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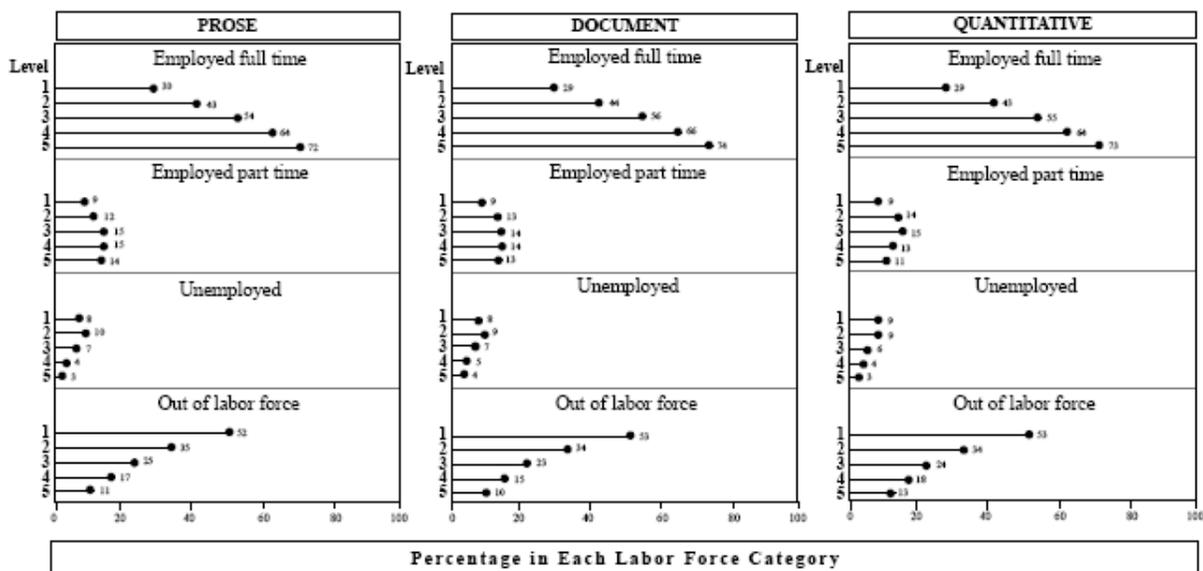
WHY DOES LITERACY MATTER?

“Reading makes you smarter,” says Keith Stanovich, a psychologist at the University of Toronto, and she has shown experimentally that this claim applies to children as well as adults. Teaching children to read not only gives them access to knowledge from print, but also makes them better able to use that knowledge. Children who read store up background knowledge about the things they read about, whether it be nature, science, history, current events, or geography (Stanovich, 1992). Having background knowledge helps readers make sense of the new things they read (Anderson & Pearson, 1984). Children who read gain bigger vocabularies, too (Smith, 1997), and having bigger vocabularies enables them to notice things (Brown, 1955) and to make finer distinctions in their perceptions of the world (Beck, McKeown, & Kucan, 2002).

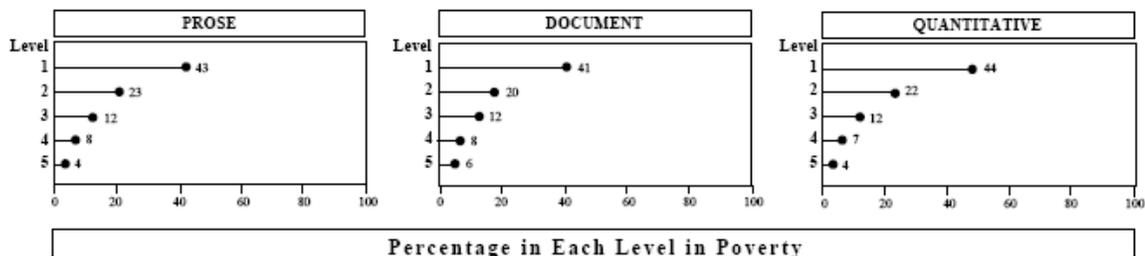
Literacy helps children to think in more sophisticated ways. Studies have shown that reading proficiency makes profound differences in people’s reasoning, their awareness of language, their understanding of themselves, and even their ability to formulate questions and learn about things they didn’t know (Luria, 1976). Children who read and talk about books with others show greater self-awareness and critical thinking (Almasi, 1995), tend to engage ideas more deeply (Eeds & Wells, 1989; Goatley, Brock, & Raphael, 1995), and are more likely to perceive themes in stories; that is, they are more likely to get the message (Lehr, 1991).

Among adults, literacy is associated with better health, greater job opportunities, and higher incomes (Policy Almanac.org, 2002; US Department of Health and Human Services, 2006). Surveys show that people who can read and write well tend to have a wider range of options in life. The following graphs from the National Adult Literacy Survey of 26,000 people in the US over the age of 16, showed that five levels of literacy, from low to high, correlated strongly with a surprising range of outcomes (National Center for Education Statistics, 1993).

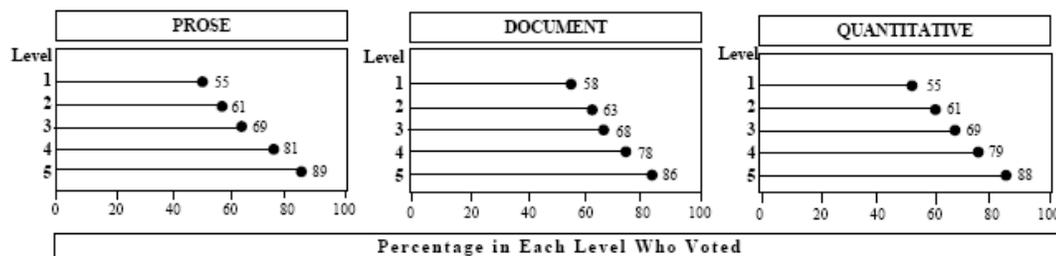
Percentages of Adults In and Out of the Labor Force, by Literacy Level



Percentages of Adults in Poverty, by Literacy Level



Percentages of Adults Who Voted in a National or State Election in the Past Five Years, by Literacy Level



Note: This figure represents the percentages of adults who voted, of those who were eligible to vote.

The strong effect of literacy on happier life circumstances is important to teachers of the lower grades, because students' early experiences as readers often have a determining effect on their eventual success or failure to learn to read and write.

Those of you who are fortunate enough to be teachers are in a privileged position to make sure your children have better choices available to them. You can teach them to read and write. But be aware that people with limited literacy do not usually see themselves as having a literacy problem (National Center for Education Statistics, 1993). On the National Adult Literacy Survey, only one person in four of those with the lowest level of literacy sought help with reading.

NALS

Table 1.3

Percentages of Adults Who Reported Getting A Lot of Help from Family Members or Friends With Various Types of Everyday Literacy Tasks, by Literacy Level

	Total Population	Level 1	Level 2	Level 3	Level 4	Level 5
Prose tasks: printed information	9	23	8	5	2	1
Document tasks: filling out forms	12	25	12	7	4	2
Quantitative tasks: using basic arithmetic	5	14	4	2	1	0*

*Percentages below .5 are rounded to 0.

Note: The first row presents responses for adults in each level of *prose* literacy; the second row presents responses for adults in each level of *document* literacy; and the third row presents responses for adults in each level of *quantitative* literacy.

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

The task of a teacher of reading, or of anyone who wants to promote literacy, will not only be to teach, but also to motivate. Even though reading ability is a ticket to a better future for all students, they might not know that, and their families might not know it either. All of us have to make special efforts to encourage every child and that child's family members to *want* to become better readers.

HOW WELL DO CHILDREN IN THE UNITED STATES READ?

For years, the media have clamored about the poor state of reading in American schools. But the critics have mostly gotten it wrong. They have missed both the considerable achievements as well as the most serious challenges in our nation's efforts to teach all children to

read (Klenk & Kibby, 2000). In a nutshell, two things are true about the way children read in the United States:

- In comparison to children in other countries, American students in elementary school do fairly well at basic reading. According to the latest international comparison of reading achievement, the PIRLS (Progress in International Reading Literacy) 2006, American fourth graders scored 11th in the world—in the top third of the participating countries. American 15-year-olds scored 17th in the world—in the top fourth of countries that participated in the PISA (Programme for International Student Assessment) study in 2009.
- Success in reading among American students is spread unevenly, however. Our most successful students do well in basic literacy tasks, but there are many students who do not. For example, the National Assessment of Educational Progress (NAEP) defines a fourth grade “basic reading level” this way:

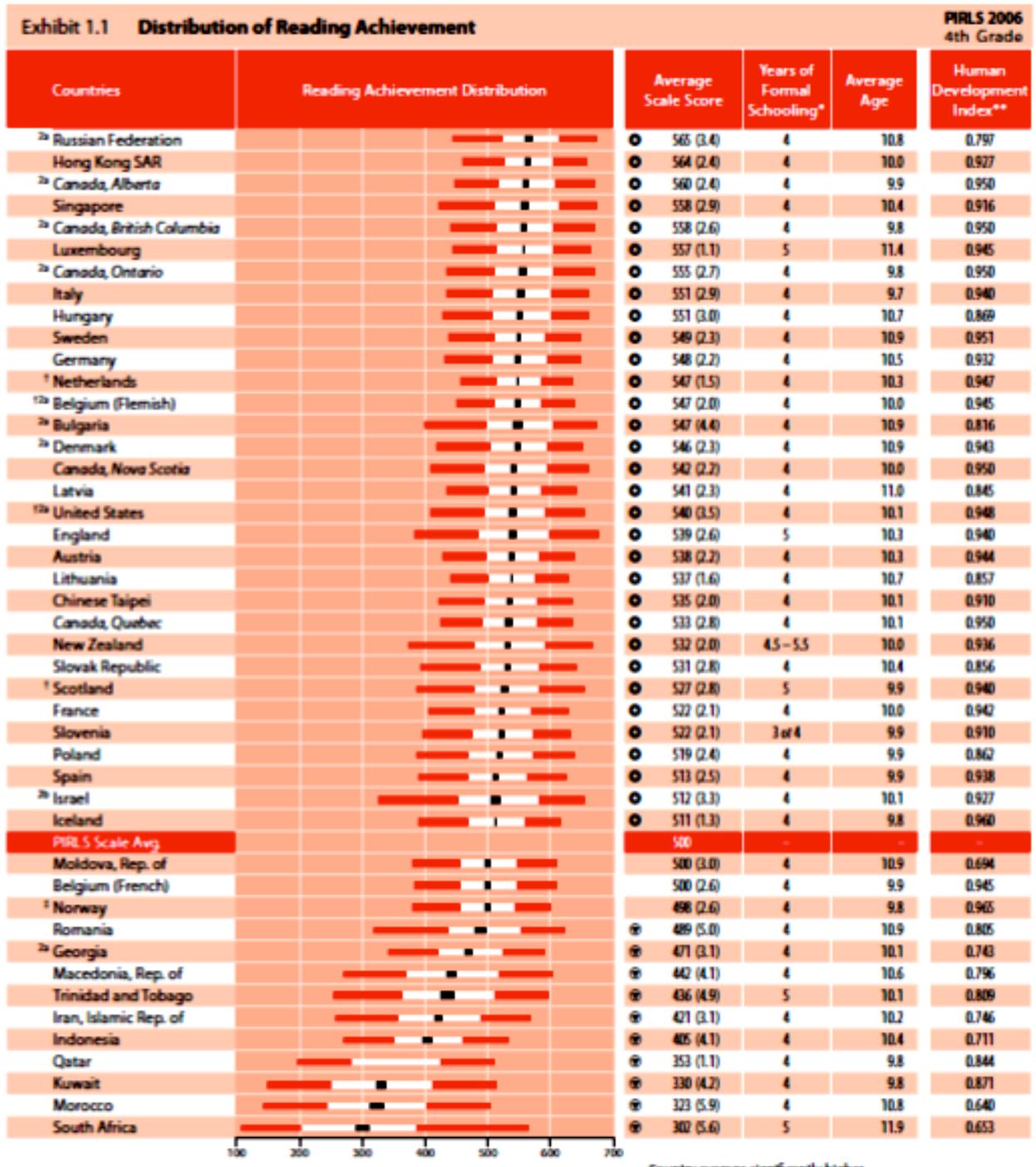
Fourth-grade students performing at the *Basic* level should be able to locate relevant information, make simple inferences, and use their understanding of the text to identify details that support a given interpretation or conclusion. Students should be able to interpret the meaning of a word as it is used in the text.

(National Center for Education Statistics, 2009).

In 2009, two thirds of all U.S. fourth graders could read at this basic level, but it is troubling that a third of all fourth graders could not. Slightly less than half of black and Hispanic fourth graders in the United States could read on a basic level.

There are also sizable differences in reading levels among the states. The state with the lowest scores had 49 percent of fourth graders reading below the basic level in 2009 and only 18 percent at the proficient level, compared to 20 percent below basic and 47 percent proficient in the state with the highest reading scores at fourth grade.

English language learners (ELLs) are defined by the NAEP as “[S]tudents who are in the process of acquiring English language skills and knowledge.” In 2009, 71 percent of the English language learners in the United States scored below the basic reading level, and only 6 percent scored at the proficient level.



At the eighth grade level, NAEP defines basic reading this way:

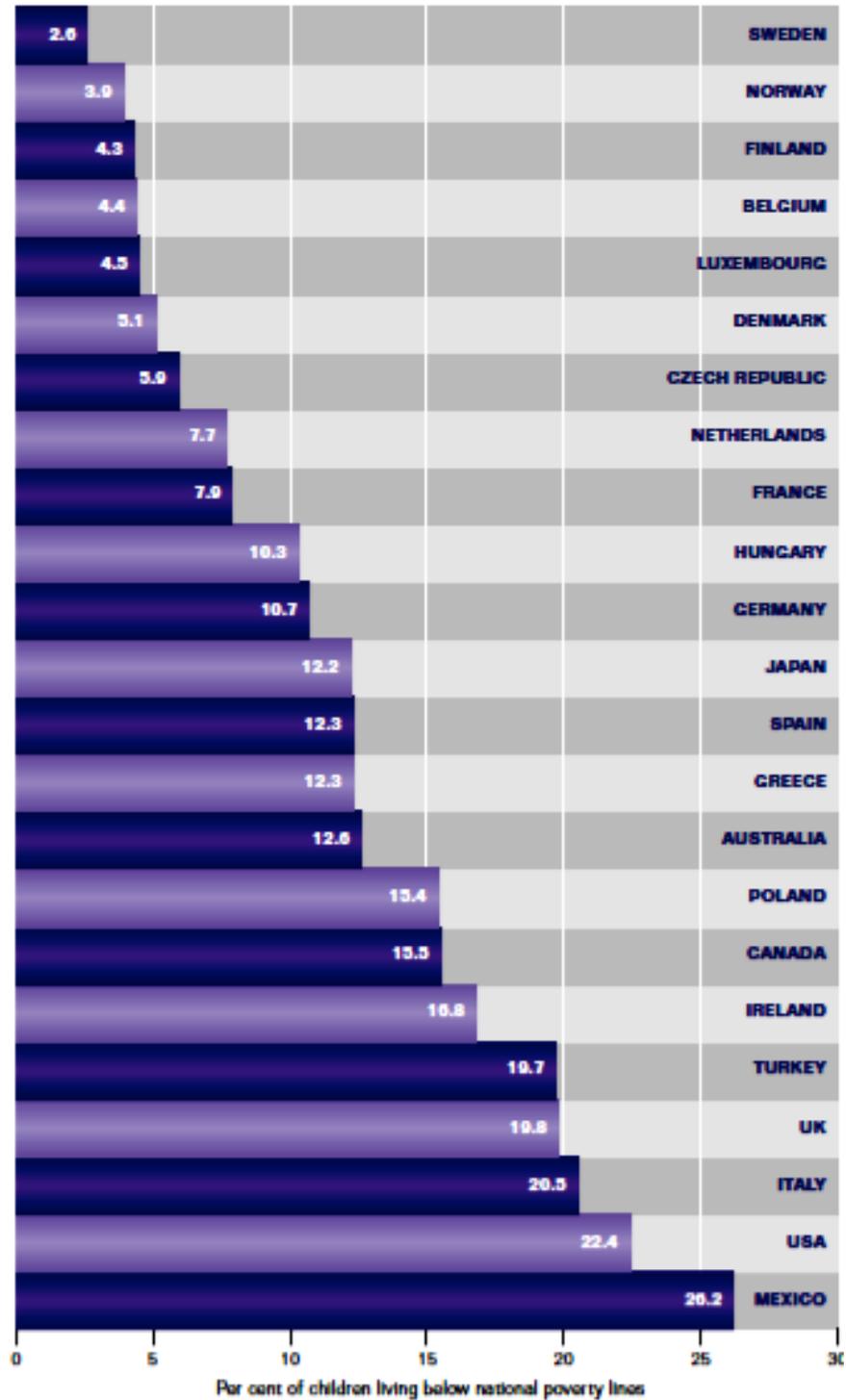
Eighth-grade students performing at the *Basic* level should be able to locate information; identify statements of main idea, theme, or author's purpose; and make simple inferences from texts. They should be able to interpret the meaning

of a word as it is used in the text. Students performing at this level should also be able to state judgments and give some support about content and presentation of content. (National Center for Education Statistics, 2009).

In 2009, three fourths of all U.S. eighth graders were at or above the basic level, and more than half of black students and three out of five Hispanic students were, too. But it's troubling again that so many eighth graders could not read on a basic level—especially given what we have already said about the considerable disadvantages of limited literacy.

- Differences in reading achievement are often related to socioeconomic status. That is not good news for American children, since about one in five of them lives in poverty. How does that compare with other countries? In the 23 wealthiest countries, the lowest incidence of child poverty was in Sweden, at 2.6 percent. The highest was in Mexico, at 26.2 percent. Slightly better than Mexico's rate of child poverty was that of the United States, at 22.4 percent.

Children Living in Poverty: An International Comparison



Source: UNICEF (2000). *A League Table of Child Poverty in Rich Nations*. <http://www.unicef-irc.org/publications/pdf/repcard1e.pdf>.

Poverty complicates children's learning in a host of ways . It is not surprising that poor children-

-those from families who are eligible for free or reduced cost lunches—tend to score well below other children in reading.

**Fourth Grade Reading Scores
from the National Assessment of Educational Progress, 2009**

	Percent Below Basic	Percent At or Above Basic	Percent Proficient
All Fourth Graders	33	67	33
Black Fourth Graders	52	48	16
Hispanic Fourth graders	51	49	17
English Language Learners	71	29	6
Children on National School Lunch Program	49	51	17
State with Highest Scores	20	80	47
State with Lowest Scores	49	51	18

Low family income does not necessarily mean students should perform poorly in reading. *Resilient students* are those who overcome difficult circumstances and learn to read in school. Poor children living in Asia are likely to be resilient—50 to 70 percent of them (PISA, 2009). But they are less so in the United States, where fewer than a third of children from poor family backgrounds tend to be resilient.

How Much Do Children Read?

Malcolm Gladwell recently floated the idea that the difference between the Beatles and the rest of us aspiring musicians, like the difference between Nobel Prize winning scientists and others,, boils down to 10,000 hours of practice. Whether or note that claim is true, it cannot be doubted that practice at anything requiring skill improves performance. And that includes reading. How much practice do students get in reading? Wilson, Anderson, and Fielding investigated fifth grade students’ out-of school reading habits, and the results, shown in the table below, were sobering.

Differences in Amounts of Independent Reading by 5th Graders
(Anderson, Wilson, and Fielding, 1988)

Percentile rank	Minutes of book reading per day	Words read in books per year
98	65.0	4,358,000
90	21.1	1,823,000
80	14.2	1,146,000
70	9.6	622,000
60	6.5	432,000
50	4.6	282,000
40	3.2	200,000
30	1.3	106,000
20	0.7	21,000
10	0.1	8,000
2	0.0	0

If these percentages were applied to a class of 30 students, the least avid reader didn't read anything, and the most avid reader read only an hour a day. The three least avid readers read for 6 seconds a day (two or three stop signs' worth), and the three most avid readers read only 20 minutes. That's not much time spent reading by any of the students—a lot less time than most children spend eating, or even getting dressed. Yet the differences are tremendous: for the three least avid readers to read as many words as the three most avid readers read in a year would take more than two centuries. Relatively small increases in the amount of time students read should make big differences in students' reading skill.

Why do some children have a really hard time learning to read?

Who Are the Struggling Readers?

If success in reading in the United States is spread unevenly, how many of our children have “reading disabilities”? A reading disability is said to be present when a child with normal intelligence who has had adequate instruction fails to learn to read. By this definition, experts have estimated that 10 to 20 percent of all school children have specific reading disabilities (Shaywitz, Escobar, Shaywitz, Fletcher, & Makuch, 1992). Some researchers suggest that the actual percentage of children with reading disabilities is much lower and that deficiencies can be overcome or prevented through appropriate reading-related experiences at home and proper instruction in kindergarten and first grade.

Why are early reading experiences so important? The importance of a good beginning in reading—and the damage that can be done by a poor beginning—was underscored by Connie Juel (1988). Juel surveyed a group of first graders in a Texas public school, found the 20 percent who read least well, and carefully tracked the reading progress of 54 of these students for three years. At the end of the study, *86 percent* of those children were still in the bottom half of the class. Although reading problems had not been severe in first grade, they were serious by fourth grade. There was little reason to hope that these children would close the gap in later years. Why?

In a famous essay, Keith Stanovich (1986) showed that in learning to read, “The rich get richer and the poor get poorer.” He meant that relatively small reading problems in the early years can discourage students from practicing their reading, so those small problems are compounded and grow into severe reading disabilities after three or four years. But children who start off relatively strong in reading get better and better.

Children learn to read by reading. But studies of reading habits show huge differences in the amount of reading children do. One study showed that the most prolific three or four readers in a fifth grade classroom read 100 times as much as the least prolific did.

How would you persuade a skeptic that teachers should help families help their children learn to read?

Families make a difference in children’s preparation to learn to read and write. On the average, children from poor families have more difficulty learning to be literate than children from middle-class homes do (Vernon-Feagans, Hammer, Miccio, & Manlove, 2001). But the exact reasons for this can be difficult to tease out. If a family is poor—and one fifth of America’s children live in families that are poor—then poverty itself presents a complex set of stress factors (Ehrenreich, 2001). If you are poor, it is hard to raise a healthy and competent child. It is hard to buy and prepare nutritious food. It is hard to afford good-quality childcare. It is hard to find the time and energy between jobs to spend time with your child.

Nonetheless, researchers have identified family literacy practices related to children’s success in learning to read and write. Many of these may be influenced by the school or by the school working in concert with community partners. Here is a set of factors that the National Research Council (Snow, Burns, & Griffin, 1998, p. 123) has identified:

1. **Value placed on literacy:** By reading themselves and encouraging their children to read, parents and other caregivers can demonstrate that they value reading.
2. **Press for achievement:** By expressing their expectations for achievement by their children, providing guidance in reading, and responding to the children's reading initiations and interests, families can create a press for achievement.
3. **Availability and instrumental use of reading materials:** Literacy experiences are more likely to occur in homes that contain children's books and other reading and writing materials.
4. **Reading with children:** Parents and other family members can read to preschoolers at bedtime and other times and can listen to schoolchildren's oral reading, providing assistance as needed.

Family literacy projects that encourage families to read to children and talk with them can have success (Vernon-Feagans et al., 2001). But helping families nurture their children's literacy is not a simple matter. Communication patterns within families are hard to change—even if we agreed that educators had any business trying to change them! A famous study showed that poor families offer children less verbal interaction than middle-class families do, and the shortage of interaction has a strong effect on the children's vocabulary size (Hart & Risley, 1995), which in turn shortchanges the store of meanings available to them as they try to learn to read and write.

Giving all families access to reading materials Here is another problem: It is known that children's preschool experiences with books and print also contribute to their success in learning to read once they arrive in school (Snow et al., 1998; Teale & Sulzby, 1987). But low income families have far less access to books than middle class families do. Writing in the *New York Times*, David Bornstein notes:

When we imagine people without books, we think of villagers in places like Afghanistan. But many families in the United States have no children's books at home. In some of the poorest areas of the country, it's hard to find books for sale. A study of low-income neighborhoods in Philadelphia, for example, found a ratio of one book for sale for every 300 children. Tens of millions of poor Americans can't afford to buy books at all.

(Bornstein, 2011, unpagged)

Certainly children's services of public libraries can help, but poorer communities have fewer libraries with fewer books that are open fewer hours (Neuman and Celano, 2012).

Nearly all families in the United States have some contact with literacy materials, but many low-literacy families really do not seriously engage with print enough to provide experiences for children that teach them (Purcell-Gates, 1995). Even when low income families visit libraries, the visits don't necessarily result in their finding materials to read (Neuman & Delano, 2006). Family literacy work is not always easy, but the title of Purcell-Gates' book about the illiterate mother and the semi-literate son--*The Cycle of Low Literacy*—underscores how important it is for educators to include families in their plans for promoting literacy.

COMPONENTS OF READING ABILITY

What exactly are you teaching when you teach a child to read? Reading ability can be broken down into several different sets of concepts and skills. The most widely recognized ones are outlined below.

Concepts about Print

Imagine a child who had never watched someone read. If that child were in your kindergarten or first grade class, you would need to show her what a book is, how to hold it, what is print and what is a picture, the direction of the print across from left to right and down the page, that print contains letters and the identities of those letters, that letters combine into words and that words are groups of letters with a space on either end, that the same words are spoken each time someone reads the same page, and that those words add up to interesting information or a good story. Taken together, all of these facts are called *concepts about print*. Most children enter kindergarten with at least some concepts about print intact. But children vary widely in their exposure to print, so assessing and teaching concepts about print is part of the repertoire of every teacher of preschool, kindergarten, and first grade—and every teacher of special education in the primary grades.

Word Recognition and Phonics

Recognizing the words on the page is the next important reading skill. This skill has two parts. One is recognizing words instantly, as you would recognize the face of a friend. This is

called *sight word recognition*, or recognizing words *at sight*. A word that has been seen many times, particularly if it refers to something interesting and its meaning is familiar, becomes a word a reader can recognize instantly. A good reader has many thousands of sight words in memory.

The other aspect of word recognition is puzzling out the identity of words readers can't yet recognize, and this is called *decoding*. When you read words like *glatz*, *charl*, *splane*, and *clorption*, you are *decoding*. A young reader uses decoding to figure out how to read the unfamiliar word *stripe* when he already knows how to read *stop* and *ripe*; or *dot* when he can read hardly any words at all, but knows the sounds represented by the consonants *D* and *T*, and the vowel *O* when it comes before a consonant. The sort of knowledge a reader applies when he decodes is called *phonics*. Phonics is knowledge of the relations between letters or groups of letters and speech sounds.

Phonics knowledge, in turn, has two parts. One is knowing the relationship between letters and clusters of letters called *graphemes* (a grapheme is a small unit of written language) and the speech sounds they represent. The other is awareness of those speech sounds, called *phonemes* (a phoneme is the smallest unit of speech sound). This latter sort of awareness is known as *phonological awareness* (which is the awareness of speech sounds in general, including syllables) and *phonemic awareness* (awareness of phonemes specifically).

Reading Fluency

Reading fluency has four aspects: recognizing words automatically and accurately, reading text efficiently (with appropriate speed), reading with meaningful inflection (the voice goes higher and lower, louder and softer), and grouping words meaningfully (for example, "Austin, [pause] the capital of Texas, [pause] is the home of the University of Texas."). Reading fluency is a combination of word recognition and comprehension. First, reading fluently *contributes to* comprehension because having the ability to read strings of words smoothly and accurately leaves the mind plenty of capacity to think about the meaning of the text (Perfetti, 1992; Pressley, 2000). Second, reading fluency *benefits from* comprehension because a reader can only read with good voice inflection and meaningful pauses if she understands what she is reading. Bear in mind that fluent reading can be silent as well as oral—we just can't hear the inflection and the word grouping when students are reading silently.

Like any other skill that we want to be able to perform automatically—be it tying a shoe, driving an automobile, sailing a boat, or hitting a tennis ball—reading fluency improves with practice. That is why thoughtful teachers provide children plenty of opportunities to read texts that are fairly easy for them, even as they sometimes assign more challenging texts, too.

Vocabulary

Vocabulary is the store of words and their meanings in memory. Having an adequate vocabulary helps reading in several ways. First, when you encounter words such as *epithalamion*, *ecclesiastical*, *primogeniture*, *dodecahedron*, or *unicameral*, you may struggle to decide what the letters are adding up to, only to discover you don't know the word they spell anyway. On the other hand, when you come across words like *muthuh*, *sista*, and *solja*, you can easily work through the unfamiliar street spellings because you do know the words they spell. Vocabulary helps us read by facilitating word recognition in just that way: You may more successfully puzzle through the spelling of a word you don't immediately recognize in written form if you already have the word in your vocabulary.

Vocabulary aids comprehension, too. Words are tokens of meaning. They are both labels for the facts and concepts we have learned and mental identifiers that we retain and will use to make sense of future experiences—whether in reading or in real life. It's not surprising that students' vocabulary size correlates positively with their reading comprehension scores. Monolingual English-speaking students vary widely in their vocabulary size, and for English language learners, limited vocabulary can be a debilitating problem.

Reading Comprehension

Reading comprehension is the act of understanding the meaning, of making sense of what is read. Comprehending what we read is the main point of reading, of course, but for decades, research has reported that comprehension has received less attention in the classroom than other aspects of reading, especially word recognition and phonics. That situation is changing, though.

When a student does it well, comprehension may look like a single competence, but there are many factors that contribute to it and many skills that comprise it.

One important aspect of comprehension is having **background knowledge**. It may seem odd to say that your capacity to understand something depends on how much you already know about it, but scholars find that is largely true. A model of comprehension known as *schema*

theory (Pearson & Anderson, 1985) argues that to understand something, you need interpret the new information using the knowledge you already had, and then sort the new information into your existing mental frameworks, or what is called your *prior knowledge*. Moreover, the better organized your prior knowledge is, the more likely you are to pay attention to aspects of the new information that will be helpful to know in the long run—and will help you comprehend still more new information (Alexander & Jetton, 2000). Background knowledge implies having labels or **vocabulary** for those things that are already known. We have mentioned vocabulary as a separate aspect of reading skill because it is often treated as such, but it is an important part of comprehension, too.

Visualizing or imaging--being able to picture what is suggested by the words in a text--is another aspect of comprehension. Not all text invites imaging to the same degree, but readers should be ready to come up with images in their mind when the words suggest them.

A competent reader can find main ideas or recognize what is most essential in a passage—the main claim or assertions, and also what details are used to support it—almost as if she were able to construct an outline of the text in her head. Going along with finding the main idea is **summarizing**. A competent reader can repeat back to you the essential points in a passage, with the less important information left out of the summary.

Making inferences is another aspect of comprehension, since a good reader can put together cues from the text with what he knows from experience to construct meaning, even when that meaning is not expressed explicitly.

Following the pattern of a text is also important in comprehension—whether the pattern is the plot of a story, the pattern of a poem, the structure of an argument, or the organization of an explanation. As students move up through the grades, they must be able to read intelligently in different genres that have different patterns (as well as other features such as specialized vocabulary, authorial voice, or ways of presenting truths). Stories usually introduce a setting in which characters encounter a problem, try different solutions, and experience an outcome with a consequence from which readers might derive some moral lesson. Most stories are not literally true, and they may range from highly fanciful (think *Harry Potter*) to highly realistic (think Walter Dean Myers' *Monster*, or Deborah Ellis' *The Breadwinner*). Their language can be full of imagery, dialogue, struggles between right and wrong, appeals to emotion, and evocations of

suspense and relief. Texts from science are quite different, with specialized and exact vocabulary, structures of claim and support or explanation, and no protagonists and antagonists.

An aspect of comprehension that has recently gained attention is **reading comparatively across texts**. Adults read different, and often competing, texts that compare automobiles, insurance policies, vacation destinations, and political candidates. They look for insights on the same topic even when different texts don't share the same structure or address topics in the same way. They consider the author's point of view or perspective, possible biases, and credibility when they try to decide how to interpret statements and whether to accept them. Even students in the primary grades can get a multidimensional view of the Civil Rights era by reading a novel such as Rita Williams-Garcia's *One Crazy Summer*, then articles on the Civil Rights movement in *Cobblestone Magazine*, and also poems with civil rights themes in collections such as Arnold Adoff's.

Critical Reading

The Common Core Standards (see pages 000-000) are calling the attention of teachers—even primary school teachers—to techniques of literary criticism, ways of exploring the meanings of texts and ways texts have meaning. The approach that has been most popular since the 1980s has been **reader response criticism** (Bleich, 1975; Rosenblatt, 1978), which holds that the meaning of a text is actively created by the reader, with suggestions supplied by the print on the page. Teachers who follow this approach encourage students to talk about what a text means to them, and the teachers are not disturbed if different children respond somewhat differently to the same text. The Common Core Standards have called for renewed attention to an older kind of criticism (older in the sense that it was widely practiced before reader response approaches) variously known as **formalism** or **New Criticism**. Formalism focuses on the text and not the reader, and calls for close reading that carefully scrutinizes the structure and parts of the literary work: reading, rereading, and studying the text much as a biologist would examine a living organism—the parts, relationships among the parts, and their overall function in a meaningful work.

There are good reasons to support both approaches. Reader response teaching tends to be more engaging; in addition, listening to different responses to the same text mirrors what happens in society, where conservatives and liberals, black citizens and white citizens, or women

and men often respond differently to the same event. Even though we respond differently, we need to understand and get along with each other, and classroom discussions that are run along the lines of reader response criticism can help develop interpersonal understanding. Formalism and its method of close reading, on the other hand, require readers to look carefully at genres, text structures, word meanings, connotations, allusions, and many other literary devices in order to understand how they work together to form a meaningful whole. Formalism and close reading require disciplined thought and hard work, and they develop students' investigative skills.