Thinking aloud: Struggling readers often require more than a model

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Although thinking aloud to model the active comprehension process has been purported to increase comprehension for all students, this instructional procedure is far from being standard practice in classrooms (Pressley, 2002). Still, teachers ask children questions that have predetermined answers (Cazden, 1988; Durkin, 1978/1979; Pressley, Wharton-McDonald, Hampston, & Echevarria, 1998). Although more teachers ask questions using comprehension processes (i.e., summarizing the story, filling out a story map, using prior knowledge), seldom are the teachers modeling the thinking process *as* students read. Research corroborates that many teachers have difficulty modeling this complex process (Duffy & Roehler, 1989; El-Dinary, Pressley, & Schuder, 1992); therefore, thinking aloud has not become common practice. Because comprehension is a complex process, teachers are mystified when demonstrating how to construct meaning using content knowledge and comprehension strategies. Comprehension is not an overt process but rather an inner self-dialogue about meaning. Thinking aloud makes this internal process observable. Yet, some students have difficulty figuring it out (Block & Israel, 2004); they passively read not expecting the text to make sense.

Even when teachers ask some struggling readers a direct question, they do not respond. Without thinking the students read the words and don't construct meaning. Or, if these struggling readers must respond to a question about text, they say, "I don't know." These readers have learned that if they refuse to respond, someone else will answer. Other students do revise their understanding, but less frequently than their more active peers. Struggling readers often rely on their initial predictions and ignore contradictory information. For example, a third-grade student was reading a selection, "Elmo Learns to Fly" (Margaret, 1975). In the middle section, the text reads "He leaped atop a sun bleached log breathing the fresh air until his great chest was puffed out tight as a drum" (pp. 58–59). Making a prediction, the student said, "Oh, I think he inhales so he could be like a balloon. So he could fly instead of flying with wings, he could inhale like a balloon." From that segment on, the student held on to the balloon prediction, even though the text refers to Elmo as an animal of the pond and marsh. Like this student, many struggling readers are passive when reading.

How think-aloud using self-statements developed

Instructional techniques develop over time with lots of influence from teachers, students, theories, and research. They often start with a problem situation like passive reading. In this type of situation, I decided to develop a way to demonstrate the active thinking process of the reader's mind. Initially, I drew my ideas from psycholinguistic theory (K. Goodman, 1975; Y. Goodman & Burke, 1980), which focused on predicting the author's meaning, and interactive theory (Pearson & Johnson, 1978; Rumelhart, 1976), which focused on shifting between text and prior knowledge. I also studied the work of Vygotsky (1978), who proposed that inner

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dialogue, which coordinates thinking, is developed through social interaction when learning is mediated by more informed others who think aloud, leading learners to verbalize their cognitive processes. When students interact with others they eventually cultivate inner self-directed speech. Building on this theory, Meichenbaum and Asarnow (1979) began teaching children to use self-regulated speech by having adults model self-verbalized regulation of comprehension strategies.

I began by modeling prediction making because it is easy (Pressley, 2002), and readers can be right or wrong as they construct meaning. As one reader in my classroom said, "You can get off track or stay on track, it doesn't matter." My initial attempts to use the theories I had studied were meager at best. As I modeled the prediction process with my fourth-grade students, I found, like other teachers, that thinking aloud was difficult. Teachers predict outcomes by switching between sources automatically and the process is difficult to model. To help students, I demonstrated using my personal knowledge by explicitly pointing to my head and using the text by clearly pointing to the book as I talked.

Models can help

After my initial attempts at demonstrating self-talk, I realized that the students needed a structure that they could consistently follow. Therefore, I adapted the self-questions of active thinking together with a format designed for self-instruction (Meichenbaum, 1977). The teacher thinks aloud using the following self-questions, and the students follow the model.

> "What must I do? I must predict what might happen. I predict...."
>
> "What's my plan? I must use the text and what I know."
>
> "Does that make sense? Oops! It doesn't. I can change my prediction."
>
> "Did it fit? Yes, I knew it! That sure fits. I am on the right track."

A colleague, who taught struggling seventh-grade readers, implemented the procedure successfully. She found that students in the self-directed questioning group performed better than the read-only group (Mohr, 1984). Using a basal reader, several colleagues and I had third-grade students write down their predictions while they used the questions. We also found that the prediction group performed better than the group that answered teacher-posed questions (Walker, Mohr, Wilson, & Hardgrove, 1986).

Although these procedures worked for many struggling readers, something was still missing. Some struggling readers still remained passive and did not engage in self-directed questioning. So, I began developing self-evaluation sheets to explain the active process after reading stories. The explanation before reading was not enough. These adaptations were influenced by Bandura's (1986) concept of self-efficacy, which refers to people's beliefs about their capabilities to carry out actions required to reach a confident level of achievement (Schunk, 2003). Many struggling readers are not confident and believe they cannot comprehend; they make negative statements about themselves that lower their self-efficacy. Because of repeated failures, struggling readers do not recognize the effective strategies they do use. Instead of learning alternative strategies from their failure, they often give up. Thus, struggling readers do not attribute their comprehension to their own strategic thinking. These readers realize that they could expend effort by reading the words, but they still would not grasp the meaning; thus, they decrease their effort, which in turn reduces feelings of success and diminishes their engagement.

Teachers can make thinking aloud more concrete by writing down self-statements and using self-evaluation sheets (see Figure 1) that discuss strategy use. These techniques can help passive students become more cognizant of a variety of strategies (Walker, 2003). The self-evaluation sheets become tools to open discussion about personal strategy use. At the end of this discussion, the teacher and the students talk about what strategies they might use the next time; in other words, they set goals. In this way, struggling readers explain their strategy use and understanding and set personal goals for improving their comprehension. Thinking aloud and strategy instruction have been used effectively for over two decades, and studies have demonstrated that thinking aloud improves comprehension (Brown, Pressley, Van Meter, & Schuder, 1996; Duffy et al., 1987; Mason, 2004; Meichenbaum & Asarnow, 1979; Schunk & Rice, 1991).

FIGURE 1
Self-evaluation sheet

When I read,	Not at all	A few times	Sometimes	Most times
I made predictions.				
I used information from the text.				
I used information that I already knew.				
I connected information to see how it fit.				
I said "Oops" and revised a prediction when it didn't fit.				
I said "I knew it" when I was on the right track.				

Today my reading was _____ because _____.

FIGURE 2
Self-questioning strategy

Modeling predictions

Self-question: "How do I begin?"

Response: "I need to predict what the author is going to say. A good strategy is to look at the title. From the title I predict that...." The teacher models using the title of the story to think aloud about how he or she made a prediction and at the same time writes "I predict" on the middle of the chalkboard.

Modeling sources of information

Self-question 1: "How do I check predictions?"

Response: "To check my prediction, I can think about what I already know or I can look for hints from the author." The teacher writes "I already know that" and "Hints from the author" on the chalkboard.

Self-question 2: "I wonder how it fits together?"

Response: "It fits because I know..., and the author says..., which can connect to support my prediction." The teacher demonstrates how he or she connects the two sources together to support a prediction.

Modeling monitoring

This self-question has three distinctive responses. Usually the teacher uses three different text segments to illustrate them.

Self-question: "Does my prediction make sense?"

Response 1: "Oops, that doesn't make sense. I need to check my thinking. So far, I'm on the right track with...but confused about...." As the teacher models this strategy, he or she writes "Oops" on the right side of the chalkboard. The teacher models self-talk related to making a mistake by saying "It's OK to make a mistake. I can change my prediction as I get more information. Now, I predict...."

Response 2: "Hmmm. Sometimes I am just not sure. Maybe it's.... Or maybe it's...." The teacher models being tentative when predicting by writing "Hmmm" on the middle of the chalkboard.

Response 3: "I knew it. That sure fits. So far I'm on the right track." The teacher models confirming the prediction as he or she writes "I knew it" on the right side of the chalkboard.

Current think-aloud strategies

In most classrooms the teacher selects a short story that is ambiguous, has a plot twist, and is easy to decode so that students focus on comprehension strategies. The teacher divides the story into segments from which multiple predictions could be made. In this way, students can revise and reconfirm their prediction, which in turn involves them in self-talk about constructing meaning.

Figure 2 is a description of the strategy I now use. During this instructional procedure, I make the comprehension process more tangible by writing the key self-statements on a chalkboard. I engage readers in self-assessment using self-evaluation sheets along with analytical conversations about strategy use and meaning.

After students finish reading a story, they complete a self-evaluation sheet and discuss their strategy

use. The self-evaluation sheet focuses on evaluation of the prediction process along with conversations about strategy use.

For several summers in a reading center setting, I worked with middle school students who had a passive stance toward comprehension. Although they began to engage in the comprehension process, they needed more active models (more informed others) and someone to discuss their self-evaluation sheets. I added tutors as learners whose role it was to record the students' active process on an evaluation sheet as they participated in understanding the story. After the story was read, the tutors met with a single student and discussed the active comprehension process. One young student reported to me later, "Did you see how excited [the teacher] was when her prediction was on the right track?" This was working; the students were observing the strategies of effective readers, one of which is self-reward. Because of years of failure, passive readers have difficulty getting excited or rewarding themselves for the positive strategies they use (Walker, 1996). Another teacher who had not been able to improve the comprehension scores of her fifth-grade struggling readers decided to use the procedure. She had the volunteer tutors think-aloud as she read stories aloud segment by segment (Shipley, 1990). Afterward, each volunteer discussed the active reading strategies with one student and completed a self-evaluation sheet. The students improved their comprehension as measured by a standardized test.

Yet, another teacher who was working with high school students with emotional problems used the technique with informational texts. Because the teacher taught many comprehension strategies, she added a last section to the self-evaluation sheet that asked which strategy the students used to construct meaning in the current assignment (L. Wilson, personal communication, September 23, 1993). These students were able to discuss not only the content but also the strategy they had used. I continue to use this technique in my teaching today, and individual case studies consistently demonstrate improved comprehension among students.

More than a model

The think-aloud technique used with the self-evaluation sheet (including strategy conversations) promotes the comprehension process as a salient feature of learning. These techniques improved strategy use, promoted self-efficacy, and increased engagement as well as comprehension. Struggling readers in many classrooms and clinics need more than a model; they require someone to think aloud, to model self-statements as they read, to jointly fill out self-evaluation sheets, and to think aloud about strategy use. Through this procedure, struggling readers begin to internalize the comprehension process.

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