What Principals Need to Know About Reading
The 20 million school-age children suffering from reading failure could be reduced by two-thirds with early identification, prevention, and intervention.

Principal - What Principals Need to Know About Reading » volume 83 number 2, November/December 2003 » page(s) 14-18

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Research by the National Institute of Child Health and Human Development (NICHD) has consistently shown that children’s failure to understand and use language, to read and write, to calculate and reason mathematically, to solve problems, and to communicate ideas and perspectives can have devastating consequences with respect to self-esteem, social development, and opportunities for advanced education and meaningful employment. Nowhere are these consequences more apparent than when children fail to learn to read.

Why? Simply stated, the development of reading skills serves as the major foundation for all school-based learning. Without the ability to read, opportunities for academic and occupational success are limited.

It is clear from our research that reading failure affects children negatively earlier than we thought. By the end of first grade, children having difficulty learning to read begin to feel less positive about their abilities than when they started school. As these children progress through elementary school, self-esteem and the motivation to learn to read decline even further. By middle school, children who read well can read at least 10 million words during the school year, while children with reading difficulties read less than 100,000 words during the same period. Poor readers lag far behind in vocabulary development and in the acquisition of strategies for understanding what they read, and they frequently avoid reading and assignments that require reading. Students who stay in school long enough to reach high school tell us they hate to read because it is so difficult. As a high school junior remarked, “I would rather have a root canal than read.”

According to the National Center for Educational Statistics, 38 percent of the nation’s fourth graders cannot read at a basic level. In many low-income urban school districts, the number of fourth graders who cannot read at basic level approaches 70 percent.

The consequences of reading failure are dire. Of the 10 to 15 percent of children who will eventually drop out of school, more than 75 percent will report difficulties learning to read. And approximately half of all children and adolescents with a history of substance abuse also have reading problems.
**How Children Learn to Read**

Converging scientific evidence from studies supported by NICHD indicates that learning to read is a relatively lengthy process that begins before children enter formal schooling. Children who receive stimulating oral language and literacy experiences from birth appear to have an edge when it comes to vocabulary development, developing a general awareness of print and literacy concepts, and understanding the goals of reading. If young preschool children are read to and engaged in language interactions that help build vocabulary on a consistent basis, they become exposed, in interesting and entertaining ways, to the sounds of language. This opens the doors to the concepts of rhyming and alliteration, and to word and language play that build the foundation for phonemic awareness—the critical understanding that spoken syllables and words are made up of small segments of sound (phonemes).

However, the experiences that help develop vocabulary and general language and conceptual skills in preschoolers are different from the experiences that develop specific types of knowledge necessary to read, including knowledge about print, phonemic awareness, and spelling. These skills need to be systematically and, depending upon the level of the child’s background knowledge, explicitly taught.

Preschool children who can recognize and discriminate letters of the alphabet clearly have less to learn when they enter kindergarten. With this knowledge, the child is oriented to what is termed the “alphabetic principle,” which associates the sounds of speech (phonemes) with letters of the alphabet (phonics). This principle stands at the core of learning and applying phonics skills to print.

Ultimately, children’s ability to comprehend what they listen to and what they read is inextricably linked to the depth of their background knowledge. Very young children who are provided opportunities to learn, think, and talk about new areas of knowledge will gain much more from the reading process. With understanding comes the desire to read more, ensuring the development of new vocabulary. Through these early interactions and the systematic exposure to language and literacy concepts provided by parents, caregivers, and teachers, skilled readers learn to apply phonemic and phonics skills rapidly and accurately. Children who practice reading develop fluency, automaticity, and the ability to apply comprehension strategies to what they are reading.

Unfortunately, few children, particularly children from poverty, come to kindergarten and first grade with these advantages. While the average middle-class child is exposed to approximately 500,000 words by kindergarten, an economically disadvantaged child is exposed at best to half as many. The difficulties these children experience in learning to read can be readily observed in the initial stages of their literacy development. They approach the reading of words and text in a laborious manner, demonstrating difficulties linking sounds to letters and letter patterns. Their reading is hesitant and characterized by frequent starts, stops, and mispronunciations. Comprehension of the material being read is usually extremely poor because it takes them far too long to read words, leaving little energy for remembering and comprehending what was read.
Can Children Overcome Reading Difficulties?
Yes. The majority of children who enter kindergarten and first grade at risk for reading failure can learn to read at average or above-average levels—but only if they are identified early and provided with systematic, explicit, and intensive instruction in phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension strategies. Substantial research supported by NICHD shows clearly that without systematic, focused, and intensive interventions, the majority of these children rarely “catch up,” and failure to develop basic reading skills by age nine predicts a lifetime of illiteracy. Unless children entering first grade at risk of reading failure receive appropriate instruction, more than 74 percent will continue to have reading problems into adulthood. On the other hand, early identification coupled with comprehensive early reading interventions can reduce the percentage of children reading below the basic level in the fourth grade from 38 percent to 6 percent or less.

Are Some Reading Instructional Approaches More Effective than Others?
Yes. On the basis of a thorough evidence-based review of reading research that met rigorous scientific standards, the National Reading Panel (NRP), convened by the NICHD and the U.S. Department of Education, found that instructional programs that provided systematic instruction in phonemic awareness, phonics, reading to improve fluency, and direct instruction in vocabulary and reading comprehension strategies were significantly more effective than approaches that were less explicit and less focused on reading skills to be taught.

The NRP found that children as young as four years of age benefited from instruction in phonemic awareness and the alphabetic principle when the instruction was presented in an interesting and entertaining, albeit systematic, manner. Likewise, the National Center for Educational Statistics recently reported data from its Early Childhood Longitudinal Study showing that, after controlling for family income, youngsters who attended more academically-oriented preschool programs had significantly higher scores in reading, math, and general knowledge when tested in the fall of their kindergarten year than children attending less academically-oriented preschools.

These findings strongly suggest that such programs, if implemented appropriately, could reduce the number of children who fail to learn to read well below the current 38 percent rate. It is also important to note that the majority of children composing this unacceptably large group of poor readers are not provided special education services.
Will Effective Reading Instruction Reduce the Need for Special Education?
This is possible in the long run. What is now clear is that effective instruction will help differentiate between children whose reading problems are related to inadequate instruction (curriculum casualties) and children who continue to struggle despite early and intensive instruction. The number of children with reading difficulties served in special education reflects only a fraction of the number of school-age children who fail to learn to read.

Keeping in mind that the majority of these children will continue to have reading difficulties throughout their school career if they do not receive systematic and focused early intervention, we can estimate that at least 20 million school-age children suffer from reading failure. But only about 2.3 million of these children are served in special education under the category of Specific Learning Disabilities (SLD). The remaining 17.7 million poor readers who do not meet SLD eligibility requirements are either provided some form of compensatory education or overlooked altogether.

We have taken care in our NICHD early intervention and prevention studies to identify all children who are at risk for reading failure within a given sample and to identify the instructional approaches that are most effective for the majority of these students, irrespective of whether they are eligible for special education. As noted earlier, these studies have indicated that, with the proper early instruction, the national prevalence of reading failure can be reduced significantly. Thus, by putting in place well-designed and evidence-based early identification, prevention, and intervention programs in our public schools, our data strongly show that the 20 million children today suffering from reading failure could be reduced by approximately two-thirds. Such a reduction would allow us to provide services to children in genuine need of special education services with substantially greater focus and intensity.

Our challenge now is to close the gap between what we know works from research and the ineffective instruction still being provided in most of our nation’s classrooms. The question is, do we have the will and the courage to do so?

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