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HELPING ELEMENTARY TEACHERS TO THINK ALOUD

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Abstract

An essential element in teaching children to effectively comprehend text is the use of teacher-led think alouds. The article follows a semester-long project with 31 in-service teachers, who planned, implemented, transcribed, and reflected upon think aloud lessons to build student comprehension. Through multiple exposures to think alouds, teachers made significant growth in the quantity and quality of reading comprehension strategies they incorporated. Discussion focuses on the successes and struggles that teachers encountered when thinking aloud. Finally, suggestions for supporting teachers in effectively thinking aloud are provided.



There are many steps between knowing what an effective teaching strategy is, and knowing how to do it. The more I prepared and tried out think alouds, the more confident I became in my knowledge that this was something I both *should* do and *could* do.

Ms. Hynes (all teacher names are pseudonyms) was a third-grade classroom teacher who enrolled in a literacy methods class that I taught at a graduate school of education in a major metropolitan area. The focus of this course was to explore instructional theories, strategies, and practices to improve K-5 students' reading comprehension across content areas. A major portion of the graduate coursework focused on implementing think alouds as a way for teachers to help their students understand the comprehension strategies that proficient readers employ to make meaning of text. As the university instructor, I assigned multiple readings on think alouds, modeled think alouds of both narrative and nonfiction text, showcased video excerpts of exemplary think alouds, and led small-group planning sessions where teachers practiced thinking aloud with their colleagues (see Table 1 for more information on the scope and sequence of think alouds in the graduate coursework).

Table 1

How Think Alouds Were Incorporated into 15 Weeks of University Graduate Course (following the Pearson & Gallagher's 1983 Gradual Release of Responsibility)

Background Readings Completed by Teachers Across the Semester	Weeks 2 -5	<ul style="list-style-type: none"> Teacher candidates were assigned to read several practitioner-appropriate journal articles about how, when, and why to use think alouds (Barrentine, 1996; Block & Israel, 2004; Oster, 2001; Walker, 2005).
Teacher Modeling by University Methods Instructor	Weeks 1 -10	<ul style="list-style-type: none"> University instructor modeled 10 weeks of read alouds of both nonfiction text and narrative text. Modeled texts included <i>Amelia and Eleanor Go For a Ride</i> by Pam Munoz Ryan, <i>Moon</i> by Seymour Simon, <i>The Circus Ship</i> by Chris van Dusen, and <i>Knuffle Bunny Free</i> by Mo Willems.
Collaborative Practice between Teacher Candidates and University Instruction	Weeks 6 -9	<ul style="list-style-type: none"> During class sessions, teacher candidates watched video clips of teacher-generated think alouds and critically analyzed the lessons.
Guided Practice among Teacher Candidates	Weeks 10-12	<ul style="list-style-type: none"> Teacher candidates worked in small groups to lesson planning with assistance, feedback, and evaluation from university instructor. Texts included <i>The Kissing Hand</i> by Audrey Penn, <i>City Hawk: The Story of Pale Male</i> by Meghan McCarthy, and <i>Balloons over Broadway: The True Story of the Puppeteer of Macy's Parade</i> by Melissa Sweet.
Independent Practice by Teacher Candidates	Due in Weeks 12-15	<ul style="list-style-type: none"> Teacher candidates planned, implemented, and reflected upon three think aloud lesson plans.

Across the semester, teachers submitted and implemented think aloud lesson plans, audiorecorded and transcribed a short excerpt of a think aloud, and reflected upon how thinking aloud impacted their teaching. This article helps elementary teachers understand how to incorporate effective think alouds into their own classroom practices.

Understanding Think Alouds

Perhaps one of the most challenging jobs that K-5 teachers have is to prepare students to be better comprehenders of the texts that they will encounter in schooling and beyond; teachers must enable students to be flexible and independent in applying a myriad of comprehension strategies. Though helping students become self-regulated comprehenders is a significant instructional challenge for teachers, this process is vastly improved when teachers provide quality interactions and models of how to maneuver through texts. An essential element in teaching children to effectively comprehend text is the use of teacher-led think alouds. During a think aloud, a reader verbally reports his/her thinking as he/she approaches the text. Think alouds require a reader to stop periodically, to reflect on how a text is being processed and understood, and to relate orally what reading strategies are being employed (Baumann, Jones, & Seifert-Kessell, 1993; Block & Israel, 2004). In their book on the cognitive processes of think alouds, van Someren and colleagues (1994) define think alouds as a problem solving process in which “the subject keeps on talking, speaks out loud whatever thoughts come to mind, while performing the task at hand” (p. 35). An essential part of effective think alouds includes teacher modeling of purposeful comprehension strategies (Pearson & Gallagher, 1983) (For a list of common think aloud strategies, see Table 2).¹

¹ Because the present study focuses largely on how to better prepare teachers on how to use think alouds, the literature reviewed here focuses largely on teacher-generated think alouds, as opposed to think alouds as a means to observe and assess student comprehension.

Table 2

Commonly Applied Reading Comprehension Strategies Applied During Think Alouds (Block & Israel, 2004; Davey, 1983; Duke & Pearson, 2002; Maria & Hathaway, 1993; Migyanka, Policastro, & Lui, 2005; Zimmerman & Hutchins, 2003)

Strategy	Brief Description
Overviewing the text	When a reader looks over the text before reading, paying particular attention to the text features and how those features are relevant to his/her purpose for reading
Visualization	When a reader creates and adapts mental images to make reading three dimensional
Activating prior knowledge	When a reader thinks through what he/she already knows about a topic to make sense of how the text connects to that prior knowledge.
Asking questions	When a reader constructs, revises, and questions the meanings he/she makes during reading
Recognizing an author's writing style	in which readers recognize an author's vocabulary choice, sentence complexity, connection between sentences and paragraphs, length of paragraphs, and introduction of ideas (Block & Israel, 2004, p. 160)
Making inferences	When a reader forms a best guess using evidence from the text to make predictions and draw conclusions
Making connections	When a reader makes personal connections with the text by using his/her background knowledge. There are three types of common connections: <ul style="list-style-type: none"> • Text-to-Self (T-S) refers to connections made between the text and the reader's personal experience. • Text-to-Text (T-T) refers to connections made between a text being read to a text that was previously read. • Text-to-World (T-W) refers to connections made between a text being read and something that occurs in the world. •
Making and revising predictions	When a reader uses information from the text and from his/her own personal experience to anticipate what he/she is about to read.
Determining the most important ideas	When a reader distinguishes between what information in a text is most important versus what information is interesting but not necessary for understanding.
Synthesizing information	When a reader not only restates the important points from a text, but also combines ideas to allow for an evolving understanding of text
Monitoring comprehension	When a reader identifies what he/she does and does not understand and applies appropriate strategies to resolve any problems in comprehension
Restatement	When a reader rephrases portions of the text in simpler terms
Determining word meanings	When a reader tries to determine the meaning of unfamiliar words and/or concepts in a text to deal with inconsistencies or gaps in knowledge
Backtracking or rereading	When a reader monitors his/her understanding and makes adjustments in his/her reading as needed

By verbalizing their thought processes and employing fix up strategies to address comprehension break-downs, teachers can help students develop higher thinking and comprehension skills (Baumann, Seifert-Kessell, & Jones, 1992; Davey, 1983). In a landmark study, Duffy and colleagues (1987) showcased that reading comprehension instruction must provide explanations and scaffolding through think alouds. Effective teacher think alouds positively impact student achievement; when given solid models of think alouds, students are more likely to be able to verbalize their own reading strategies and thus score higher on comprehension tests (Anderson & Roit, 1993; Bereiter & Bird, 1985; Loxterman, Beck, & McKeown, 1994; Schunk & Rice, 1985; Silven & Vaurus, 1992; Ward & Traweek, 1993).

Though think alouds are widely recommended as an effective instructional strategy, they may not yet be commonplace in today's classrooms (Pressley, 2002). Walker (2005) wrote "seldom are the teachers modeling the think aloud process as students read" (p. 688). The exclusion of think alouds in classroom instruction may be due to teachers' struggles to model this complex process (Duffy & Roehler, 1989; El Dinary, Pressley, & Schuder, 1992). Many teachers find that modeling their thinking processes, as done in a think aloud, is difficult (Dowhower, 1999; Jongsmas, 2000). Though a text may be difficult for students, teachers often struggle to see where and why students struggle with a text that they interpret as easy.

How to Effectively Think Aloud

A wealth of information provides teachers with meaningful and constructive advice on how to approach think alouds in routine classroom instruction (Baker, 2002; Block & Israel, 2004; Davey, 1983; Oster, 2001; Walker, 2005). Wilhelm (2001) suggests that teacher-generated think alouds include the following steps:

- 1) The selection of a short section of a text
- 2) Teacher selection of a few relevant and purposeful strategies
- 3) Teacher statement of the purpose for reading and a deliberate focus on particular strategies
- 4) Reading the text aloud to students while modeling the chosen strategies
- 5) Having students annotate the text, or make notes for possible sources of confusion
- 6) Brainstorming of cues and strategies used

- 7) Teaching students to generalize the strategies
- 8) Reinforcement of the think aloud with follow-up lessons.

While thinking aloud, teachers should intentionally hit upon the reading skills that poor readers often lack, such as making predictions, developing mental images, linking prior knowledge, monitoring comprehension, and correcting comprehension break-downs (Davey, 1983).

Helping Teachers To Think Aloud

As a teacher educator, my intent was to help early career teachers increase the quality and the quantity of the think alouds that they incorporated into their routine classroom instruction. I viewed my literacy methods coursework as an effective place to increase teachers' own metacognitive awareness of their reading processes (Thomas & Barksdale-Ladd, 2000). During my semester-long project, I worked with 31 K-5 teachers who pursued state certification in elementary (K-6) education. All participants were full-time teachers and enrolled in a two-year alternative certification Masters of Arts in Teaching program. All teachers were either in their first or second years of full-time teaching in urban public schools, in conjunction with 5-8 credits of graduate coursework per semester.

Over the course of the semester, teachers planned, implemented, and reflected upon three think aloud lesson plans. In the lesson plans, teachers selected a K-5 children's book appropriate for their student teaching placement. Texts could be either narrative or nonfiction. In their lesson plans, teachers submitted the following: (a) the overarching lesson objectives and appropriate Common Core State Standards (2010), (b) a justification of how this text was appropriate for their classroom context, (c) a text copy (or excerpts) of their choice of children's books, (d) clearly identified stopping places where they'd stop and think aloud, and (e) a transcript of what they planned to verbalize to the class while thinking aloud at each predetermined stopping point. Teachers were not directed to include a particular number of stopping points for think alouds or to incorporate any specific reading comprehension strategies; rather, they were left to determine both what kind and how many strategies were appropriate for their students and their chosen text. In addition to planning and implementing these lessons, teachers submitted a written reflection, focusing on successes and struggles in thinking aloud. At the conclusion of the semester, participants transcribed a short portion (approximately 10-15 minutes) of their think aloud

instruction. The transcript analysis portion of the project was highly influenced by the instructional recommendations of Kucan (2007):

Transcript analysis allows teachers to capture what cannot be captured in any other way—the talking and thinking that transpires in classrooms on a daily basis. Transcript analysis also allows teachers to see what happens when they are more thoughtful about the kinds of texts they ask students to think about and to become more aware of the kinds of questions they ask and the kinds of responses they make to students. (p. 236)

At the conclusion of the semester, I examined multiple data sources from the 31 teachers including (a) three lesson plans per teacher, (b) transcriptions of a 10-15 minute think aloud lesson, and (c) written reflections. In their reflections, teachers responded to the following prompts:

- What did you notice about yourself as a learner, as a reader, and as a teacher in planning and implementing these think aloud lessons?
- How might planning, implementing, and reflecting upon think aloud lessons inform your instruction?
- What are your future goals in planning and implementing think alouds in your classroom? What might you need to accomplish these goals?
- What was the think aloud process like for you? What about thinking aloud worked for you? What about thinking aloud didn't work?
- What about thinking aloud was easy for you? What about thinking aloud was hard for you?
- Evaluate your own level of comfort in thinking aloud with K-6 students. How ready do you feel to incorporate think alouds in future teaching?

To examine my data sources, I used a mixed-methods approach. I tallied the frequency of reading comprehension strategies aligned with the previously cited comprehension strategies. To examine the transcripts and reflective journals, I used grounded theory data analyses procedures. After all data were collected, I read and reread the data to identify emerging themes. I triangulated findings across data sources; for instance, I compared think aloud lesson plans with the actual audiotaped portion to confirm findings. My observations are explained below, as well as concrete suggestions for how elementary teachers can incorporate think alouds into their teaching.

Teachers' Successes in Thinking Aloud

Overall, the process of planning, implementing, reflecting upon, and transcribing think aloud lessons proved to be successful. By the end of the semester, the vast majority of participants were able to design think aloud that were effective for a variety of reasons: their think alouds included (a) logical stopping points that capitalized on comprehension opportunities, (b) a variety of comprehension strategies that were relevant to the associated text, and (c) rich monologues designed to help young readers understand the metacognitive processes of reading. For further evidence of effective think alouds, Table 3 includes brief portions from scripts submitted by teachers.

Table 3

Selected Portions of Effective Think Alouds

Sample Text #1 – <i>Knuffle Bunny Free</i> by Mo Willems		
What The Text Says	Teacher Think Aloud Script	Associated Comprehension Strategies
<p>That night, they had a surprise for Trixie: a brand-new, top-of-the-line FUNNY-BUNNY-WUNNY-DOLL EXTREME! It could walk! It could speak (In Dutch.) It could dance! But it couldn't make Trixie feel any better. Trixie was sure that she wouldn't be able to sleep another night in a strange bed without her Knuffle Bunny.</p> <p>→</p> <p>Before she knew it, she was dreaming...She dreamed of Knuffle Bunny and all the places he would visit. She dreamed of all the children Knuffle Bunny would meet. She dreamed of how Knuffle Bunny would make them feel better. The next morning, Trixie felt better. Trixie had a big breakfast. She played with Oma on the playground swings. She even tried a sip of Opa's coffee at the café! It was a great day. Before she knew it, the trip was over it was time to go home. Trixie hugged Oma and Opa as hard as she could. Then Trixie and her family got back onto the train, and back onto the plane, and listened to the crying baby as the plane lifted off. But can you believe it? Right there, on that very plane, Trixie noticed something... "KNUFFLE BUNNY!!!" Trixie was so happy to have Knuffle Bunny back in her arms.</p> <p>→</p> <p>Happy enough to make a decision...Trixie turned around and said: "Would your baby like my Knuffle Bunny?"</p> <p>→</p>	<p><i>"So even though I was right that Trixie really does miss Knuffle Bunny, I was wrong in predicting that her Oma and Opa would take her on many adventures to help her forget. I think that even though the new bunny Trixie's Oma and Opa bought for her was really cool and could do lots of fun things, she just wants her doll back."</i></p> <p><i>"I can't believe it! Trixie must have the best luck in the world! On her flight home, she was on the very same plane and in the very same seat and Knuffle Bunny was still there! Thumbs up if you lost something and then forgot about it. Now keep your thumbs up if you finally found what you had lost, and even though you forgot about it, you were SO happy to have it back!"</i></p> <p><i>"What? I'm going to go back and read that again. I thought I read that Trixie gave up Knuffle Bunny. I'm not sure if that's right. Let me go back and reread."</i></p>	<p>Making and clarifying predictions</p> <p>Clarification, making connections</p> <p>Reread to clarify confusion</p>

Sample Text #2 – *The Kissing Hand* by Audrey Penn

What The Text Says	Teacher Think Aloud Script	Associated Comprehension Strategies
<p>“I don’t want to go to school,” he told his mother. “I want to stay home with you. I want to play with my friends. And play with my boys. And read my books. And swing on my swing. Please may I stay home with you?” Mrs. Raccoon took Chester by the hand and nuzzled him on the ear.</p> <p>“Sometimes we all have to do things we don’t want to do,” she told him gently. “Even if they seem strange and scary at first. But you will love school once you start.” “You’ll make new friends. And play with new toys. Read new books. And swing on new swings. Besides,” she added. “I know a wonderful secret that will make your nights at school seem as warm and cozy as your days at home.”</p> <p>She took Chester’s hand and carefully wrapped his fingers around the kiss. “Now, do be careful not to lose it,” she teased him. “But, don’t worry. When you open your hand and wash your food, I promise the kiss will stick.” Chester loved his Kissing Hand. Now he knew his mother’s love would go with him wherever he went. Even to school. That night, Chester stood in front of his school and looked thoughtful. Suddenly, he turned to his mother and grinned. “Give me your hand,” he told her. Chester took his mother’s hand in his own and unfolded her large, familiar fingers into a fan.</p>	<p><i>In my mind’s eye, I see a nice, loving Mom who is trying to comfort her child. This reminds me of how my mom used to comfort me when I was sad and did not want to go to school. I bet she will have a great idea to make Chester feel better and stop crying.</i></p> <p><i>I am curious to find out what her secret might be to make Chester feel better while they are apart during school.</i></p> <p><i>Is Chester going to give her a kiss on her hand, too?</i></p>	<p>Visualization, making predictions, making connections</p> <p>Clarifying, setting a purpose</p> <p>Asking a question</p>

Sample Text #3 – *The Circus Ship* by Chris van Dusen

What The Text Says	Teacher Think Aloud Script	Associated Comprehension Strategies
<p>Through chilly water, all night long, the animals swam on, until they reached an island beach just before the dawn. They pulled themselves up on the shore-bedraggled, cold, and beat-then staggered to the village on weary, wobbly feet.</p> <p>The next day at the crack of dawn, a ship was at the pier, and up the lane marched Mr. Paine, whose voice was loud and clear: "I am the circus owner. My ship sank in the murk. I've come to find my animals and put them back to work." He hiked until he came into the center of the town. His face was red. He scratched his head. He stood there with a frown. Mr. Paine looked high and low, but still he couldn't see the fifteen circus animals of his menagerie. "</p> <p>He ran around the alleyways. He searched the village square. He even checked the chicken coop-his animals weren't there. Mr. Paine was tuckered out. His heavy chest was heaving. Then little Red stepped up and said, "I think your boat is leaving." He ran off in a fit of rage. His ship was leaving sight, so he jumped into a rowboat and he rowed with all his might. And from that day they like to say their lives were free of "Paine." It was a happy, peaceful place upon that isle in Maine.</p>	<p><i>"Wow, there are a lot of big words that I need to take a look at again. 'Bedraggled' seems to talk about how the animals are feeling. If they were swimming all night long, I would think 'bedraggled' must mean really, really tired. Now, 'staggered' is an action word. If they 'staggered' to the village on weary, wobbly feet', they must have been walking but in a way that seemed like they would fall over at any minute. And lastly, 'weary' is used to talk about the animals' feet that were wobbly and also probably very tired"</i></p> <p><i>"I wonder if I can find all of the animals in this picture. How can he not recognize some of them? If he can't find the animals, what will he do?"</i></p> <p><i>"The animals were free from their mean, old boss! I was a little nervous when he first came back in the story, but I am so happy he left empty-handed. I wonder what it would be like to live on an island with a bunch of circus animals. This book showed me a lot about how it is better to be kind to others instead of being afraid if maybe they are a little different."</i></p>	<p>Activate prior knowledge, determining word meanings</p> <p>Asking questions</p> <p>Revisiting and checking previous predictions, and summarize</p>

These think alouds are exemplars because of the clarity of the script and the relevancy of the stopping point with the associated comprehension strategy. These transcripts showcase teachers as Wade's (1990) good comprehenders, who "construct meaning and monitor comprehension" (p. 444). It is evident in these samples that teachers truly tried to put themselves in the perspectives of their students: to identify sources of confusion and model how to make meaning throughout the text. Furthermore, the teachers' samples here do not treat comprehension strategies as discrete entities, but rather highlight that to make meaning of text readers often apply multiple strategies simultaneously.

It was also interesting to note that teachers grew significantly in the both the number and the variety of reading comprehension strategies they incorporated. In their first lesson plans, teachers most frequently relied upon three basic reading comprehension strategies: making predictions, activating prior knowledge, and making connections. Upon recognizing that their think alouds were fairly limited in the repertoire of strategies, teachers included a wider diversity of reading comprehension strategies in subsequent lessons. A fourth-grade teacher noted, "I couldn't believe that in my lesson I used the same two strategies time and time again. Next time around, I need to expand my comfort zone and include some others!" Though activating prior knowledge, making connections, and making and revising predictions remained the most favored comprehension strategies, teachers demonstrated a willingness to include nearly all of the reading comprehension strategies in some capacity. By the final lesson plan, teachers included some of the more difficult comprehension strategies, such as making inferences (from 0% in the first lesson plan to 10% in the third lesson plan), synthesizing information (from 0% in the first lesson plan to 10% in the third lesson plan), and recognizing an author's writing style (from 0% in the first lesson plan to 8% in the third lesson plan).

Teachers' Struggles in Thinking Aloud

Just as there were successes in teachers' think alouds, there were also stumbling blocks. Table 4 provides examples of think alouds that were not as successful.

Table 4

Selected Portions of Less Effective Think Alouds

Sample Text #1 - <i>Just Plain Fancy</i> by Patricia Polacco		
What the Text Says	The Think Aloud Script	The Associated Comprehension Strategy
<p>Naomi and Ruth looked at each other and hurried outside to hang up the washing. Naomi felt botherment inside.</p> <p>Over...Under...Around...Through...Naomi ran after Fancy, trying to catch him before anyone noticed. And that's about the time that Fancy decided to head straight for the elders. He flew at Martha, the oldest member of the gathering. Adjusting her glasses, she gasped as he flew over her head just before landing on the clothesline where the quilts were airing.</p> <p>"Please don't shun him," Naomi cried. "I did this! I made him fancy," she sobbed.</p> <p>At that moment, pleased with all the attention, Fancy ruffled his feathers and did for the guests what he had done for the girls in the henhouse the day before. Those who weren't speechless were stunned!</p>	<p><i>Now I am wondering why Naomi and Ruth feel worried. Why do you think they are worried?</i></p> <p><i>Ugh Oh! What do you think the elders are going to say about Fancy? Do you think he will be shunned from the community?</i></p> <p><i>What do you think Fancy did that left everyone speechless and stunned?</i></p> <p><i>In my mind I am picturing Fancy doing something so special with his feathers.</i></p>	<p>Predict</p> <p>Question and prediction</p> <p>Prediction and visualization</p>
Sample Text #1 – <i>Sarah Plain and Tall</i>		
What the Text Says	The Think Aloud Script	The Associated Comprehension Strategy
<p><u>Sarah Plain and Tall</u></p> <p>"Did Mama sing every day?" asked Caleb. "Every-single-day?" He sat close to the fire, his chin in his hand. It was dusk, and the dogs lay beside him on the warm hearthstones.</p> <p>"Every-single-day," I told him for the second time this week. For the twentieth time this month. The hundredth time this year? And the past few years?"</p>	<p><i>I am wondering what kind of character Sarah is in the book and why the author describes her as plain and tall. I wonder how that will effect what happens in the story.</i></p> <p><i>I am wondering who Caleb is talking to and why he is asking about his mother.</i></p> <p><i>I am wondering who the narrator of the story is.</i></p>	<p>Asking a question</p> <p>Asking a question</p> <p>Asking a question</p>

In these less effective think alouds, teachers struggled to apply a broad variety of strategies and were more comfortable in applying simpler comprehension strategies, such as making predictions. In addition, the teachers here treated think alouds not as an opportunity to model what proficient readers do, but rather as an opportunity to elicit students' responses to text. For instance, one third-grade teacher, during a think aloud of *Just Plain Fancy* by Patricia Polacco, asked students "Why do you think they are worried?". While this teacher labeled this stopping point as an example of making predictions, truly the teacher provided a turn-and-talk opportunity for readers. It would have been more effective for this teacher to have modeled a prediction that she had made, along with an explicit explanation of how she reached that prediction and how that prediction helped her to better understand the text. Another less effective think aloud shows a teacher stopping to ask questions, but with very little insight into why those questions are essential to the comprehension process. Wade (1990) might classify this sort of think aloud as an example of a "non-riskier, who assumes a passive role by failing to go beyond the text to develop hypotheses" (p. 446).

While a select number of teachers struggled to use think alouds as models into their metacognitive processes, other teachers struggled with where to stop in a text and what comprehension strategy logically aligned with the stopping point. A first-grade teacher noted, "It was tricky to determine the most appropriate or effective strategy from a comprehensive list of good options". Other teachers struggled with an overreliance on some comprehension strategies and an underreliance on others, as explained by a third-grade teacher.

The think aloud process was more difficult than I expected because I found myself falling back on the same strategies, like making connections and predictions. It was difficult for me to make inferences and to incorporate strategies before reading, like setting a purpose for reading. I also noticed that my tendency is to think aloud in narrative text, but I am not as comfortable in using this approach to model my thinking in nonfiction text.

On a similar note, comprehension monitoring and applying fix-up strategies was equally challenging, as explained by a third-grade teacher:

As a proficient reader, it's sometimes difficult to see where in a text my students are likely to struggle and how I can help model what to do when a comprehension breakdown arises. How can I verbalize the processes which are so inherent to me?

A final struggle for teachers was balancing between too many and too few stopping points. One participant wrote, “I struggled with finding the appropriate number of times to stop since I wanted to make sure these times were meaningful and contributed to their comprehension. I wasn’t always sure when my think aloud was just an interruption or done simply for the sake of stopping.”

Trying out Think Alouds in Your Teaching: Classroom Implications

In looking across the work and responses of teachers, important implications emerge for teachers to improve the quality and quantity of their think alouds, as discussed below.

Practice Makes Perfect: Thoughtful Planning of Think Alouds

One of the sentiments commonly echoed by teachers was the need for diligent planning of their think alouds. As a fourth-grade teacher explained, “A thoughtful think alouds does not happen extemporaneously. It requires multiple perusals of the text, reflection on when and why to stop, and careful thought into exactly what you will say.” Knowing that teachers needed support during the planning and implementation of think alouds, I modeled two strategies during class time. First, I modeled the process of planning a think aloud in a text that was new for me. During one class session, I came in with a new storybook that I had never read before. I modeled how I stopped to think aloud throughout the initial reading. I used an overhead projector to show the notes that I took to remind myself of where I had stopped during this first approach to the text. I then modeled the thought process of reviewing my notes to determine which stopping point and associated teacher talk was worth including in a read aloud for my students. In a whole-group conversation, my teacher participants noticed that I initially had stopped to think aloud 11 times in the duration of a picture book. I led the group in a conversation where we reflected on my notes for each stopping point and think aloud, focusing on the following questions:

- In what ways in this stopping point and think aloud effective or ineffective to showing young readers my metacognitive processes?
- What do young readers gain from hearing my talk during this particular think aloud?
- Is this stopping point a necessary and advantageous one?

Finally, I revealed how I place sticky notes on the back cover of the text with my notes and script of exactly what I will say; many of my teachers copied this method and found it to be an effective crutch to develop their own confidence of knowing exactly what to say at the right point.

Equally as effective for the teachers in my study was to take a piece of frustrational text and practice thinking aloud through their confusions. Because many teachers are avid and proficient readers themselves, they may struggle to understand how it feels to struggle during reading and the nature of those struggles. To simulate this experience, I provided difficult texts for my teachers to practice thinking aloud. For example, I allotted class time for teachers to struggle through selected texts from a college statistics textbook, a medical dictionary, and legal documents. As teachers understood how their lack of background knowledge and their limited vocabulary impeded their comprehension of these domain-specific texts, they felt what it was like to be a struggling reader. Many teachers voiced the opinion that the experience of struggling with a text helped them to both empathize with their students and to better understand potential comprehension breakdowns in the texts they chose for their instruction.

Another common sentiment was a request for multiple forms of support to help teachers think aloud. A Kindergarten teacher explained,

Just as we expect with our young readers, we as teachers need a lot of exposure to a topic in order to internalize it and be ready to try it out. It's not enough to read an article about how to think aloud; I needed to watch teachers trying them, to debrief with colleagues on the process, and to collaboratively plan a lesson all just to get me ready to try it out myself.

Though time during this particular semester did not allow it, it may have been useful to have participants work in small groups to collaboratively plan a think aloud in a text that was unfamiliar to them. Much like they saw my thinking process in planning a think aloud, teachers could then have conversations where they evaluated their thought processes and decision making in the process of planning a think aloud. In addition to the process undertaken in this project, teachers may benefit from observing master teachers as they think aloud and then debriefing on the strategy. Ongoing professional development opportunities could include teachers watching their own videotaped think aloud lessons, perusing transcripts of their think alouds, or debriefing about their think alouds in observations with literacy coaches and administrators. It was also outside the parameters of this project to observe teachers in their classrooms as they

implemented their think alouds; these observations and reflective conversations would certainly be a fruitful area of ongoing professional development and support.

Future Directions & Concluding Thoughts

The value of teachers who effectively and confidently think aloud cannot be understated. Though it was outside the realm of this project, it would prove to be useful for teachers to connect think alouds to student performance. Teachers should be encouraged to reflect upon how their think alouds impact student performance. Certainly teachers can be informed of the formal reading research showcasing the effectiveness of think alouds. Yet more powerful than these findings may be having teachers do case studies or inquiry projects where they begin to connect their thinking aloud to the performance of the students in their classrooms every day. Without compelling evidence that their hard work and thoughtful preparation of think alouds translates to a difference in the comprehension of their students, teachers may see think alouds as one more thing in their ever-growing list of things to do.

Additionally, it would be useful for teachers to practice thinking aloud in with a greater variety of text. Though I made efforts to model thinking aloud with nonfiction text, the vast majority of participants conducted think alouds with narrative text. Perhaps they were not as comfortable thinking aloud in less familiar text genres. It is also possible that teachers were unclear on how to translate comprehension strategies to nonfiction text. Whatever the case, teachers must be supported in thinking aloud in nonfiction text, especially as this text genre carries so much weight in the Common Core (2010). It would also be useful for teachers to think through differentiation of think alouds. In the graduate course, I deliberately modeled think alouds for a variety of grade levels in K-6, but teachers only planned lessons for their current teaching placement. It would be useful to examine how to differentiate think alouds differentiated to meet the diverse needs of students of different grade levels, diverse language backgrounds, and various levels and learning needs.

These findings present promising suggestions to improve the quantity and quality teachers' think alouds. Research (Anderson & Roit, 1993; Bereiter & Bird, 1985; Baumann, Seifert-Kessell, & Jones, 1992; Davey, 1983; Duffy et al., 1987; Loxterman, Beck, & McKeown, 1994; Schunk & Rice, 1985; Silven & Vaurus, 1992; Ward & Traweck, 1993) highlights think alouds as an effective way to improve the reading comprehension of K-12 students, yet teachers often experience uncertainty

or reluctance to incorporate them into routine instruction. We must remember, however, that think alouds are a complex skill for teachers to master. Even with the repeated opportunities to engage with think alouds in this study, teachers still expressed uncertainty about logical stopping points and how to incorporate a wide array of strategies. When teachers engage in multiple meaningful opportunities to plan for, implement, and reflect upon think aloud lessons, they are likely to increase the variety of their strategy inclusion, the frequency of think aloud stopping points, and their confidence in employing think alouds in classroom instruction.



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