Reading is a fundamental necessity for acquiring knowledge and many of the skills that facilitate social, cultural, and political engagement. Illiteracy and insufficient literacy have many social and economic costs. Insufficient literacy might prevent people from having access to basic information about health and safety or social rights, and it is a major contributor to inequality. Thus, improving literacy is a critical challenge that has generated strong public interest on how children learn to read and how they should be taught to read.

In this issue of *Psychological Science in the Public Interest* (Volume 19, Issue 1), Anne Castles (Macquarie University and Australian Research Council Centre of Excellence in Cognition and its Disorders) and her colleagues Kathleen Rastle (Royal Holloway, University of London) and Kate Nation (Australian Research Council Centre of Excellence in Cognition and its Disorders and University of Oxford) examine the research on reading acquisition, from early alphabetic learning to word recognition and mastery of text comprehension. Castles and her colleagues make the case for the importance of understanding the development of reading skills to minimize the current gap between educational policies and practices and the ways in which psychological science has shown that reading can be effectively taught.

The authors call attention to the division that the “reading wars” have caused and how these wars might have prevented the translation of scientific findings into policies and practices. The “reading wars,” which started over 200 years ago, involve two opposing groups: proponents of phonics instruction and
proponents of whole-language instruction. Proponents of the phonics approach to reading instruction maintain that the sounds that letters make should be taught explicitly, whereas proponents of the whole-language approach contend that the best way to teach reading skills is by having children discover the meaning of words through immersion in literacy-rich environments. Despite strong scientific consensus about the value of phonics instruction, there is still resistance in adopting these methods in education. The authors suggest that two factors might have contributed to the gap between scientific support for phonics instruction and current educational policies and practice: (a) There are very limited explanations of why phonics works, and (b) there is an absence of discussion about how phonics provides a reading foundation, but other processes are needed to ensure later text comprehension. In their review, Castles and her colleagues provide an overview of how children’s reading skills develop, addressing why phonics works and what other processes have to be considered after alphabet acquisition.

What Research Tells Us About Reading Instruction

By Rebecca Treiman, Washington University in St. Louis

The goal of reading development must be achieved by “developing a system that allows children to construct meaning from print” (Castles et al., 2018, pp. 6–7). To achieve this goal, it is important to take into account that both the writing system and experience matter. The first step to mastering reading is decoding the alphabet. The connection between letters and sounds does not come naturally to children and must be taught explicitly—thus, the importance of phonics instruction. Children must learn that graphemes represent phonemes before they can move into more advanced reading stages. In school, it is important that children are exposed to phonics in a systematic way; that is, the correspondence between graphemes and phonemes must be taught in an ordered manner that depends on characteristics of the language and its orthography. Teaching phonics with sight words (unusual words that escape common grapheme-phoneme rules) may be a good teaching strategy, along with exposure to books and other printed material.

After the alphabet is decoded, reading becomes more than phonics, and children must understand word meaning. Despite their differences, most models of reading agree that two processes are involved in becoming a skilled reader: first, translating the word spelling into sounds and then into meaning; and second, translating the word spelling directly into meaning without the need to use the sounds. The fluent reader can process word meaning directly from the word’s written form. A well-accepted hypothesis is that this fluency is achieved by self-teaching during reading. This implies that motivating children to read and exposing them to printed words is very important during this phase.

A final step to becoming an expert reader is to comprehend the text. Reading comprehension depends on vocabulary, semantic, and background knowledge. But it is also affected by processes such as how
easily word meanings are activated, the ability to generate inferences, and the capacity to check one’s own comprehension. Key factors in reading comprehension are being able to suppress irrelevant meanings and being able to make relevant inferences. Yet general abilities such as working memory capacity do not seem related to reading comprehension. Reading comprehension is a complex task that benefits from being taught using active learning strategies.

By taking into account the development of reading, this review provides insights into why phonics work and what other processes beyond phonics are needed to become a fluent reader and achieve reading comprehension. This comprehensive review gives practitioners the tools to make informed decisions about how to translate the psychological science of reading into classroom practices.

In an accompanying commentary, Rebecca Treiman, who is the Burke and Elizabeth High Baker Professor of Child Developmental Psychology and head of the Reading and Language Lab at Washington University in St. Louis, discusses the importance of phonics for reading instruction. With five books published and over 30 years of experience, Treiman combines psychology and linguistics in her research, focusing children’s spelling and the reasons behind their errors. In her commentary, she highlights how difficult it is to learn to read and explains how phonics might help with overcoming common difficulties. In addition, she suggests ways to improve phonics instruction. Treiman praises Castles and colleagues’ comprehensive review of the science of learning to read and enumerates ways their report will benefit policymakers, teachers, and parents.

About the Authors (PDF, HTML)