

Using the think-aloud for reading instruction

Thinking aloud leads students to improved discussions, better understandings, and more enjoyment of literature.

What is going on in students' minds as they read? How do they make sense of a story? Are they bogged down in decoding, thus missing the plot and who's doing what to whom? How do they figure out what a character might do next or how the central conflict might be resolved? At the end of a chapter, do they predict something that is plausible, or are they "way off base"? As teachers of reading and language arts, we need a way to assess our students' strengths and weaknesses in reading and a strategy for teaching them to become better readers and enjoy what they read. Ideally, assessment and instruction go hand in hand so that our instruction appropriately addresses students' needs.

The think-aloud is a technique in which students verbalize their thoughts as they read and thus bring into the open the strategies they are using to understand a text (Baumann, Jones, & Seifert-Kessell, 1993; Davey, 1983; Wade, 1990). Readers' thoughts might include commenting on or questioning the text, bringing their prior knowledge to bear, or making inferences or predictions. These comments reveal readers' weaknesses as well as their strengths as comprehenders and allow the teacher to assess their needs in order to plan more effective instruction. This article describes the use of the think-aloud in this two-pronged way: as both an assessment and instructional tool in a heterogeneously grouped seventh-grade reading/language arts classroom. First, I describe the think-aloud strategy and explain how I introduced it to my learners. Then I present examples of students' think-aloud comments to show how they applied the strategy in

reading *The Pearl* by John Steinbeck. Finally, I discuss ways in which students' comments helped me to plan and deliver reading instruction that was integrated with the teaching of literature.

Reading comprehension depends upon being able to successfully and appropriately use a number of strategies: accessing prior knowledge, creating mental images of the information, making predictions and inferences, monitoring understanding, and using "fix-up" strategies when necessary (Davey, 1983). Wade (1990) described five categories of "comprehenders" and found that while good readers work interactively with the text and manage their reading strategies adeptly, poorer readers do not. Davey and Wade each developed think-aloud instruction to target the strategies weaker comprehenders need. Baumann et al. (1993) added the following strategies in their instructional model: verifying, retelling, rereading, and reading on to clarify meaning. If students know which strategies to use and when to use them, they can monitor and control their own comprehension processing. (Baumann et al., 1993; Vacca & Vacca, 1993).

This metacognitive awareness (being able to think about one's own thinking) is a crucial component of learning, because it enables learners to assess their level of comprehension and adjust their strategies for greater success (Baker & Brown, 1984). The think-aloud puts the responsibility on learners to become aware of how they make meaning and to be aware of when their strategies may not be working. Several studies have shown that students who verbalize their reading strategies and thoughts while reading score significantly higher on comprehension

tests (Anderson & Roit, 1993; Bereiter & Bird, 1985; Loxterman, Beck, & McKeown, 1994; Schunk & Rice, 1985; Silven & Vaurus, 1992; Ward & Traweck, 1993).

The strategy

To use the think-aloud for reading instruction, I provided both a model and varied opportunities for students to practice, first as a class, then in pairs, and finally individually. I directed students to write down their questions and comments as they read. Written comments provided me and the students with valuable information on their comprehension abilities in areas such as basic knowledge, vocabulary, relating new to old information, literal comprehension, inferences and predictions, and understanding literary devices. This information helped students to develop metacognitive awareness and provided me with the basis for classroom instruction, either to help students correct misunderstandings or to build upon their strengths to explore important aspects of the literature. Instructional strategies based upon students' comments will be discussed after the initial presentation of the strategy in my class is described.

To model the think-aloud strategy, I began by telling students that a reader should be thinking all the time while reading. I listed on the chalkboard some of the things that readers may consider: (a) what they notice—information they think might be important, (b) facts and possible facts about characters or the story—things they are figuring out, (c) predictions—what might happen next, (d) questions they have—about words or phrases, or about what characters do or say, and (e) personal reactions—how they feel about what the character did or what happened in the story.

Then I named the strategy. I told students the think-aloud would help them to recognize how they worked with the text to make meaning in their own minds. Next, I demonstrated by “thinking aloud” using the short story “A Ribbon for Baldy” by Jesse Stuart (1979). My think-aloud comments are in brackets:

The day Professor Herbert [Professor—that must mean this is a college] started talking about a project for each member of our general science class, I was more excited than I had ever been. [“I”—this is first person narration, the main character in the story is telling it himself. Also, he must like science. Well, it might not be a he, I don't know yet.] I wanted to have an

outstanding project. I wanted it to be greater, to be more unusual than those of my classmates. [He has high hopes! Or, he's ambitious.] I wanted to do something worthwhile, and something to make them respect me. [I wonder why he needs their respect.]

After this demonstration, I asked the students what kinds of comments I had made, and we talked about how those comments could help me understand the story. I emphasized that my thoughts at this point might be incorrect, and I might have to revise them later on. For instance, in this story the professor actually teaches at a high school, not a college. When people read, they assume certain things based on their experiences and prior knowledge. But readers must also be willing to adjust their understanding as they read further and discover more.

We tackled the next paragraph as a class. I read aloud one sentence at a time, asking students for comments in any of the categories listed above. One sentence might prompt several students to give many different think-aloud comments. I wrote all the comments on the chalkboard to demonstrate that many kinds of responses are appropriate. Then I directed student partners to “think aloud” together, taking turns on the next two paragraphs. Using students as think-aloud models for one another produces more authentic thinking (Fawcett, 1993). I directed students to write down their think-aloud comments and compare them at the end. This helped to avoid undue noise in the room and to preserve students' thoughts. Afterwards, we all shared our comments. Students were surprised to find out how similar some of their comments were to those of other students. Having the same thoughts as someone else discomfited certain students, but I explained that “great minds think alike.” In the last part of this introductory exercise, students read alone and wrote down their individual think-aloud comments for the rest of the story.

The next day, students' think-aloud comments enabled us to discuss plot, character development, and theme. There was genuine excitement in the room as students took charge of the discussion, jumping in with their comments and reacting to one another's ideas about the story. Instead of the usual teacher-directed question-and-answer session, this time my students' observations and questions brought up all the points I

would have asked them. My students had really taken ownership of both the reading process and the class discussion.

Applying the think-aloud strategy to *The Pearl*

In using the think-aloud for *The Pearl* by John Steinbeck, I was particularly interested in how this strategy could help weaker readers, but I discovered the significant strengths of my students as well. Weaker students' think-aloud comments indicated vocabulary deficits, an inability to make connections between earlier and newer information, or difficulty making inferences. But many students, initially diagnosed as "weak" or "average" readers, made excellent inferential comments about characters and situations that enlivened and extended our class discussions. The think-aloud comments revealed both problems and strengths I might not have seen otherwise.

I assigned written think-aloud comments as the homework for Chapter 1 because I wanted to involve students immediately and personally in the text. As in any work of literature, the exposition is crucial to understanding how the characters and story unfold. I alternated the assignments for the rest of the novel (think-aloud comments for Chapters 3 and 5, and teacher-designed comprehension questions for Chapters 2, 4, and 6) in order to give the students a break, because many of them found the think-aloud demanding and it was their first time applying this technique to a novel. I expected that more students would do homework on the nights I assigned my comprehension questions, but the opposite was true: More students turned in homework when I asked them to write down their think-aloud comments. Clearly, my students preferred to say what they thought about the novel rather than to answer my comprehension questions.

What follows are some examples of students' think-aloud comments and questions, a discussion of what they revealed to me, and how I used these insights to inform my teaching. There are four categories of comments: those that reveal lack of basic or prior knowledge, those that indicate students misunderstood crucial information in the text, those that show students had difficulty interpreting information, and those that reveal students' strengths as readers. Having

assessed my students' abilities, I was able to plan appropriate instruction to help students improve their comprehension of the novel.

Lack of basic or prior knowledge

When they first began using the think-aloud, many students of all reading levels wrote down the obvious things that were already explicit in the text. For instance, in Chapter 1 of *The Pearl*, the baby jiggles the rope of his sleeping basket and causes the scorpion to fall onto him and sting his shoulder. One student's comments were, "The baby knocked the scorpion down but it stung him. The baby is seriously hurt and Juana is trying to save it." Other students wrote: "Kino wakes up very early. Kino is married to Juana." "They eat corn cakes." "The doctor's office is at his house." These comments may represent the students' "envisionments," their understandings/assumptions/imaginings of the entire "world of the text" up to that point in the reading (Gates, 1991) and, as such, are crucial to comprehending the situation at the start of the novel. It is important here to emphasize for the students that their comments are correct and valuable so that they see the think-aloud comments as a useful learning strategy.

Sometimes students' questions reveal their lack of basic vocabulary or background knowledge (Wade, 1990). For example, one student asked, "Doesn't a rooster crow when the moon sets?" Another student, not understanding the term *brush house*, asked, "How would they have a fireplace in their house if it [meaning the "brush"] is hung up?" He must have thought the brush was a hairbrush, and thus did not understand that the baby's sleeping basket was hung from the center pole of the house. Another student wanted to know, "What time is it? What Gulf is it?" to better understand the novel's setting. A student asked about the meaning of *parable*, which is mentioned in the Preface. Although I always define and discuss *parable* with my students when teaching this novel, their think-aloud comments spurred me to clarify several other ideas and terms. The teacher can help students to become aware of comprehension problem areas such as vocabulary by instructing them to write down word meanings they develop using context clues as well as any words about which they still have questions. Discussion of vocabulary can become part of the next day's lesson.

Misunderstanding information

Other questions raised in the think-aloud comments indicate which crucial facts or character traits a student may have misunderstood. One student asked, "Where was Coyotito when this [Kino beating Juana] happened?" When I asked the student to explain his concern, he answered that Coyotito should have been able to stop his father from beating his mother. Clearly this student did not know Coyotito was an infant! Did he skip over the description of the "hanging basket" in Chapter 1? Davey's (1983) suggestion that students be encouraged to visualize things as they read might have prevented this student's misunderstanding. Or perhaps, as with some remedial readers, this student was unable to "step back and rethink" what he thought he knew about Coyotito. He had assumed Coyotito was an older child or a young man, and, faced with an apparent discrepancy, did not recognize that his comprehension, not the text, was the problem (Gates, 1991). Another student asked, "Why is Kino beating on Juana?" He did not understand that Kino's obsession with the pearl changed him into a violent man. Instructing these students to reread to verify Coyotito's age and to look for clues to the change in Kino's personality was important in their developing an effective comprehension strategy.

Difficulties interpreting text

Think-aloud comments also reveal students' attempts at more advanced interpretation, such as the meaning of a metaphor. The best explanation I've ever heard of the metaphor of "songs" in this novel came from the student who wrote, "Kino thinks in songs." This student clearly understood not only Kino's personality, but the effectiveness of Steinbeck's use of metaphor. Many students struggled to comprehend the novel's metaphors and symbols. One student questioned, "Who is the enemy?" because Kino heard the Song of Evil when the scorpion appeared. Another student asked what "leprosy" is, referring to Kino's description of himself as "a leprosy," meaning a feared outcast from his community. Another asked, "Who or what are the 'dark ones'?" referring to Juana's description of the nighttime attackers.

Some phrasing and concepts can stump even an advanced reader, like the student who asked about the meaning of the phrase, "Kino watched with the detachment of God." Another student questioned, "What does it mean when Juana had been trying to rescue something of the old peace?" These questions not only get to the heart of character and situation in the novel, but they allow us to discuss and appreciate Steinbeck's eloquent use of language. Discussing these points provided the opportunity to use several comprehension strategies: activating our prior knowledge ("God"), understanding vocabulary ("leprosy," "detachment"), distinguishing between literal and figurative meanings ("dark," "peace"), and developing an understanding of figurative language. We discussed the relationship of "dark" to night and evil and had quite an interesting discussion about the philosophical implications of "the detachment of God." If students gloss over or misinterpret any of these metaphors or symbols, they miss a great deal of the novel's meaning and beauty. Assessing students' think-aloud comments allowed me to address gaps in comprehension to help students better understand how figurative language enhances character development and theme in the novel.

Weaker readers ask questions that can help others to learn, too. One student queried, "Was the 'late moon' a real light or a dark moon?" This question highlights the important issue of who could see Juana when she tried to throw the pearl away late one night. Kino did see her and beat her up, but the student raised the interesting question of whether others in the village could see Kino beating his wife and whether they would have tried to rescue her. Our discussion on this point led to a journal entry in which I asked students to predict what would have happened if others had seen the incident and how subsequent events might have been different. This part of the lesson allowed students to think creatively and critically about the novel, inventing alternative events and analyzing their probable repercussions for the characters. The same think-aloud comment also led to further discussion of the relationship between women and men in this community, thus deepening background knowledge and extending understanding of the characters.

Revealing readers' strengths

Many think-aloud comments revealed students' strengths as readers, and, when shared in class discussion, enabled the whole class to benefit from these insights. "Kino enjoys small things" (because of his pleasure in the early-morning sounds). "They seem to be satisfied with being poor." "Do they live near a desert because of the scorpion?" "The houses must be close together." "They're brave to go to the doctor." "The doctor seems racist and unkind" (when he refuses to treat the baby's scorpion sting because Kino is an indigenous person). These comments indicate that students are doing a good job of creating "envisionments" (Gates, 1991) of the imaginative world described in the novel. A reader who can "envision" correctly will be better able to understand a character's reactions, such as when Kino hits the doctor's gate after being refused treatment. This student commented: "Kino has a bad temper." As Kino's world becomes more centered around the pearl and he beats his wife, another student wrote: "The pearl seems to have complete control over Kino." Drawing these important scenes can help students to visualize and understand not only setting, but changes in characters' personalities and relationships.

Better readers can dig more deeply into characters' motivations and relationships because they are able to integrate relevant text information and background knowledge. One student wrote: "From what Kino says about the abuse of his race from the white man, I think you can tell that he's Native American [sic]." This comment shows how the student connected his prior knowledge of history to the novel's characters. Because of the behavior of the doctor's servant, another student wrote, "The servant is not very proud to be working for the doctor," showing that he understood the nuances of the servant's character. When Juana tried to throw the pearl away, one student commented, "Juana seems so afraid of Kino she was willing to give up the pearl to get him back." When Kino's canoe is broken, one student wrote: "Kino acts like he lost a son." Having read these think-aloud comments, I was able to focus class discussion on the important themes of oppression, the shifting balance in relationships among characters, and cultural values.

The think-aloud is an excellent way to encourage students to give personal reactions to the text. When the baby got stung, one student commented, "I feel bad for Juana. She must be scared." "The doctor really is a 'Song of Evil,'" said one student who was able to understand this character in metaphoric terms. Another said, "If they're so poor, they should have to pay nothing for treatment!" When Juana accepted Kino's beating without complaint, many students had a lot to say: "I would escape!" "He did not have to beat her!" "I cannot understand how Juana is not mad at Kino." "Juana has an interesting interpretation of Kino as a 'man.'" These comments stimulated lively class discussion of characters' motivations and figurative language, and led to a personal-response journal entry. The think-aloud comments also provided a smooth segue into writing topics such as contrasting Juana's reactions with those of women in other cultures.

Instruction and assessment

While the think-aloud enables teachers to assess their students' reading abilities, it can also become a valuable instructional strategy. The key to its instructional use is in having students write down their thoughts. Students' think-aloud comments can become the "teacher's homework," to be studied in order to plan instruction in specific skills students might need or to capitalize on their comprehension strengths. Skills such as learning vocabulary, activating prior knowledge, developing valid interpretations, making inferences and predictions, rereading, and reading on to clarify ideas can be emphasized during class discussion, as I have described. Teachers can also use the personal reactions generated in think-aloud comments as the basis for writing assignments that extend students' understanding through critical and creative thinking.

Think-aloud comments can become the basis of a student-centered class activity. To get everyone involved, ask students to share their written comments in pairs or small groups at the start of class. Encourage appreciation of one another's ideas by having students put a star next to similar comments and a check mark next to comments that disagree. (Remind students that disagreements do not necessarily mean one of the comments is wrong.) Another approach is to have students write their questions and com-

ments on the chalkboard, and class discussion can proceed in a variety of ways: in the order the comments were written, by categorizing comments, or by taking all the questions first, and so on. Students, of course, enjoy being the focus of attention, especially if other students are discussing what they wrote. It is important to make the classroom atmosphere one of mutual respect and academic exploration, especially when discussing think-aloud comments that may be incorrect or that may raise questions to which only some students know the answer.

The teacher can guide students to see patterns in their own think-aloud comments. A student may learn that "I usually skip over vocabulary words that I really need to know" or "I have trouble understanding figurative language." This metacognitive awareness can help students as they develop specific reading strategies for remediating their comprehension problems. A reader can learn to recognize his strengths by remembering, "I usually connect earlier clues in the story to figure things out before my classmates do!" or "I know when to reread to make sure I understand what happened." Having kept a written record of their thoughts, students can chart their own growth in specific skill areas.

Once my students became comfortable with the think-aloud strategy, they valued peer sharing and class discussion based on their think-aloud comments. The level of student interest and participation increased, and their understanding of literature improved when I made the think-aloud the basis of my teaching. The think-aloud is the most successful strategy I have used to date to help students improve reading skills, initiate and participate in class discussion, and understand and enjoy literature.

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