interaction (Taylor et al., 2002). Teachers should present prompts that force the students to address issues of theme; character development; character motive; and connections to self, world, and other texts. Young students benefit from being taught to consider the answer sources needed to respond to questions generated by teachers or others. Question-Answer Relationships enable students to consider and use both the information in text and their personal knowledge when responding to questions surrounding a text they have read (Raphael, 1984, 1986).

After reading, some form of retelling should be required. For the youngest children a five-finger retelling with adult coaching works well. Older children can do this with a peer, especially if this is a school goal that is developed in kindergarten and early first grade. However, by the end of first grade children should have regular opportunities to write their synopses and personal responses to text. A story map, a frame, or some other appropriately structured graphic organizer can help scaffold this writing. However, research has not yet resolved many issues around the young child's ability to do this independently. So caution, explicit instruction, close monitoring, and a gradual release of responsibility are required during this transition from an oral retelling to any form of written synopsis. I used the GIST procedure successfully to help second graders summarize informational text and to synthesize a story plot on a story map. However, this instructional technique has not been empirically tested with young children.

Because effective readers use a variety of strategies to deal with troublesome text, teachers may want to move toward a repertoire approach as they become more comfortable with strategy instruction and its adaptation to the existing reading curriculum. Reciprocal Teaching and Transactional Strategy Instruction both have a strong research base in the primary grades. However, implementation can be challenging and requires teacher commitment that is more likely to occur after teachers have laid the groundwork for the instruction of the preliminary comprehension strategies.

Caution also is warranted in the use of K-W-L and picture walks if the instructional objective is comprehension. When they use these techniques teachers must be deliberate in their intentions and in the type and amount of verbal scaffolding provided. They must also be attentive to student inaccuracies and misconceptions. The after-reading comprehension activities become extremely important in determining whether the student is able to accurately represent the message or information in the text.
Closing comments

The comprehension strategy research conducted with novice readers indicates that there are many instructional implications that can be incorporated in primary reading programs. The ideas stated in this article enable teachers, literacy specialists, and other decision makers to make a good start. However, there are still many unknown factors. The demands of reading acquisition and lack of automaticity are likely to make the developmental needs of the novice reader different than those of the older readers that have been studied more extensively. Also, the adaptation of strategy instruction into an already full primary literacy curriculum poses an additional challenge. The motivation provided by the Reading First grants may improve both reading instruction and what we know about reading by forcing us to be deliberate about comprehension instruction from the very beginning.

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"I am delighted to finally find something that integrates all that is necessary to teach reading, writing, and spelling!"

"Our data show that this curriculum has produced an average student gain of two years in one year's time."

"We attribute the decline in our office referrals—682 to 88 in three years' time—to students now being able to read and engage in their schoolwork."

"Our students' SAT-9 scores for total reading doubled from 1999 to 2000."

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"My students have made significant growth in fluency, accuracy, and comprehension with this curriculum."

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