

COMPREHENSION AT THE CORE

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One spring day in 2008, an issue of *Educational Leadership* arrived in Steph's mailbox with an article written by Arthur Costa. She couldn't wait to read it, as he was near the top of her most revered educator list. As she scanned the article, a line in the introduction flashed like a neon sign. *You can't teach students to think*. Her heart sank, her stomach churned. She shut the magazine instantly and tried wishing it away. She simply couldn't bring herself to read it. She and Anne had spent nearly 20 years telling teachers nothing was more important than teaching kids to think and now this. Yikes!

When she finally mustered the nerve to read it, she understood the message. You can't teach kids to think, *because human beings are born thinking*. It is in their DNA to think. In fact, human beings pop out of the womb thinking. They cry when they are hungry. That's comprehension. They smile broadly at three months when they see their mom. That's comprehension. And at age 2, they fully comprehend the word *no*, but refuse to pay a whit of attention to it! Kids are thinking from the moment they are born. Costa was right!

So because they already know how to think, what can we actually teach them when it comes to thinking? We can and must teach them *about* their thinking.

We can teach them to do the following:

- Be aware of their thinking
- Think strategically
- Recognize the power of their own thinking

Developing Awareness

We teach kids to listen to their inner voice while they read, to follow their inner conversation and to stop,

think, and react to information rather than simply reading on (Harvey & Goudvis, 2005, 2007, 2008). We think aloud to reveal our own reading process, and we model what it is to be a thinking-intensive reader, one who pays attention to thinking and monitors for understanding.

Often as kids read, particularly when reading informational text of little interest to them, they simply run their eyes across the page and then answer the literal questions at the end, even though they have not processed the information or synthesized the big ideas. Simply sharing how this happens goes a long way toward addressing the problem. When Steph asked a group of seventh graders if any of them had ever read something without thinking about it, the entire class raised their hands. Taunia (pseudonym) shared that it had happened to her in science that very day while reading about atoms in the textbook. Although she reported that she had read the words, she found herself thinking about a new skirt for the upcoming dance.

Kids need to know that this happens to all of us, not just seventh graders reading science textbooks. We model how we sometimes lose track of meaning and drift off while reading, so they will understand that even proficient, adult readers sometime derail. Then we take time to show them how we stop, refocus, and get back on track (Harvey & Goudvis, 2007).

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Becoming Strategic

When readers monitor and stay on top of their thinking, they can become readers who access comprehension strategies that best suit a variety of reading goals and purposes. We don't teach strategies for a strategy's sake. We don't teach kids to visualize so they can be the best visualizers in the room. We teach our kids to think strategically so they can better understand the world around them and have some control over it. We teach them to ask questions to delve into a text, to clarify confusion, to connect the new to the known to build knowledge, and to sift out the most important information when making decisions.

Strategic reading refers to thinking about reading in ways that enhance learning and understanding. The dictionary defines strategic as being "important or essential to a plan of action." However, having a nodding acquaintance with a few strategies is not enough. Students must know when, why, and how to use them.

When thinking of ways to help students become more strategic, we encourage what Tishman, Perkins, and Jay (1994) called "a strategic spirit—a special kind of attitude encouraged in a culture of thinking, one that urges students to build and use thinking strategies in response to thinking and learning challenges" (p. 3). We help students to recognize a thinking challenge and take action. Kids with a "strategic spirit" have the disposition to implement a plan of action whether reading or doing anything else.

For instance, a fifth grader, when tempted to sneak off to the creek during recess, may ask, What will happen if I go? Adults, when purchasing a home, need to strategically consider the cost, location, resale value, and so on so they can make the best decision for their

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family. The threads of strategic thinking weave together in an intricate mental tapestry to address and solve complex problems. The goal is not to get an "A" on the inferring packet. Strategy instruction is useful only insofar as it leads our kids to better understand the text, the world, and themselves so they can gain insight, anticipate hurdles, solve complex problems, and make progress toward a goal. Ultimately, being strategic enables us to accomplish our goals.

Recognizing the Power of Thinking

Above all, we teach our kids to recognize the power of their own thinking. Too many of them, particularly those who feel marginalized (and what kid doesn't?), do not recognize the power that rests between their ears. In *Choice Words*, Peter Johnston (2004) stated, "If nothing else, children should leave school with a sense that if they act and act strategically, they can accomplish their goals" (p. 29). He refers to this as *agency* and notes, "the spark of agency is simply the perception that the environment is responsive to our actions" (p. 29). Too often our kids believe the reverse.

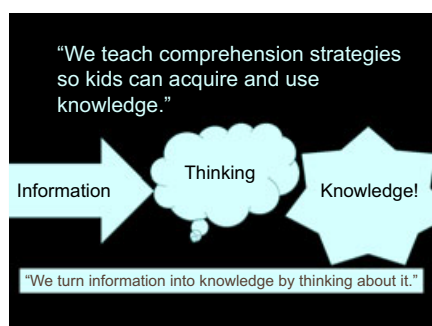
To help our students recognize the power of their own thinking and develop a sense of agency, we emphasize the distinction between information and knowledge. Harvard professor David Perkins (1992) said, "Learning is a consequence of thinking...Far from thinking coming

after knowledge, knowledge comes on the coattails of thinking...Knowledge does not just sit there. It functions richly in people's lives so they can learn about and deal with the world" (p. 8). For Anne and Steph, who attended grade school in the 60s, knowledge did just sit there long enough for Friday's quiz. Information in. Information out. To meet the challenges of an increasingly complex world, we teach comprehension strategies so our students can turn information into knowledge and actively use it.

This is a powerful notion for our kids. Nothing will give them a more complete sense of agency than knowing that they have the power to turn information into knowledge by actively questioning an author's purpose, drawing inferences about characters' actions and words to surface themes in literature or synthesizing information to build knowledge across several texts. As teachers, we can flood the room with engaging texts, we can share interesting ideas, we can model our own curiosity, we can foster thoughtful conversations. Only they can turn what they hear, see, read, and talk about into knowledge by thinking deeply and expansively. Teachers can share the graphic on the next page with their students to give them an explicit, visual representation of the power of their own thinking.

Comprehension at the Core

But we're alarmed. Just when calls for rigor and ramping up instruction



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reverberate from coast to coast, a drumbeat of doubters question the instruction that rests on the well-validated, long-standing body of comprehension research. Based on a rich research tradition (Block, Gambrell, & Pressley, 2002; Dole, Duffy, Roehler, & Pearson 1991; Pearson and Gallagher 1983), instruction in comprehension and thinking strategies has never been more important than today.

In a recent review of the research, Wilkinson and Son (2011) described how research on strategy instruction has “evolved from laboratory and classroom-based studies of single-strategy instruction, to studies of teaching small repertoires of strategies, to studies of teaching these repertoires in more flexible ways in more collaborative contexts” (p. 364). The implications are clear: Comprehension instruction is most effective when students integrate and flexibly use reading and thinking strategies across a wide variety of texts and in the context of a challenging, engaging curriculum.

Current questions about comprehension strategy instruction seem to primarily relate to classroom practices that may be widespread but

have little or no grounding in the research. Too often, we see resources—basal programs, fill-in-the-blank worksheets, and so forth—that merely mention strategies, and direct kids to use them in inauthentic ways, such as asking three questions or making two connections during reading. Or teachers sometimes focus on teaching one strategy over several weeks’ or even several months’ time, rather than teaching a repertoire of strategies in a relatively short period of time so that students then use them to acquire knowledge and enhance understanding.

In recent years, the focus of instruction has been on scoring well on state tests, with a steady diet of test prep, phonics practice, and finding the one and only one main idea. National Assessment of Educational Progress and Programme for International Student Assessment reading scores stagnated, whereas state scores skyrocketed, stark evidence that teaching to the state-mandated test had become the default curriculum. As of this writing, the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) have commandeered the national conversation, and 46 states have adopted them. Thankfully, there now seems to be a common understanding that finding the main idea in a paragraph simply won’t cut it in the 21st century. Kids are really going to have to think and comprehend if they

are to meet the CCSS. So these new standards represent a reasonable course correction.

Fortunately, the responsibility to teach students to meet these standards rests with us educators. If you won’t take our word for it, check out page 4 in the CCSS (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) document:

The standards leave room for teachers, curriculum directors and states to determine how the standards should be reached. Teachers are thus free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting the goals set out in the standard. (p. 4)

Taking the standards at their word, we design instruction that teaches students to become active, critical, curious, and strategic readers. What we believe holds the most promise for enhancing students’ learning and knowledge are those instructional practices that foster reading, writing, and thinking across the curriculum, teaching kids to apply and integrate comprehension strategies as they grapple with and come to understand information and ideas in different subjects.

The Comprehension Continuum

In *Strategies That Work* (Harvey & Goudvis, 2007), we advocated for explicit comprehension instruction,

“Taking the Common Core State Standards at their word, we design instruction that teaches students to become critical, curious, strategic readers.”

and we remain convinced that reading and thinking strategies provide an essential foundation for learning and understanding, especially in this era of CCSS and 21st century learning. Our thinking has evolved over the years, but the goal of comprehension remains to acquire and actively use knowledge. Costa (2008) said, “the deeper knowledge one has, the more analytical, experimental and creative are one’s thought processes” (p. 23). In that vein, we have designed a continuum of comprehension, a spectrum of understanding that runs the gamut from answering literal questions to actively using knowledge. This continuum, which first appeared in Stephanie Harvey and Harvey Daniels’s (2009) *Comprehension and Collaboration*, includes five comprehension practices and the teaching language that matches each (Daniels, 2011).

Answering Literal Questions

Answering literal questions is the least sophisticated practice of comprehension. Students may demonstrate that they can recall information, but simply skimming and scanning to find the answers to questions at the end of the textbook chapter does not guarantee understanding. It is important to distinguish between literal understanding of information and this practice. It goes without saying that literal understanding is an important foundation of knowledge acquisition

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and use—but practices that begin and end with literal questions, be they from the textbook or the teacher, are unlikely to lead readers to a deep understanding and do little to engage the reader in learning.

Retelling

Retelling involves short-term recall and understanding a sequence of events, perhaps in a story. For younger learners, retelling is too often the crowning achievement of comprehension. We recognize that retelling is a foundational skill for learners and that it is more sophisticated than answering literal questions. What we really want is for students to take their thinking further—so that being able to recount or retell the events of a story or summarize the information is the jumping off point.

Merge Thinking With Content

Comprehension begins when we merge thinking with content. Here’s where kids use thinking strategies so that understanding takes root—engaging in connecting, questioning, inferring, visualizing, determining importance, and synthesizing information. These strategies facilitate

kids’ active engagement with their reading and provide them with an arsenal of tactics to construct meaning.

Acquiring Knowledge






Once readers begin to consciously merge their thinking with the content, they are able to turn that information into knowledge. This is not simply memorizing information. To truly learn and remember information, we have to think about it. Comprehension strategies become tools for readers to think about, question, synthesize information, and gain insight. Integrating content and comprehension instructions means that “strategies... help students make sense of the content, and the content gives meaning and purpose to the strategies” (Wilkinson & Son, 2011, p. 367). Understanding strategies and having the disposition to use them encourages students to take an active rather than a passive stance toward learning.

Actively Using Knowledge

When we think about information and acquire knowledge, we come to realize the power of our own thinking. We can integrate our knowledge and actively apply it to experiences, situations, and circumstances in our daily lives. We may come to care about what we learn and apply that knowledge in practical ways. Or we can make informed decisions about how to act and behave, persuade others or take action.

“When we think about information and acquire knowledge, we come to realize the power of our own thinking.”

Comprehension Continuum

Answering Literal Questions	Retelling	Merging Thinking with Content	Acquiring Knowledge	Actively Using Knowledge
<p>Answering literal questions shows that learners can skim and scan for answers, pick one out that matches the question, and have short-term recall. Does not demonstrate understanding.</p>	<p>Retelling shows that learners can organize thoughts sequentially and put them into their own words. Shows short-term recall of events in a narrative and bits of information in nonfiction. Does not, in and of itself, demonstrate understanding.</p>	<p>Real understanding takes root when learners merge their thinking with the content by connecting, inferring, questioning, determining importance, synthesizing, and reacting to information. Understanding begins here.</p>	<p>Once learners have merged their thinking with the content, they can begin to acquire knowledge and insight. They can learn, understand, and remember. Shows deeper understanding.</p>	<p>With new insights and understandings, learners can actively use knowledge and apply what they have learned to the experiences, situations, and circumstances in their daily lives to expand understanding and even take action.</p>
 <p>Teacher Language</p>	 <p>Teacher Language</p>	 <p>Teacher Language</p>	 <p>Teacher Language</p>	 <p>Teacher Language</p>
<p>How many...? What is...? Where did...? Who was...? When did...?</p>	<p>What happened in the story? What was it about? What happened first? Next? Last? What did the character do after that? Retell what you read or heard. Try using your own words to explain what happened.</p>	<p>What do you think? What did the text make you think about? What does this remind you of? Has anything like this ever happened to you? What do you wonder? What do you visualize? What can you infer from this? How does it make you feel? Do you have any reactions? Say more about that...</p>	<p>What did you learn that you think is important to remember? What if anything new did you learn? Why does it matter? What do you think the author most wants you to get out of this? What do you think are some of the big ideas here? What do you think is the main issue here? Why? What makes you think that? How did you come up with that?</p>	<p>Why do you want to remember this? What do you want to do about this? Why do you care? How do you think you can help? Is there a way you can get involved? Do you think you can make a difference? What is your plan?</p>

From *Comprehension Going Forward*. Portsmouth, NH: Heinemann. © 2009 by Stephanie Harvey and Harvey Daniels from *Comprehension and Collaboration*. Heinemann, Portsmouth, NH.

Teachers sometimes come to us and express frustration that their kids are only “surface thinkers.” They ask us how we get kids to ask more thoughtful questions, to think more rigorously, to “go deeper.” The teacher language on the continuum moves from practices that emphasize literal questions to more sophisticated questions that encourage analysis and synthesis. The prompts in the last three columns nudge kids toward more thoughtful responses. The questioning language suggested in the continuum is not a

recipe for recitation, but rather a tool teachers can use to guide students toward higher levels of thinking and deeper understanding.

You might ask yourself what the active use of knowledge looks like in your classroom. Sometimes the active use of knowledge means kids learn something new, integrate that information, and apply it in their daily lives. Other times it means kids are inspired to make a difference in the world, form a plan, and take action.

For example, listening to and discussing Tomie dePaola’s *Oliver Button Is a Sissy* is a great way for second graders to come to understand that bullying is hurtful and to remember this before they pick on someone else. Reflecting on Martin Luther King Jr.’s *I Have a Dream* speech allows sixth graders to consider the power of words and perhaps get people to pay more attention the next time they want their voices heard. Reading Eric Schlosser’s *Fast Food Nation* might lead 12th graders to make healthier choices about food.

From our perspective, thinking about what we learn and using that knowledge every day is what it means to go deeper.

Teaching for Understanding

How many times have we heard that “it is all about the teacher”? More than we can count, that’s for sure. So what is it that teachers need to do to make a real difference? How do they create a classroom culture that is conducive to thinking and learning? As we design thoughtful literacy instruction, we ground our lessons in Schulman’s (1987) idea of pedagogical content knowledge.

Pedagogical content knowledge describes the teacher’s in-depth knowledge of and experience with the ways in which content, instruction, and the learners’ interests and needs intersect. What matters is how teachers act on this knowledge—and how their teaching reflects their understanding of their students, the curriculum, and a broad repertoire of teaching strategies every day in their classrooms. Teachers have the pedagogical power to craft learning environments and experiences for their students so they engage with exciting, challenging content. All the while, they can work to help students develop the dispositions and habits of mind of curious, independent learners.

“P. David Pearson states, ‘Today’s new knowledge is tomorrow’s background knowledge.’”

“Supporting readers to connect their prior knowledge to new information is at the core of learning and understanding.”

To develop a pedagogically sound practice, teachers need time to plan, design, and reflect on how to best teach what their students need to learn. They must not only understand the content they wish to teach, but also share with students their curiosity and excitement about learning in all disciplines. They must understand how to make the content comprehensible to their students, and they must be attuned to the interests and needs of their children. The implications are huge. This all begins with our teaching moves and our teaching language. What we do and what we say has the power to give rise to energetic, vibrant classrooms with eager learners or, conversely, to spawn deadly, dull classrooms full of bored kids. The choice is ours.

We believe the following practices are most likely to result in classrooms full of engaged, active learners with teachers who have a deep understanding of pedagogy, content, and their students. Four teaching practices we deem essential include the following:

Build and Use Background Knowledge to Inform Reading and Thinking

Nothing colors our learning and understanding more than what we bring to it. Kids aren’t blank slates when they walk into our classrooms. All kids bring life experiences and prior knowledge about many topics as well as their thoughts, passions, and insights. P. David Pearson’s (2008) notion that “Today’s new knowledge is tomorrow’s

background knowledge” takes this even further, encapsulating what learning is truly about.

Recently, in some circles, the validity of building students’ background knowledge before reading has come into question. This flies in the face of years of research on schema theory, which explains how our previous experiences, knowledge, emotions, and understandings have a major effect on what and how we learn. (Anderson, Spiro, & Anderson, 1978). Recently, Pearson (2012) quipped, “Asking kids to read without using background knowledge is like asking people to breathe without using oxygen.” We concur. Supporting readers to connect their prior knowledge to new information is at the core of learning and understanding.

In practice, what we really want to do is make sure kids think about what they already know so they can make sense of new information. However, we remember to keep the background knowledge activation and building short and sweet. We don’t spend 45 minutes building background and leave merely 15 minutes for kids to read. We spend some time making sure kids understand unfamiliar concepts that they will meet in the text, or they run the risk of learning nothing. We might take 5 or 10 minutes to introduce the topic and fire them up about the information and ideas in the text.

To foster engagement, maybe we share images, a salient example, an essential word or concept. We might ask kids to turn and talk about their

“Nothing is more important than teaching young people to use and recognize the power of their own minds.”

prior knowledge so we can address any misconceptions. Building background is essential, but getting kids quickly into reading is the best way for them to add to their knowledge store, become more literate, and ultimately, better educated.

Build a Repertoire of Thinking and Reading Strategies

“From start to finish, make your reading of any text thinking-intensive” (President and Fellows of Harvard College, 2011). This is advice to Harvard freshmen, but why not get a head start on this in elementary school? What we often call a “strategy” is really a whole package of strategic possibilities for reading to understand and remember new information. Kids need an arsenal of tools to think deeply about text.

Take the strategy of determining important ideas, for example. There’s a lot more to determining importance than merely finding the main idea. When focusing on teaching students to determine important information, we design ways to teach kids to sift important ideas from interesting details, target and paraphrase key information, and decide what to remember (Harvey & Goudvis, 2005; NGA Center & CCSSO, 2010).

The same goes when we teach kids to infer, question, or synthesize. We don’t simply teach a strategy one time and call it a day, nor do we do a strategy unit for weeks on end. Instead we share multiple ways to give kids a repertoire of strategic tools that allow them to delve

into the text and work out their thinking to construct meaning.

Scaffold Collaborative Discussions

Over the years, we have observed that students who have a repertoire of strategic practices under their belts participate more fully and actively to construct meaning through classroom conversations and dialogue. When students annotate texts, respond with questions and inferences, and consistently interact with each other, classroom discussions of both specific texts and content seem more thoughtful, our teaching more effective. In collaborative discussions, comprehension strategies provide a variety of entry points into the text and lead to richer conversations about it. Kids’ questions and inferences prompt responses from their peers that foster deeper understanding.

For example, as students were taught to distinguish their thinking from the author’s (Harvey & Goudvis, 2005), they questioned the author’s perspective, brought in different points of view, and took a more critical stance. When kids broadened their understanding of ways to question the text, they often went beyond literal understanding to focus on the bigger ideas and issues. As students internalize a common language of comprehension, reading and thinking strategies support effective discussion and facilitate learning from text.

We guide students to merge their thinking with the text to develop a line

of thinking about it. In focusing on a line of thinking, we steer students to use the information in the text to understand the important ideas and issues raised by the text. We listen carefully so we can weave students’ responses and ideas into the discussion. The insights and perspectives kids offer often take the conversation in important and unanticipated directions.

Through our language, we encourage kids to expand on their thinking. We ask questions such as those on the continuum, What makes you say that? Can you tell us more about what you are thinking? How did you come up with that? These conversations send the message that kids’ thinking matters. Our discussions and the kids’ reading are springboards to their independent thinking, understanding, and decision making.

Integrate Reading and Thinking Strategies Across the Curriculum

At the very moment when calls for scaling up the curriculum echo from coast to coast, history, social studies, science, geography, and other content subjects are too often barely a blip on the radar screen. No Child Left Behind (NCLB) morphed into MCLB, *much curriculum left behind*, as schools narrowed their curriculums in the face of high stakes tests in math and reading (Berliner, 2009).

Pearson, Moje, and Greenleaf’s (2010) message is clear: Reading across the disciplines is nonnegotiable.

Without systematic attention to reading and writing in subjects like science and history, students will leave schools with an impoverished sense of what it means to use the tools of literacy for learning or even to reason within various disciplines. (p. 460)

Reading, writing, and thinking across disciplines promotes literacy in

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the broadest sense of the term. We'd argue that our democracy depends on making sure our kids build their knowledge store about the world so they are prepared to read with a critical eye and a skeptical stance. They need to sift, sort, and evaluate the barrage of information that bombards them each and every day. They can't swallow whole everything they read, view, and hear. They need to be ready, willing, and eager to engage in dialogue—with their peers, their elders, their bosses, and, while still in school, their teachers. And above all, they must continually ask questions to become informed, engaged, thoughtful citizens.

So in the 12 years that have passed since we wrote our first edition of *Strategies That Work*, we continue to keep comprehension at the core of our teaching and learning. We have revised and tweaked our thinking, but believe, now more than ever, that ultimately becoming literate and educated is all about understanding, acquiring knowledge, and actively using it.

Eleanor Roosevelt punctuates the point: "Every effort must be made in childhood to teach the young to use their own minds. For one thing is certain: if they don't make up their own minds, someone will do it for them" (Beane, 2005, p. 75).

When hearing this, we may think, *Never more important than today*. But if

we had read this quote when Eleanor Roosevelt actually said it, we would have had the same thought. And if we were to read this midway into the 21st century, we would recognize its significance as well. Nothing is more important than teaching young people to use and recognize the power of their own minds. We simply must keep teaching in a way that ensures they will.

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