

Title: *Understanding the Primary Role of Word Recognition in the Reading Process: Synthesis of Research on Beginning Reading*

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Subject(s): Alphabetic Knowledge, Dyslexia/Reading Disabilities, Fluency, Intervention, Phonics and Decoding, Phonological and Phonemic Awareness

Grade Level: Preschool, K, 1–2, 3–6

Synopsis: “The intent of this chapter is to identify and discuss areas of converging evidence regarding the centrality of word recognition to the reading process.” (p. 8) The authors reviewed research, primarily from the 1990s, including 14 secondary sources and 10 primary studies. The various studies covered both normally achieving and learning disabled students, and while most focused on K–1, subjects ranged from preschool to 8th grade. Areas of converging evidence are described for both gifted and struggling readers. Possibilities for intervention are discussed.

Word recognition is defined as “seeing a word and accessing its meaning.” Word recognition begins with *phonological recoding*, the process of converting printed words into sounds using letter-sound rules. “For example, the word ‘man’ would be converted into its component letters (m , a , n), then into its corresponding sounds (/m/, /a/, /n/) and blended into its phonological referent to the word ‘man.’ Finally, this phonological referent can be used for lexical access of the word’s meaning.” (p. 8)

The authors argue that word recognition is the “crux” of reading, for two reasons. “First, higher order reading skills such as comprehension, vocabulary development, and purposeful, enjoyable reading and writing are dependent on accurate word recognition (Stanovich, 1991). Second, word recognition is central to reading acquisition (Daneman, 1991; Juel, 1991; Stanovich, 1991).” (p. 1)

Area of Convergence #1: Reading comprehension and other higher order reading activities are dependent on strong word recognition.

“Word recognition skills lead to improved reading comprehension ability rather than the reverse (Daneman, 1991; Juel, 1991; Stanovich, 1991).” (p. 10) “Thus, it seems that good word decoders comprehend more; and as expected, stronger comprehension enhances a reader’s ability to decode and hold clauses or whole sentences in working memory.” (p. 11) For less skilled readers, “poor word recognition appears to limit (a) storage of and access to word meanings and (b) ability to access or remember sequences of words.” (p. 11)

Area of Convergence #2: Prerequisite Conditions of Word Recognition—An understanding that

- (a) words can be "spoken" or "written,"
- (b) print corresponds to speech, and
- (c) words are composed of phonemes.

“Juel (1991) noted that children who are nearly ready to begin reading words have developed four prerequisite skills. Specifically, they understand that (a) words can be

"spoken" or "written," (b) print corresponds to speech, (c) words are composed of phonemes (sounds), and (d) words are composed of letters that correspond to phonemes." (p. 11)

The first two conditions are usually met as young children are read to. The third condition is phonological awareness. "Research over the past 15 years has validated repeatedly the importance of phonological awareness to reading acquisition (see reviews by Adams, 1990; Ehri, 1991; Juel, 1991; Spector, 1995; Stanovich, 1993/1994; Wagner & Torgesen, 1987). . . . As Juel (1991) pointed out, "some form of phonological awareness is necessary for successfully learning to read alphabetic languages" (p. 778)." (p. 12)

Area of Convergence #3: Alphabetic Understanding (i.e., a reader's understanding that words are composed of graphemes and letter-sound correspondence) facilitates word recognition.

The fourth condition for learning to read is alphabetic understanding, or "the mapping of print to speech," (or phonics). "Children's responses to words differ qualitatively before and after they master letter-sound correspondence. Gough, Juel, and Roper-Schneider (cited in Juel, 1991) found that first graders without letter-sound knowledge made more errors than their peers who had mastered letter-sound correspondence. Moreover, errors made by the children with letter-sound knowledge were most often caused by improper "sounding-out" of the word. In contrast, children without letter-sound knowledge tended to substitute words that they saw often in their book. In short, students who had not learned the correspondence between letters and sounds guessed at words based on first sounds, physical features of the words, or context." (p. 13)

Interventions for alphabetic understanding: Evidence in experiments done by Byrne and Fielding-Barnsley (1989) shows that explicit training in letter-sound correspondences helps students with reading disabilities improve their reading skill. Knowing letter-sound correspondences helps children read unknown words and is required before children can read "by analogy" (read new words by recognizing the same word parts found in familiar words).

Area of Convergence #4: Phonological recoding (i.e., translating a word into its phonological counterpart) combined with word frequency mediates word recognition.

Word recognition depends on phonological recoding, which is the process of converting printed words into sounds using letter-sound rules, blending the sounds into its phonological referent (a word), and then using this phonological referent for lexical access of the word's meaning. While familiar words that are seen frequently begin to be recognized by "sight," phonological recoding continues to be important for unfamiliar and less common words. Speed of phonological recoding appears to be an essential part of developing automaticity of word recognition. And increased speed of word recognition has many benefits for comprehension. Juel (1991) cited eight studies on the automaticity of word recognition, concluding that "by second or third grade, children can recognize many words while their attention is focused on another task—a sign that word recognition is automatic" (p. 770).

Diverse Learners

"Phonological recoding does appear to account for individual differences in reading ability both in young readers as well as adults (Jorm & Share, cited in Daneman, 1991; Stanovich, 1986)." (p. 18) Beginning readers rely heavily on context to read words, looking at beginning sounds, pictures, and context before guessing at unknown words.

For most readers, this approach is soon dropped and phonological recoding provides a more efficient way to decode. But poor readers continue to use a context-reliant approach. For these children, skill in phonological recoding will not develop without explicit training.

Interventions for building automatic word recognition primarily have focused on repeated readings. For example, “In a study of the effects of a combination of repeated readings and explicit memory instructions on reading fluency and reading comprehension, Sindelar, Monda, and O’Shea (1990) found that readers at all skill levels improved their fluency and recall from an instructional level to a mastery level after three readings of the same text and explicit instructions to remember as much of the story as possible.” (p. 18) “These findings suggest that multiple readings of stories would benefit all students in the classroom.” (p. 18)

Summary: “Throughout the process of learning to read, story reading and demonstrations of the role of reading for enjoyment as well as more functional purposes should be integrated with learning to read independently. Once early readers are taught some letter-sound correspondence, they can learn to blend those sounds into simple words. Similarly, as children begin to blend sounds into words, the words can be put into sentences so children can read connected texts. This type of careful integration contributes to strong reading abilities.” (p. 20)

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