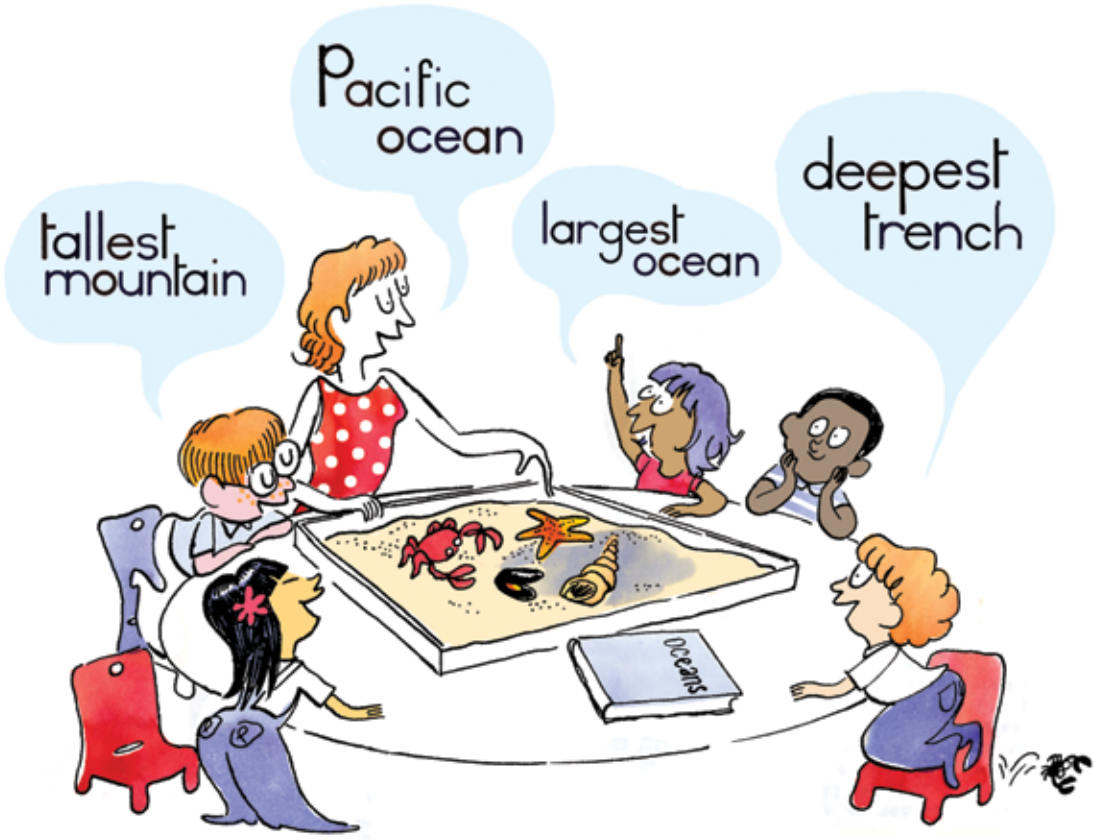
Sparks Fade, Knowledge Stays

The National Early Literacy Panel's Report Lacks Staying Power



By Susan B. Neuman

When it came time to find the man of my dreams, my mother, a yenta of the best sort, would often speak in homilies. She would remind me to stay away from those super-handsome flashy types—you know, the ones that stand out immediately in the crowd—because "they don't wear well," and moreover, "a nebbish would drive you meshuga." Rather, better look for the smart one, the "mensch"—someone you really want to hang out with over time—someone with "staying power."

Well, the mensch won out, and now, some 40 years later, I'd say with some degree of certainty that my mother was right. Looks *can* be deceiving, especially when the pickings are slim. But when you move outside of your immediate eye view, you begin to see a whole new world out there, something far deeper, and certainly more meaningful.

There's something to be said about my mother's wise counsel. In fact, I've relied on it throughout both my personal life and my professional life. Her words especially come to mind now, as I seek to better understand *Developing Early Literacy*, the report of the National Early Literacy Panel.[1] The panel, which consisted of nine experts, was convened by the National Institute for Literacy to synthesize the research on the development of literacy from birth through age 5. This panel was the intellectual sequel to the National Reading Panel, which consisted of a group of experts charged with analyzing the research on literacy development among school-age children. Both panels did important work, but both also suffered from a basic conundrum often faced by this type of consensus panel: the studies that met their methodological criteria sometimes were not the best studies to answer the questions posed. If readers of the resulting reports are not aware of this conundrum, they may not realize that the reports' recommendations are limited to what can be said given the panels' constraints, and that they don't represent all that is known, is likely true, or requires further study. Panel reports are extremely useful, but finding the deeper meaning and figuring out what has staying

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power often requires a broader view.

In the case of the National Reading Panel, the experts were charged with examining all the extant literature on teaching school-age children how to read. Although they skimmed over 100,000 articles, only 428 articles included enough data to make the cut for their meta-analysis (which is a strategy for quantitatively synthesizing research). Despite initially examining 32 topics, they ended up reporting on just seven topics. And, of those seven, only two—phonological awareness and phonics—had enough data to make strong recommendations. The other areas—fluency, vocabulary, comprehension, teacher education, and technology—all had too few studies to make firm conclusions. The resulting report was terrific *as far as it went*. Phonological awareness and phonics, as well as the other five areas, are extremely important, but there's more to literacy development than these seven topics.

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In the case of the National Early Literacy Panel, the esteemed scholars were charged with reviewing the existing research in early (ages 0–5) literacy. The pickings were slim. Over the eight years of their work, only 190 studies met their rigid criteria for examining the effectiveness of instructional strategies, programs, or practices. Almost half of those studies (41 percent) focused on code-based interventions. When I say "code-based," I mean the interventions were designed to help young children understand the alphabetic principle, decoding (i.e., sounding out words), and encoding (i.e., learning which letters are used to write particular sounds and words). You needn't be particularly prescient to guess what they concluded: code-based interventions are key to literacy. More specifically, here is the list of code-based interventions that they found to be the strongest predictors of later measures of literacy development: alphabet knowledge, rapid naming of letters, phonological awareness, phonological memory, and writing one's own name.

I agree that all these things are extremely important. But I worry that too many readers of *Developing Early Literacy* will not realize what a narrow view of literacy development it presents. The problem for the panel, of course (and I feel their pain), is that they can't examine what hasn't been tested. While many of us might think that at least something must be missing from this equation for successful reading, you'd be hard-pressed to convincingly prove your case. In fact, if your goal were to identify interventions, parenting activities, and instructional practices that promote the development of children's early literacy skills, more likely than not, you'd come up with the same result: code-based instruction = early reading development.

But while the existing evidence might suggest a code focus like letter-name knowledge, a different type of empiricism begins to argue against such a narrow focus. Just observe a really good preschool. Look at what's going on. The most engaging classrooms, the ones where children seem actively involved in projects or investigations, aren't just fiddling around with sounds associated with printed letters. Sure, you will (and should) see ABCs, tons of books in all locations, and paper, pencils, and writing implements in the room. But these materials are not the drivers of the activities.

Rather, they stand in service of a much more important focus: the desire to know. Children are natural knowledge seekers. Whether it's orca whales, dinosaurs, or the latest technological doodad, children's activities are often guided by their need to know. They want to become expert in a domain. And it's this goal that drives their ambition to come to school to learn about literacy, among many other things, not their desire to be able to "rapidly name a sequence of repeating random sets of pictures of objects" (which is one of the things that the National Early Literacy Panel found code-based interventions help children do, and which, to be fair, is actually important for learning to decode fluently).[2]

All well and good, you might say. Of course it's important to know such things. But the discussion here is supposed to be about literacy development, not background knowledge or concept development. If the charge to the panel had been to look at science achievement, we might take a look at content knowledge. However, if we are to stick to the panel's charge, to discern what it takes to develop conventional literacy skills—decoding, oral reading fluency, comprehension, writing, and spelling—it only makes sense to target aspects of literacy that are clearly the focus of reading, writing, and spelling development.

Or does it? Here's where things get tricky. Of the skills listed above defining conventional literacy, you'll see one that sticks out like a sore thumb: comprehension. Except for comprehension, these skills are code based.* Comprehension is not code based. In the early years, it is not even the understanding of text—at least in the conventional form. Even the most precocious child in the birth-through-5 age range isn't really engaged in the kind of text reading that is adequately measured through questioning, synthesizing, and thinking aloud.

Most of what we know about comprehension comes from studying students in grades 4 through 12 who are failing at it. You'll hear teachers describe it like this: "The student can't understand the text at all." "The student reads the text by totally changing its meaning." "The student misreads the text by taking words and phrases out of context." "The student is a word caller" (which is someone who can decode the words but not understand them). Whether you call it the "fourth-grade slump" or the road to drop-

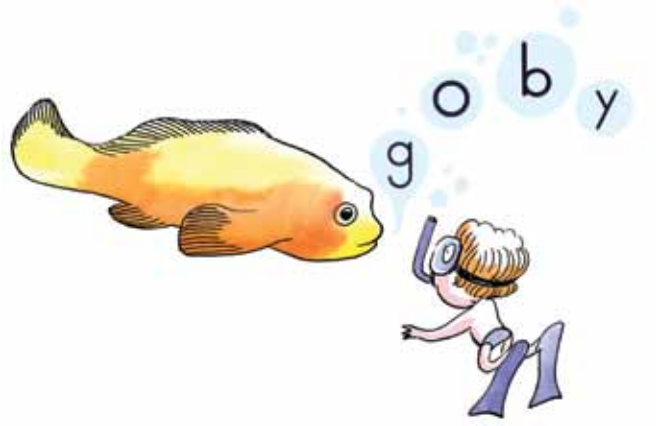
*In the upper elementary and middle grades, spelling is also an exception as it requires kids to learn about words' origins and histories. See "How Words Cast Their Spell" in the Winter 2008–2009 issue of *American Educator*, available at www.aft.org/pdfs/americaneducator/winter0809/joshi.pdf.

ping out, the problem is the same: as the texts get harder and the academic language gets tougher, students can't understand what they read.

So let's step back a minute and ask what we could do to change this unfortunate trajectory. Given that the large majority of children have the wherewithal to read and read well, what might we need to do in the early years to help children get on the road to successful reading, not just in kindergarten, but in the later years when the comprehension demands are greater?

The flashy solution would be to hit the code-based interventions highlighted in *Developing Early Literacy* even harder. Instead of outdoor activities, or play, or science projects, or the teacher reading books aloud, we could have phonological memory time or games with random letters and digits. Sadly, such approaches are becoming increasingly popular across the country.

But there is another solution. Taking my mother's advice to heart, let's do our own literature review to see if we can find an approach that may have more staying power. Perhaps the true path to literacy is not to focus exclusively on the procedural skills that stand out in the crowd, but to ensure that all children develop both skills and the knowledge of content and concept that underlie comprehension. If so, most of our efforts in the preschool classroom would be to get children to engage with new content, to think, to grapple with ideas, to experience the "aha" that comes when we achieve something meaningful against resistance. In this scenario, knowledge is the headline star, and conventional literacy skills are the supporting cast members.



We should get children to engage with new content, to experience the "aha" that comes when we achieve something meaningful.

Now, thinking that knowledge must come into play, we could approach the panel's charge in a somewhat different way. Instead of only looking for studies about reading, we could also look for studies about content understanding or comprehension. Taking this broader view, we are rewarded with many studies—and even a meta-analysis—that the panel did not consider. Let's start with the meta-analysis, which consisted of 22 studies describing 40 experiments on instructional strategies for science classes that spanned third grade through the beginning of college.[3] None of the approaches that focused on skills made a bit of difference for students' comprehension of science. Rather, the effective interventions all focused on the structure and function of students' scientific knowledge base. Most powerful were interventions that helped students integrate their knowledge into larger scientific categories and concepts.

Moving on to the individual studies, it's not long before we find one of the seminal studies of comprehension—a simple look at children's ability to comprehend and recall a text about baseball.[4] The researchers asked seventh-grade students to read a grade-level passage that described a half inning of a baseball game. According to a standardized reading test, half of these students were good readers, half were poor readers. Using a task somewhat similar to a think-aloud protocol, the researcher divided the passage into five parts, and after each part students were asked to use a replica of a baseball field and players to show the plays as described in the text. It turns out that background knowledge of baseball trumped all the reading skills measured on the standardized achievement test: poor readers with high knowledge of baseball displayed better comprehension and recall than good readers with low knowledge of baseball.

What is going on here? Could knowledge actually aid comprehension of text? As we continue our search, we come upon studies that go one step further, looking at high- and low-aptitude children (according to standardized intelligence tests), some who have prior knowledge of the subject domain and some who do not.[5]

For example, in one experiment, 576 young soccer experts and novices were compared on their ability to memorize details, make inferences, and detect basic contradictions in a story about soccer that was contrived to include lots of misinformation.[6] Not surprisingly, the experts wildly outperformed the novices: experts remembered more details, better applied what they read to new situations, and detected more contradictions than their novice peers. But here's something that the researchers didn't anticipate: *the high- and low-aptitude experts did not differ from one another*. In other words, there was virtually no distinction between their performance on these tasks, and both were clearly superior to high- and low-aptitude novices. In addition, high-aptitude novices did no better than the low-aptitude novices.

Being meticulous scientists, the researchers replicated their study, this time with another 185 students, to find out if the tests might have inappropriately prompted the experts' recall and understanding, or if the skills associated with executive functioning (e.g., memory monitoring techniques) might differ between experts and novices.[7] This time around, they chose a more open-ended task, being careful not to cue or prime students in any way. They asked them to "think aloud" as they read, and to recall what they had learned from this text. This time, even memory monitoring and prediction accuracy were superior for students who had more prior knowledge about soccer, despite differences in aptitude. Even more remarkable, other researchers looking into areas such as chess, computer programming, bridge, circuit design, map reading, music, and dance performance all show the same

result.[8] *Knowledge improves comprehension and performance.*

So if the National Early Literacy Panel had examined comprehension, instead of only examining studies related to a rather narrow definition of reading, then the major headline in *Developing Early Literacy* might have been "All students will learn more and comprehend better if they have greater background knowledge," or "To be successful in reading comprehension, students must acquire knowledge."

However, there's not a smidgen of evidence on background knowledge in the panel's report. In one case, I came upon the term "world knowledge" as a modifier of oral language development, but I could never find it on its own. Background knowledge is not considered a predictor, it's not listed as an independent variable—it's just missing.

Why? you might ask. Most likely it is due to the old-fashioned notion that learning to read precedes reading to learn. And this might be the crux of the problem in *Developing Early Literacy*. To examine the importance of knowledge and concepts, the panel members would have had to look at learning to read in rich content domains. Take, for example, educational psychology professor Deborah Simmons and her team,[9] who have developed the Project WORLD (Words of Oral Reading and Language Development) intervention designed to teach the content areas of science and social studies through shared book reading in kindergarten. Another example is the work my colleagues and I have done with the World of Words curriculum; we teach preschoolers vocabulary through the content areas of health, science, social studies, and math.[10] By the end of a typical eight-week session, we have children making inferences about new, unfamiliar words that are related to the concepts we taught. Others before us have examined children's knowledge gains in science and math through such conventional measures as retellings and listening comprehension, as well as less conventional measures such as problem sets—solving new problems that require children to use their knowledge.[11] None of these studies, however, would have likely made the panel's cut, with its narrow focus on skills in reading.

Here my mother's sage advice becomes even clearer. If we are to stay true to our long-desired goal of high achievement for all children, then we cannot simply focus on the nearest target: decoding. Rather, we must look toward the goal that has real staying power: the complex skill and knowledge required for reading comprehension. Their foundation is word and world knowledge, the critical features that will enable students to be proficient readers in elementary school and beyond.

This means that to be successful, children need to learn *both* code and content knowledge. Code-related skills, like the essential alphabetic principles that make up our language, are a critical component in learning to read. But while these skills are necessary, they are certainly not sufficient. They must be accompanied by a massive, in-depth, and ever-growing foundation of factual knowledge.

For those who are new to early childhood education, it's important to realize that this built-up store of knowledge can't be poured into children as if they were empty vessels just waiting for our precious insights. All children, but especially young children, need time to play actively with ideas, experience and ask questions, and connect new learning with what they already know. Such efforts can't be delayed until children are supposedly reading to learn; nor can they be subordinated in any way to other skills. Code and content learning must be emphasized simultaneously.

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Suppose, for example, instead of focusing on print referencing or some other basic skill in shared reading, we returned book reading to its original purpose: learning about ideas and the words that convey them. We read to little 4-year-old Abigail a story about kings and queens. Then, instead of going on to a new topic, over the next few days or even weeks we read more stories about kings and queens. We select fiction and information texts to give her lots of background information. Over the course of the readings, Abigail learns how kings and queens lived, what they did, and what problems they had to solve. Her questions become more pointed; her curiosity is piqued as she develops a growing knowledge base on the topic. We develop some activities, perhaps some play settings, that allow Abigail and her friends to use what they are learning, constructing new meaning through play. And the chances are good that Abigail will increase not only her general knowledge but the vocabulary she uses to express her ideas.

If we took knowledge building as a significant goal, just consider how we might organize instruction. Instead of a cafeteria approach to content, with a little bit of this and a little bit of that, we could develop units that immerse children in significant topics, and use activities like shared book reading to deepen knowledge and spark challenging conversations. Such features of classroom instruction might include:

- time, materials, and resources that carefully, actively, and sequentially build language and conceptual knowledge;
- a supportive learning environment in which children have access to a wide variety of reading and writing resources;

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- different group sizes (large, small, and individual) and different levels of guidance to meet the needs of individual children;
- opportunities for sustained and in-depth learning, including play; and
- a masterful orchestration of activity that supports learning and social-emotional development.

When I read *Developing Early Literacy*, I am reminded of one last missive from my mother. "Be careful what you wish for," she would remind me when I was pining for one of those popular guys in high school. Through no fault of the panel, this report could be the subject of much mischief. There will be people out there who will require teachers to apply these code-based skills like a laundry list of what they should teach. They'll demand that teachers focus exclusively on alphabet knowledge, phonological awareness, phonological memory, and rapid naming of random letters and digits and colors and objects—and they will confidently argue that they are helping teachers do what is best in teaching children to read.

But they are not. With a literacy curriculum reduced to a set of narrow, largely procedural skills, children learn to please others through mimicking, reciting, and repeating. Children deserve better. In contrast to such an approach, we need to expose children to language, and to content-rich settings that can help them acquire the broad array of knowledge, skills, and dispositions that serve as a lifelong foundation for literacy. The early years are just too precious to get it wrong. ❑

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Endnotes

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