i-Ready®

Research Base for *i-Ready Personalized Instruction* for Reading

Executive Summary

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Research and expert opinion provide a sound basis for reading instruction that addresses phonological awareness, phonics, automatic recognition of high-frequency words, vocabulary development, and development of reading comprehension skills and strategies.

Phonological Awareness. Phonological awareness is the ability to attend to the sounds of language and has two levels: phonological sensitivity (awareness of the larger segments of sound) and phonemic awareness (awareness of the individual phonemes in spoken words) (Brady, 2012; National Research Council, 1998).

Research suggests that phonological awareness instruction should progress from larger to smaller units of sound (Adams, 1990; Goswami & Bryant, 2016; Stahl, 1990). When focusing on phonemes, evidence supports instruction that stresses sound blending and segmenting activities, encourages students to playfully manipulate sounds, and links phonemic awareness instruction to phonics instruction (Foorman, Beyler, Borradaile, Coyne, Denton, Dimino . . . & Wissel, 2016; NELP, 2008; NICHHD, 2000; Schuele & Boudreau, 2008; Yeh, 2003; Yopp & Yopp, 2009).

Phonics. Phonics instruction focuses on the acquisition of the correspondences between sounds and letters and sounds and letter combinations in order to prepare students for decoding and encoding words.

Research supports systematic and explicit phonics instruction, including teaching the blending of letter-sounds into words, segmenting words into component letter-sounds, focusing on larger subunits of words, decoding, and encoding (Camilli, Wolfe, & Smith, 2006; Foorman et al., 2016; NICHHD, 2000; Weiser & Mathes, 2011). Researchers recommend integrating instruction on these foundational literacy skills with opportunities for students to read meaningful, connected text (Adams, 1990; Brady, 2012; Dehaene, 2009; Moats, 2012; NICHHD, 2000; Strickland, 2011).

High-Frequency Words and word recognition. Experts in reading instruction recommend that children just learning to read should develop instantaneous decoding of high-frequency words (Dolch, 1936; Fry, 1980; Graves, 2016; Kamil & Hiebert, 2005; Zeno, Ivens, Millard, & Bi Duvvuri, 1995). Research suggests that repeated exposure and word review builds automaticity with high-frequency words, so early readers need to invest little effort on decoding individual words and can focus their attention on comprehension (Logan, 1997; Samuels & Flor, 1997). Sight word instruction should first focus on words in isolation to develop automaticity and then progress to identifying sight words in context (Konza, 2010).

Vocabulary development. Research strongly suggests that instruction focused on vocabulary development is critical to learning to read with comprehension (NICHHD, 2000; Rasinski, Padak, Newton, & Newton, 2011). Research-based best practices include teaching high-utility words, introducing words in rich and multiple contexts, providing explicit instruction in word meaning, teaching word-learning strategies grounded in morphology, and teaching context clues, with an emphasis on multiple-meaning words (Baumann, Edwards, Boland, & Font, 2012; Beck, McKeown, & Kucan, 2013; Biemiller, 2011; Butler, Urrutia, Buenger, Gonzalez, Hunt, & Eisenhart, 2010; Graves & Silverman, 2011; Lehr, Osborn, & Hiebert, 2004; Logan & Kieffer, 2017; Nelson & Stage, 2007; NICHHD, 2000; Rasinski et al., 2011). Research also supports an emphasis on vocabulary instruction for English Learners (ELs) (Rasinski et al., 2011).

Reading comprehension instruction. Research and expert opinion on reading comprehension instruction support careful selection of the texts students will read. Evidence-based best practices regarding text selection include choosing texts that are at an appropriate level of complexity, giving students experience with multiple text genres (both fiction and nonfiction), and selecting high-interest texts that will motivate students to read (ACT, 2006; CCSSO, 2017; Robertson, Dougherty, Ford-Connors, & Paratore, 2014; Roskos & Neuman, 2014).

Research-supported features of reading comprehension instruction include having students spend more time engaging with text and less time on prereading activities, interspersing comprehension questions to help students focus on understanding each portion of the text as they first read it, and teaching multiple comprehension strategies, including rereading and the use of graphic organizers (Beck & McKeown, 2006; NICHHD, 2000; Roskos & Neuman, 2014; Shanahan, 2013).

Research-based strategies for using technology to enhance reading comprehension instruction include building in instructional feedback and other adaptive scaffolding support and incorporating features to prevent mind wandering (Molenaar & Roda, 2008; Shanahan, 2013; Smallwood & Schooler; 2014).

How *i-Ready Personalized Instruction* aligns with the research. The *i-Ready Diagnostic* is an adaptive assessment that places students into lessons at their zone of proximal development. Based on the assessment, teachers are able to see students' "Can Dos" and "Next Steps," see groups of students with similar needs, and access teacher-led Tools for Instruction to provide small group instruction. In addition to supporting teacher-led instruction, *i-Ready* automatically places students into online lessons—in *i-Ready Personalized Instruction*—that are right for them. *i-Ready Personalized Instruction* includes reading instruction and practice in Phonological Awareness, Phonics, High-Frequency Words, Vocabulary, and Comprehension. Lessons focused on each of these domains are designed to reflect the research and expert opinion summarized above to ensure students learn to read with fluency and understanding.

- **Phonological Awareness (PA).** *i-Ready* PA lessons for Grades K–1 reflect the strong research evidence of the benefits of having children learn phonemic awareness by progressing from larger to smaller units of sound. *i-Ready* also aligns with research-supported PA instructional best practices, including teaching students to blend and segment phonemes, engaging students with opportunities for playful manipulation of sound, and linking *i-Ready* PA instruction to *i-Ready* Phonics instruction.

- **Phonics.** *i-Ready* Phonics lessons for Grades K–3 reflect research-based recommendations to provide explicit, interactive instruction and practice in a systematic, sequential skill progression. These lessons help students master the correspondences between sounds and individual letters and between sounds and letter combinations. Students also receive instruction and practice with word patterns, word parts, and syllabication. Each lesson culminates with an opportunity to apply phonics skills in the context of engaging connected text.

- **High-Frequency Words (HFW).** *i-Ready*'s HFW lessons for Grades K–2 start by introducing and providing practice with a focused set of HFW in isolation—HFW selected from research-based word lists. As needed, *i-Ready* follows the research-based strategy of providing students with instructional scaffolding and practice to build automaticity with the target words in isolation. Students also practice identifying these HFW in sentences and longer texts to further develop automaticity in the context of reading. Repeated exposure to and practice with the selected HFW help build students' ability to recognize these important words instantly and automatically.

- **Vocabulary.** *i-Ready* includes vocabulary instruction across Grades K–8, as supported by decades of research. At Grades K–2, *i-Ready* Vocabulary lessons focus primarily on a select set of high-utility, academic words that students will encounter in a variety of text types and content areas. These lessons present selected words in context, provide modeled instruction for each word, and provide ample practice using each word in multiple contexts. *i-Ready* Vocabulary lessons for Grades 3 and above focus primarily on teaching multiple strategies students can use to unlock the meaning of many unknown words by applying their knowledge of morphology and/or context clues.

- **Comprehension.** *i-Ready* Comprehension lessons reflect current research and expert recommendations by featuring carefully selected complex, engaging, and rigorous texts, including many culturally responsive texts, making text central to the learning experience while minimizing time spent on prereading activities, interspersing comprehension questions to help students establish meaning while reading a text, teaching multiple comprehension strategies, and providing technology-enhanced individualized scaffolds as needed to support and motivate each reader and prevent mind wandering.