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 90% to 95% of all students can achieve literacy levels at or approaching grade level. These statistics include students with dyslexia and other students with learning disabilities. Student succeed when intensive, comprehensive, and high-quality prevention and early intervention instruction is provided by well-trained and well-supported teachers. (c.f. Al Otaiba, Connor, Foorman, Schatschneider, Greulich, Sidler, 2009; Al Otaiba & Torgesen, 2007; Rashotte, MacPhee, Torgeson, 2001; Shaywitz & Shaywitz, 2006; Torgesen, 2007; 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% 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 human lives and society in countless ways. Students who struggle with reading typically have lower grades across all their classes, high levels of truancy, and decreased self-esteem and self-efficacy, and they often exhibit disruptive, challenging, and sometimes violent self-destructive behaviors. Low literacy levels cause unconscionable human suffering outside of school that often extends across multiple generations, including 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.

Common Core State Standards
One response to this challenging situation has been the creation of a set of academic standards designed to “help ensure that all students are college and career ready in literacy no later than the end of high school” (National Governors’ Association, 2010 CCSS, p. 3). To date, 45 states and 3 U. S. territories have adopted the
Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects (CCSS). The CCSS state that:

“To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, and report on information and ideas, to conduct original research in order to answer questions or solve problems, and to analyze and create a high volume and extensive range of print and nonprint texts in media forms old and new” (National Governors’ Association, 2010 CCSS, p. 4).

In order to achieve this ambitious and important goal, students first must be taught to read, and to read skillfully. To ensure that happens, the CCSS include standards for foundational reading skills to be taught in kindergarten through Grade 5, designed to foster “students’ understanding and working knowledge of concept of print, the alphabetic principle, and other basic conventions of the English writing system” (National Governors’ Association, 2010 CCSS, p. 15). These prerequisite skills, typically taught in early elementary school, must be mastered in order for competent and proficient reading to occur.

**CCSS Foundation Skills**

The CCSS identify four essential prerequisite foundational skills for reading: Print concepts, phonological awareness, phonics and word recognition, and fluency. These skills have been widely recognized as essential for the “truly extraordinary transformation” (p. 15) of converting print—the written symbols that have no meaning on their own—into a meaningful linguistic code (Shaywitz & Shaywitz, 2006). These four skills presume that beginning readers have acquired a foundation in a spoken language, ideally the language that 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 learn to speak to the symbolic representations of letters and words, such as those written on a page in a book, on the screen of a computer or smartphone, or on a sign posted in a restaurant. 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. Print awareness includes understanding that print is organized in a particular way—for example, knowing that print in English, Spanish, and other languages is read from left to right and top to bottom.

**CCSS print concept skills [K-1]**

- 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 finer-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 causal factor of most reading difficulties, including dyslexia. The good news is that this difficulty can often be corrected or significantly improved with intensive and targeted intervention (Snow, Burns, & Griffin, 1998).

**CCSS phonological awareness skills [K-1]**

- Recognizing rhyming words.
- Counting, pronouncing, segmenting syllables into phonemes (e.g., hunt > /h/ /u/ /n/ /t/); blending individual phonemes, consonant blends, onsets and rimes into words (e.g., /d/ /a/ /g/ > dog; /t/ /r/ /u/ /k/ > truck; /s/ + /um/ > sum, /g/ + /um/ > gum, /dr/ + /um/ > drum)
- 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 involves knowing which letters symbolize the sounds in a 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 have acquired strong phonics skills are more skillful and confident readers because they can more effectively figure out new or unfamiliar words that they encounter. The CCSS foundation skills also include the ability to instantaneously recognize frequently used but irregularly spelled words.

**CCSS phonics and word recognition skills (K-Grade 5)**

- 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.

Fluency has been defined as reasonably accurate reading at an appropriate rate with suitable prosody* that leads to accurate and deep comprehension and motivation to read (Hasbrouck & Glaser, 2012). There is a common misconception among educators 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 is a complex skill in which accuracy plays a foundational role, along with rate. Students need to learn to use a reading rate that is appropriate to the task at hand, but not to “speed read.” 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.

**CCSS fluency skills (K-Grade 5)**

- 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.

**Instruction and Intervention for Foundation Skills**

While the CCSS provide an integrated and comprehensive model of literacy, the authors of the standards specifically identify six important, intentional design limitations, including any direction on how teachers should teach, or the intervention methods or materials that should be used to support academically struggling students, ELL students, or those with special needs. 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).

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. The authors of the CCSS acknowledge that in order for students to master the essential foundational skills for reading, effective instruction must be provided, 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.

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


