

Foundational Skills, Grades K–5

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Introduction

Researchers have made extraordinary progress in understanding what *reading* really is. Numerous complex brain processes involved in the act of reading have been identified, along with many individual component skills that must be learned and used automatically and efficiently by a reader. At this point, compelling evidence from a convergence of reading research indicates that close to 95 percent of all students can achieve literacy levels at or approaching grade level. These statistics include students with dyslexia and students with other learning and cognitive disabilities. Students succeed when well-trained and well-supported teachers provide intensive, comprehensive, and high-quality prevention and early intervention. (Al Otaiba, Connor, Foorman, Schatschneider, Greulich, & Sidler, 2009; Al Otaiba & Torgesen, 2007; Rashotte, MacPhee, & Torgesen, 2001; Shaywitz & Shaywitz, 2006; Torgesen, 2000; Vaughn & Wanzek, 2014; Vellutino & Fletcher, 2007).

Our Challenge

Given this fact about our students' potential success in reading, many educators, parents, and members of the general community are increasingly frustrated: If scientists have proven that almost all children can be taught to read at or very close to grade level, why is it that nearly 40 percent of the fourth-grade students in the United States continue to struggle with reading and understanding grade-level material? This is not a trivial or easily ignored problem. Reading problems negatively affect individual lives and society in a number of ways. Students who struggle with reading typically have lower grades in all subjects, higher levels of truancy, and decreased self-esteem and self-efficacy. They often exhibit disruptive, challenging, and sometimes violent, self-destructive behaviors. The serious effects of low literacy levels often extend across generations. These effects can include chronic unemployment or underemployment, substance abuse, enduring poverty, and incarceration (Blaunstein & Lyon, 2006). The consequences of illiteracy affect the individuals themselves, their families, and the broader community in which they live.

Foundation Skills

Current widely adopted standards identify four essential prerequisite foundational skills for reading: Print concepts, phonological awareness, phonics and word recognition, and fluency. These skills have been recognized as essential for the truly extraordinary transformation of converting print and written symbols that have no meaning on their own—into a meaningful linguistic code (Shaywitz & Shaywitz, 2006). These four skills can help a child become a reader if the child has a solid foundation in a spoken language, ideally the same language in which they will be learning to read.

Print awareness is the initial stage of literacy in which emergent readers begin to connect the language they understand and are learning to speak to the symbolic representations of letters and words, such as those written on a page, screen, or sign. Print awareness involves an understanding that print has different functions depending on the context in which it appears: a menu lists food choices; a book can tell a story; a sign can announce a favorite restaurant or warn of danger; a card or letter can convey thanks or good wishes. Print awareness includes the understanding that printed language is organized in a particular way—for example, knowing that print in English, Spanish, and many other languages should be read from left to right and top to bottom.

Print Concept Skills

- Knowing that print represents spoken language.
- Understanding print organization (text reads left to right, top to bottom, and page by page; printed words are strings of letters separated by blank space).
- Recognizing and naming lower- and upper-case letters in the alphabet.
- Recognizing features of a sentence (first word, capitalization, ending punctuation).

Phonological awareness is the general appreciation of the sounds of speech being distinct from their meaning. The fine-grained ability to notice, identify, and ultimately manipulate the separate sequence of sounds in spoken words is called *phonemic awareness*. These skills involve only auditory processes. Scientific evidence now confirms that having difficulty discriminating the sounds of spoken language is the primary causal factor of most reading difficulties, including dyslexia (Dehaene, 2009). The good news is that this difficulty can often be corrected or significantly improved with intensive and targeted intervention (Vaughn & Wanzek, 2014).

Phonological Awareness Skills

- Recognizing rhyming words.
- Counting, pronouncing, and segmenting syllables into phonemes (e.g., hunt > /h/ /u/ /n/ /t/); blending individual phonemes, consonant blends, onsets, and rimes into words (e.g., /d/ /o/ /g/ > dog; /t/ /r/ /u/ /ck/ > truck; /s/ + /um/ > sum, /g/ + /um/ > gum, /dr/ + /um/ > drum).

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- Isolating and pronouncing initial, medial, and final phonemes in spoken, single-syllable words; replacing individual phonemes to make new words (e.g., hat > sat; cop > cap; grip > grit).
 - Distinguishing long from short vowel sounds in short spoken words.

Phonics is knowing which letters symbolize the sounds of a spoken word in a printed word, and using that knowledge to sound out or decode words. Phonics is also referred to as the alphabetic principle. Phonics involves a reader using both auditory and visual (or tactile) processes. Students who are blind or visually impaired can also use phonics, but they learn how to associate phonemes with raised dots on a page (Braille) rather than printed letters. Students who develop a strong aptitude in phonics are more skillful and confident readers because they can more effectively figure out new or unfamiliar words that they encounter. Foundation skills also include the essential ability to instantaneously recognize frequently used but irregularly spelled words, often referred to as sight words or high-frequency words. Newer standards are also emphasizing the value of explicitly teaching morphology (root or base words, prefixes, and suffixes) to expand students' access to word meaning (Bowers, Kirby, & Deacon, 2010). In addition, having students study the spelling of words they are learning to read has been shown to have a powerful and positive effect on reading skill development (Joshi, Treiman, Carreker & Moats, 2008-2009).

Phonics and Word Recognition Skills

- Knowing the primary or most common sounds of each consonant, five major long and short vowels, final *e*, and common consonant digraphs and vowel teams.
- Reading high-frequency, irregularly spelled words by sight (e.g., *was, one, have, of, love*).
- Being able to distinguish between similarly spelled words and identify inconsistent but common spelling-sound correspondences.
- Decoding regularly spelled words.
- Using knowledge of syllable structure and morphology (roots and affixes) to read words in and out of context.

Reading fluency has been defined as reasonably accurate reading at an appropriate rate with proper prosody* that leads to accurate and deep comprehension and motivation to read (Hasbrouck & Glaser, 2012). There is a common misconception that fluency is the same as rate or speed, and that having students learn to read as fast as possible will increase their reading proficiency (Rasinski & Hamman, 2010). This is a mistaken notion. Fluency needs to be understood as a complex skill in which accuracy plays a foundational role, along with rate. Students need to learn to use a rate of reading that is appropriate to the task at hand, but not to speed read. Reading too fast can be as detrimental to skillful reading as reading too slowly.

**the pitch, tone, volume, emphasis, rhythm of oral reading*

Fluency is an important skill because it is necessary (but not sufficient) for students to read and understand what they have read independently, proficiently, and with motivation. Fluent reading is a sign that a reader is reading with automaticity, which is the ability to do a task without having to think about it at a conscious level. When words are read automatically, the brain isn't occupied with the details of the task itself and can instead attend to the meaning of the text being read (Rasinski, Blachowicz, & Lems, 2012).

Fluency Skills

- Reading with sufficient accuracy and rate to support comprehension.
- Reading on-level text with purpose and understanding.
- Reading on-level text orally with accuracy, appropriate rate, and expression.
- Using context to confirm or self-correct word recognition and understanding.

Introduction and Intervention for Foundation Skills

For many children, especially those who are at risk of academic failure due to the effects of poverty, cognitive challenges, and/or language deficits, learning to read will require a significant amount of carefully designed and systematically delivered instruction (Archer & Hughes, 2011; Kilpatrick, 2015). Unlike learning to speak, which occurs naturally and organically because human brains are genetically hard-wired for spoken language, learning to read is not natural. Written language is a relatively new phenomenon in human development, and our brains must be taught how to turn the intrinsically meaningless symbols of print into something meaningful—and potentially memorable, useful, and enjoyable. For students to master the essential foundational skills for reading, effective instruction must be provided and skillfully differentiated to meet the varied needs of students. Struggling readers will typically need much more explicitly targeted guided practice to master the foundation skills than some of their peers, so care should also be taken by teachers to discern which students need additional, appropriate, and effective intervention, as well as when and how to provide it effectively and efficiently.

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