

New Literacy Research Infuses Common Core

In the 15 years since the National Reading Panel convened, the knowledge base on literacy has grown

By [Sarah D. Sparks](#)

The truism that students "learn to read, then read to learn," has spawned a slew of early-reading interventions and laws. But the Common Core State Standards offer a very different view of literacy, in which fluency and comprehension skills evolve together throughout every grade and subject in a student's academic life, from the first time a toddler gums a board book to the moment a medical student reads data from a brain scan.

In doing so, the common-core literacy standards reflect the research world's changing evidence on expectations of student competence in an increasingly interconnected and digitized world. But critics say the standards also neglect emerging evidence on cognitive and reading strategies that could guide teachers on how to help students develop those literacy skills.

"In our knowledge-based economy, students are not only going to have to read, but develop knowledge-based capital. We need to help children use literacy to develop critical-thinking skills, problem-solving skills, making distinctions among different types of evidence," said Susan B. Neuman, a professor in educational studies specializing in early-literacy development at the University of Michigan in Ann Arbor. "The Common Core State Standards is privileging knowledge for the first time. To ensure they are career-and-college ready, we have to see students as lifelong learners and help them develop the knowledge-gathering skills they will use for the rest of their lives. That's the reality."

Response to Findings

It's been 15 years since Congress convened the National Reading Panel to distill knowledge about how students learn to read. That group, in the heat of the so-called "reading wars" between whole-language and phonics approaches to instruction, focused on five

fundamental literacy skills: the word-decoding skills of phonemic awareness and phonics, fluency, vocabulary, and text comprehension. The panel's seminal 2000 report, "[Teaching Children to Read](#)," was used as the touchstone of the \$1 billion-a-year federal Reading First grant program, established under the No Child Left Behind Act of 2001.

Eight years later, the U.S. Department of Education's research arm found that schools using Reading First did devote significantly more time to teaching the basic skills outlined by the panel, but ultimately "reduced the percentage of students engaged with print," both fiction and nonfiction. The [study](#) by the Institute of Education Sciences found students in Reading First schools were no better at drawing meaning from what they read than students at other schools, and the program eventually was scrapped.

"One of the things we're seeing with the common core is, there was general disappointment with the NRP report's five critical skills as part of the Reading First initiative," said Ms. Neuman, who was an assistant secretary of education during the first term of President George W. Bush, when the federal reading program was rolled out. "When the evaluation came out and the results were very modest, people said, 'Well, what's next, what do we do?' We have not seen the emergence of a new model, and now, that's on the verge of happening."

Peggy McCardle, the chief of the child development and behavior branch—which includes literacy research—at the National Institute on Child Health and Human Development, said comprehension became the "next great frontier of reading research" after the National Reading Panel. There have been other, narrowly focused panels on early reading and English-language learners, but the National Reading Panel still stands as the last comprehensive, Congressional task force on reading.

"What the National Reading Panel had to say about comprehension was, we do need to teach kids strategies, and it's better if you teach them in combination—and we've taken that much further," Ms. McCardle said. "While we don't have reading comprehension completely figured out in every way, ... we have it much more figured out than we did in 2000."

The common core's emphasis on more complex text with higher-level vocabulary at younger ages—and particularly the use of informational, non-narrative texts as opposed to overwhelmingly narrative texts—also puts into practice research showing that there is no bright line for when students start to read to learn, Ms. McCardle said. Setting one would be

"an artificial distinction," she said, "because the ramp up to learning from reading starts earlier and is just that, a ramp-up, not a quick switch or a dichotomy."


Comprehension and the Standards

The Common Core State Standards take a holistic view of comprehension, asking students to derive meaning from a mix of texts, illustrations, and digital media at the same time.

"Our knowledge of comprehension is changing. We used to teach strategies, on the assumption that those strategies would translate to any text. Now we recognize that transferability has real problems; we need to teach in the context of the text," said Susan B. Neuman, a professor of educational studies specializing in early-literacy development at the University of Michigan in Ann Arbor.

This is one area in which the standards have staked a position on the bleeding edge of research on learning, said Nell K. Duke, a professor of language, literacy, and culture at the University of Michigan School of Education in Ann Arbor. "How do you teach kids to read a diagram, how do you teach kids to read a time line? What typically goes wrong with reading a graphic?"


Viewing comprehension as a sequential skill rather than a continuously evolving one "also implies they don't need ongoing instruction after 3rd grade, and we clearly know they do," she said.

The Alliance for Excellent Education's 2006 report ["Reading Next"](#)  helped spark the common core's approach. Education professor Catherine A. Snow and then-doctoral student Gina Biancarosa of the Harvard Graduate School of Education found that explicit comprehension instruction, intensive writing, and the use of texts in a wide array of difficulty levels, subjects, and disciplines all helped improve literacy for struggling adolescent readers.

"There are two really big ideas underlying the common core," said P. David Pearson, a professor of language and literacy, society, and culture at the University of California, Berkeley. The standards first set out that children build knowledge through their close reading of texts, a concept "consistent with the last 20-30 years of research," Mr. Pearson said.

"But the second big idea is its grounding in the disciplines," Mr. Pearson added. "If you think of science and history and even literature as disciplines, you can see why they have separate standards in reading for literature, informational text, science, and technical areas. You're not just learning to read; you're learning to read within a rich content area. This reflects a huge refocusing of reading research in the last 10 to 15 years on reading in the disciplines. It's been timely; they've hit a theme in the realm of education policy and practice."

Content and Complexity

Mr. Pearson pointed to research by Cynthia L. Greenleaf, a co-director of the Strategic Literacy Initiative at the San Francisco-based research group WestEd, which identified [specific literacy skills](#)  required in science and history classes. Timothy Shanahan, the director of the Center for Literacy at the University of Illinois at Chicago and a member of the common-core literacy-standards committee, likewise has found differences not just in the content knowledge but the approach to reading and getting information from text by professional scientists and historians.

While "reading across the curriculum" research in the mid-1990s also stressed text in different content areas, Dorothy Strickland, a reading professor and education professor emeritus at Rutgers University in New Brunswick, N.J., said the common core leverages emerging research on how students analyze and verify what they read in different types of text, from literature to a lab report or an Internet blog.

"One of the key elements of executive function is holding more than one thing at a time" in mind, she said. "Kids have to read across texts, evaluate them, respond to them all at the same time. In office work of any sort, people are doing this sort of thing all the time." The "Reading Next" report also highlights labor studies that show the 25 fastest-growing professions from 2000-2010—computer software engineers, database administrators, and medical assistants, among them—require higher-than-average literacy skills, particularly in informational texts.

In a series of experiments across several grades beginning in 2000, Nell K. Duke, a professor of language, literacy, and culture at the University of Michigan in Ann Arbor, found elementary classrooms spend on average only 3.6 minutes a day reading non-story-based

informational, as opposed to narrative texts. In classrooms with high numbers of poor children, informational reading occupies less than two minutes a day.

"Even if there hadn't been one stitch of research on informational text with young children, it's still conceivable the common core would have had an incredible emphasis on informational text because that was what colleges and employers were saying students needed to be able to read," Ms. Duke said. "Fortunately, there was a nice alignment between the concerns of researchers and the concerns of the college and business community."

The fundamentals discussed in the National Reading Panel are still there, too, but have been given different weight. For example, vocabulary gets much more attention in the common core, not just individual words, but their meanings in different contexts and the nuances in families of related words. In part, that's because a student's depth and complexity of vocabulary knowledge predicts his or her academic achievement better than other early-reading indicators, such as phonemic awareness.

"There was a big push on academic vocabulary and the discourse of the disciplines. It's likely come from that whole tradition of making sure kids not only have general academic language but deep vocabulary of history, social studies, science," Mr. Pearson of UC-Berkeley said.

The common core also marks a sea change in the way researchers and teachers think about a child's reading level. For example, in a 2010 [study](#) in the *Journal of Educational Psychology*, researchers assigned two groups of poor readers in grades 2 and 4 to practice reading aloud text either at or above their reading level; a third group, the control, had no additional practice. They found students who practiced reading, even when it was difficult, were significantly better 20 weeks later at reading rate, word recognition, and comprehension, in comparison with the control group.

"It flies in the face of everything we'd been doing. Since the 1940s, the biggest idiots in the field—like me—were arguing that you couldn't teach kids out of books they couldn't read," Mr. Shanahan said. "We were setting expectations of such a modest level of learning being possible. We were unintentionally holding them back, and the common core called us on that."

Standards and Grades

Ms. Strickland and Mr. Pearson said the common core's strength comes from integrating many factors that have been identified as vital to adult literacy—such as facility with complex text or academic vocabulary—across all grades and academic subjects. "I think the idea of 10 standards that play themselves out grade after grade across different disciplines is a powerful thing," Mr. Pearson said.

Still, researchers said, while individual standards are backed by evidence that students' level of mastery of them can predict their eventual literacy in college and work, there is much less research supporting the grade-level descriptors of how those skills look through the years, or the most effective instructional strategies at each grade. Mr. Pearson said descriptors at transition grades, such as in upper elementary and middle school, may become the "Achilles heel of the standards."

"As you move through the grades, it changes in funny ways, and I don't think the changes are based on any actual research, but on professional consensus," Mr. Pearson said. "We may end up in the strange position of having a standard in 8th grade easier than one in 6th grade."

Mr. Shanahan agreed that "some of the targets are a little goofy," noting, for example, that the common core requires children to compare two texts in kindergarten, but there is no specific evidence that this skill should develop in that grade versus, say, grades 1 or 2. On the other hand, Mr. Shanahan said, "I think what the learning progressions tell us is a 4th grade teacher can no longer be a 4th grade teacher, or even a grades 3-4-5 teacher. They need to be a teacher of literacy and understand the precedents and antecedents of what a student needs to know."

Getting There From Here

Much of the criticism of the common core's research base comes from what it leaves out rather than what it includes.

In the years since the National Reading Panel, reading researchers have made significant advances in the development of strategies for reading and comprehension, as well as metacognitive factors that contribute to reading success, such as attention and motivation.

In its preface, the literacy standards bluntly limit their scope to "required achievements"—the outcomes of reading, as opposed to strategies for comprehension.

"The standards do not mandate such things as a particular writing process or the full range of metacognitive strategies that students may need to monitor and direct their thinking and learning," the common core states.

Rather, it says, teachers should use their professional judgment and experience to decide how to help students meet the standards.

"It's not because [the common-core designers] rejected that research," Mr. Shanahan said. "The notion was that you wanted to focus on outcomes, not the inputs. It might be helpful to teach a student whether he's paying attention or not, and if not, to do something. The common core isn't saying you shouldn't do that kind of thing, but that's not an outcome." Maureen McLaughlin, the president-elect of the Newark, Del.-based International Reading Association, sees the lack of reading-strategy research in the curriculum as tantamount to having no research base where it counts most. "I see a gap between the standards and school curriculums, because typically when [previous]state standards were developed, they basically became the curriculum," said Ms. McLaughlin, who also chairs the reading department at East Stroudsburg University of Pennsylvania. "If the states that adopted the common core say to their school districts, 'This is the curriculum,' and teachers feel they must teach to the test, the curriculum as it exists would not include the metacognitive strategies, the writing-process strategies... and that's a problem."

Ms. Neuman, the former assistant education secretary, disagrees. "I like the idea of focusing on outcomes," she said. "Comprehension strategies and metacognitive techniques have often been talked about as repair strategies, but you have to actually know you are not reading well to use those. So it's a little bit of a Catch-22 here. What this new approach is saying is focus on the text, because many remedial readers rely too much on their background knowledge and think they understand what they are reading when they actually do not."

The University of Michigan's Ms. Duke echoed the researchers' general concern that there has not been enough study of what good comprehension looks like and how to teach it in new contexts required by the common core, such as Internet articles, data tables, and texts that also include graphics.

"When a standard calls for us to get kids proficient at something we don't yet know how to get students proficient at, we really have to scramble a little bit," she said. "Hopefully, in a decade, we'll have really nice research on effective ways to go about this."

Mr. Shanahan agreed.

"I don't know of any studies or lines of research that might make us decide three or five years from now, let's take out these items or put these in," he said. "In many ways, the common core is silent on that. They're taking it on trust that we'll either know how to do it or we'll figure it out, and, as a field, I'm not sure we do know how to do it."

The common core's vision of how students ought to learn, grade by grade, to comprehend meaning differently across different media is sketched out in one strand of the reading standards—part of "integrating knowledge and ideas."

Kindergarten: With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).

Grade 1: Use illustrations and details in a story to describe its characters, setting, or events.

Grade 2: Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

Grade 3: Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Grade 4: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Grade 5: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

Grade 6: Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

Grade 7: Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).

Grade 8: Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

Grades 9-10: Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.

Grades 11-12: Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

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