

## Evidence-Based Reading Instruction for Grades K-5



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## **Innovation Configuration for Evidence-Based Reading Instruction for Grades K-5**

This paper features an innovation configuration (IC) matrix that can guide teacher preparation professionals in the development of appropriate use of evidence-based reading instruction for Grades K-5. This matrix appears in the Appendix.

An IC is a tool that identifies and describes the major components of a practice or innovation. With the implementation of any innovation comes a continuum of configurations of implementation from non-use to the ideal. ICs are organized around two dimensions: essential components and degree of implementation (Hall & Hord, 1987; Roy & Hord, 2004). Essential components of the IC—along with descriptors and examples to guide application of the criteria to course work, standards, and classroom practices—are listed in the rows of the far left column of the matrix. Several levels of implementation are defined in the top row of the matrix. For example, no mention of the essential component is the lowest level of implementation and would receive a score of zero. Increasing levels of implementation receive progressively higher scores.

ICs have been used in the development and implementation of educational innovations for at least 30 years (Hall & Hord, 2001; Hall, Loucks, Rutherford, & Newton, 1975; Hord, Rutherford, Huling-Austin, & Hall, 1987; Roy & Hord, 2004). Experts studying educational change in a national research center originally developed these tools, which are used for professional development (PD) in the Concerns-Based Adoption Model (CBAM). The tools have also been used for program evaluation (Hall & Hord, 2001; Roy & Hord, 2004).

Use of this tool to evaluate course syllabi can help teacher preparation leaders ensure that they emphasize proactive, preventative approaches instead of exclusive reliance on behavior reduction strategies. The IC included in the Appendix of this paper is designed for teacher preparation programs, although it can be modified as an observation tool for PD purposes.

The Collaboration for Effective Educator, Development, Accountability, and Reform (CEEDAR) Center ICs are extensions of the seven ICs originally created by the National Comprehensive Center for Teacher Quality (NCCTQ). NCCTQ professionals wrote the above description.



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Reading is fundamental to many life activities and is perhaps the most essential skill children learn in school. Without reading proficiency, students have limited access to the content of every other academic subject. Unfortunately, children who do not learn to read well during the primary grades typically struggle with reading throughout school (Juel, 1988; Snow, Burns, & Griffin, 1998; Stanovich, 1986). In fact, nearly 70% of older students fail to achieve proficient levels of reading (Biancarosa & Snow, 2004; National Center for Education Statistics [NCES], 2011) because once poor reading trajectories are established, they are very difficult to change (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996; Good, Baker, & Peyton, 2009). Reading failure is likely to lead to negative consequences such as grade retention, dropouts, limited employment opportunities, and difficulties with basic life activities (Lyon, 2001). Clearly, the long-term effects of early reading difficulties can be devastating. For these reasons, identifying effective methods for early reading instruction and intervention for struggling students is critical.

Classroom teachers have the responsibility for helping students achieve (Darling-Hammond & Ball, 1998); however, many teachers are not prepared to effectively teach reading (Bos, Mather, Dickson, Podhajski, & Chard, 2001; Cunningham, Perry, Stanovich, & Stanovich, 2004; Moats & Foorman, 2003). Teaching reading requires specialized knowledge about oral and written language, how children learn and acquire literacy skills, and a variety of instructional strategies to address students' diverse needs (Foorman & Torgesen, 2001; Moats & Foorman, 2003; Moats & Lyon, 1996). Teachers face challenges in the classroom, including students who have language difficulties or limited literacy background knowledge and academic experiences. Unfortunately, many beginning teachers are inadequately prepared to address students' language and literacy needs (Moats, 1994). Although it is expected that teachers



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continue to learn and develop once they begin their careers, teacher preparation programs must ensure that prospective teachers enter the profession with the requisite knowledge and skills to effectively teach reading.

This paper elucidates the research and its application to instruction. Each essential element, instructional activity, and strategy shared (see Appendix) is supported by research. This paper reviews the basic knowledge and skills required by K-5 teachers to teach diverse students to read.

### **What Literacy Knowledge and Skills Do Teachers Need?**

A consistent theme of reform is that teachers must have well-developed knowledge of the content they teach, and their PD experiences must remain grounded in that content (Shulman, 2000). In particular, teachers of reading must have expert pedagogical content knowledge, or “the ways of representing and formulating the subject that make it comprehensible to others” (Shulman, 1986, p. 9). In an early study of teacher knowledge about reading, Mazurkiewicz (1975) administered a questionnaire to practicing teachers and discovered that the majority did not know meanings of even the most common terms such as *vowel*, *consonant*, and *syllable*. Similarly, Moats (1994) found that teachers were unfamiliar with terms related to phonology (e.g., *speech sound*, *phonics*, *phonological awareness*) and morphology (e.g., *compound*, *affixed*, *inflection*). Teachers’ knowledge about reading is related to their practice and to their students’ learning. For example, McCutchen and colleagues (2002) found that kindergarten teachers’ phonological knowledge correlated positively with measures of their students’ word reading, and Lane and colleagues (2009) found that elementary teachers’ knowledge about reading fluency was related to their students’ performance on fluency measures. This paper identifies the teacher knowledge and skills needed for effective reading instruction.



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## Influences on Reading Policy and Practice in the United States

The goal of reading success for all students through evidence-based reading instruction has become a pervasive theme in education reform, and it is important that teachers of reading have an understanding of the history that led to current policies and practices. Controversies about how reading should be taught have persisted for most of the past century. The opposing perspectives, often dubbed *the reading wars* or *the great debate* (Chall, 1967), have centered mostly on whether early reading instruction should emphasize the code (i.e., phonic instruction); meaning (i.e., whole language); or a combination (i.e., balanced instruction). Several influential publications have shaped the discussion and have, more recently, shifted the current emphasis to evidence-based instruction.

Jeanne Chall, in her 1967 book, *Learning to Read: The Great Debate*, analyzed studies of instruction with early reading instruction and demonstrated superior outcomes in phonics programs. Her book was met with harsh criticism by two professors in particular: Kenneth Goodman and Frank Smith, both advocates of a psycholinguistic approach to reading. Goodman (1969) insisted that syntax and semantics were as important as letter-sound correspondences in reading, and Smith (1976) averred that reading acquisition was a natural process, best learned by doing.

In response to the ongoing controversy, the Commission on Reading convened a panel of experts to synthesize research on reading, which led to the publication of *Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985). This report advocated a more balanced approach that included rich early language experiences, systematic phonics instruction, and plentiful opportunities for reading practice. Later, another research synthesis was commissioned by the U.S. Department of Education and via the University of Illinois's Center for the Study of



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Reading. This publication, *Beginning to Read: Thinking and Learning about Print* (Adams, 1990), included an in-depth examination of the cognitive science behind skilled reading. Its publication at the height of the whole-language movement had a profound effect on policy and practice because Adams (1990) presented strong scientific evidence in support of the use of phonics during early reading instruction. A few years later, a report from the National Research Council (NRC), *Preventing Reading Difficulties in Young Children* (Snow et al., 1998), further highlighted the need to use evidence-based practices (EBPs). The U.S. Department of Education also commissioned a report on reading comprehension from RAND. The report from RAND Study Group (2002), *Reading for Understanding: Toward an R&D Program in Reading Comprehension*, identified priorities for research to develop and evaluate high-quality assessment and instruction.

Perhaps the most influential publication was the National Reading Panel's (NRP, 2000) report, *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. This meta-analysis of scientifically based research identified five essential elements of reading (i.e., phonemic awareness, phonics, fluency, vocabulary, and comprehension) and reviewed the findings about how these components of reading are most effectively developed. The NRP report formed the foundation for federal reading initiatives, including Reading First and Early Reading First. No Child Left Behind (NCLB), which spawned these initiatives, mandated the use of EBPs and increased the focus on accountability and high-stakes testing. NCLB also resulted in the establishment of the What Works Clearinghouse (WWC), which makes research findings and practice guides available to educators.



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Standards for students and professionals function as another key influence on reading policy and practice in the United States. The widespread adoption of the college- and career-ready standards has outlined what K-12 students need to know and be able to do in the area of English language arts. These standards have also increased the emphasis on the use of content-rich non-fiction, using evidence from text, text complexity, and academic language. Although some states are adopting their own variations of college- and career-ready standards, the emphasis remains focused on ensuring that students are college and career ready. It is imperative that teachers are prepared to help their students meet rigorous standards.

The identification of what K-12 reading educators need to know and be able to do is a central aim of the standards of several professional organizations, including the International Reading Association (IRA), the Council for Exceptional Children (CEC), the International Dyslexia Association (IDA), and the National Council for Teachers of English (NCTE). Teacher educators can use these professional standards to develop or evaluate the rigor of their programs.

### **Foundation Concepts about Oral and Written Language**

Just as teachers of science must understand scientific concepts and teachers of mathematics must understand math concepts, teachers who teach students to read and write must understand the foundations of oral and written language. This includes understanding phonology and phonetics, orthography, morphology, semantic organization, the etymology of English words, syntactic structures, and pragmatics (Moats, 2009). In addition, reading teachers must understand key theories about reading development, the language processing requirements of proficient reading and writing, and the elements of cognition and behavior that affect reading (Rayner, Foorman, Perfetti, Pesetsky, & Seidenberg, 2001). It is also important to understand



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the typical developmental phases in reading development and reasonable goals and expectations for learning at various phases (e.g., Ehri & Snowling, 2004).

The purpose of reading is to comprehend text, but there are numerous influences on text comprehension. To comprehend, a reader must be able to accurately read the text with automaticity, make sense of the words and language structures used in the text, connect the content of the text with prior knowledge, and use strategies to monitor and repair comprehension (Duke, Pearson, Strachan, & Billman, 2011). The NRP report (2000) focused on five critical elements of reading: phonemic awareness, phonics or decoding, fluency, vocabulary, and comprehension. Each of these five elements has a strong evidence base demonstrating its importance. There are also numerous environmental, cultural, and social factors that influence literacy development. Children's interactions with adults before they reach school age have a profound impact on the development of oral language and vocabulary (Hart & Risley, 1995), which, in turn, have a significant impact on reading development (Kamil, 2004). Experience with text is important in language and literacy development because it decontextualizes language, requiring making sense about ideas beyond the here and now (Beck & McKeown, 2001). Children's life experiences and content knowledge affect their abilities to comprehend text (Willingham, 2006), and they must activate the appropriate prior knowledge to meet the specific demands of the text (Kendeou & van den Broek, 2007). Many other factors contribute to success in reading; these include, for example, oral language (Catts, Fey, Tomblin, & Zhang, 2002); alphabet knowledge (Allen, Neuhaus, & Beckwith, 2011); print awareness (Justice & Ezell, 2002); encoding (Weiser & Mathes, 2011); working memory (Linderholm & van den Broek, 2002); motivation (De Naeghel, Van Keer, Vansteenkiste, & Rosseel, 2012); metacognitive strategies (Baker, 2013); and background knowledge (Fisher, Frey, & Lapp,



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2012). It is important that teachers understand the role of various factors that contribute to proficient reading, how they are related, and how relationships change as reading develops. These factors can be categorized into those that are necessary for reading words and text (e.g., phonemic awareness, decoding, fluency) and those necessary for understanding words and text (e.g., vocabulary, comprehension).

### **Reading Words and Text**

An individual can be a master of oral language and still be illiterate. Literacy requires one to access messages conveyed via print, and this requires coordination of knowledge, skills, and processes. For example, one must have knowledge of the alphabet, which includes familiarity with letter shapes, names, and sounds as measured by recognition and production tasks (Piasta & Wagner, 2010). One must also have print knowledge, including understanding of the distinctions between letters and words, the directionality of print, the relevance of punctuation, and the various forms and functions of print (Justice, Kaderavek, Fan, Sofka, & Hunt, 2009). Although many children enter kindergarten well on their way toward mastery of these basic skills, many others require explicit instruction to ensure mastery. Formal reading instruction typically begins with a focus on the development of phonemic awareness, decoding and word recognition skills, and reading fluency.

**Phonemic awareness.** Phonological awareness, or the conscious sensitivity to the sounds structure of spoken language, contributes to a child's ability to read words (Lane & Pullen, 2004). Although phonological processing can occur at several structural levels, including syllables; intrasyllabic units (i.e., onset-rime or body-coda divisions); and phonemes, it is the phoneme level that is most critical to decoding and encoding skill development (Troia, 2004). Phonemic awareness refers to the capacity to detect and manipulate individual phonemes, or



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speech sounds, within words, and there is strong research evidence that a child’s phonemic awareness is a powerful predictor of later reading success (Adams, 1990; Torgesen, Wagner, Rashotte, Alexander, & Conway, 1997). Most people with significant reading difficulties have an underlying problem processing the individual sounds of language (Badian, 1995; NRP, 2000; Shaywitz, 1996; Uhry, 2011), but in numerous studies with a wide range of student populations, instruction in phonological awareness significantly improved students’ reading skills (e.g., Foorman, Francis, Beeler, Winikates, & Fletcher, 1997; Torgesen et al., 2001).

The NRP (2000) developed specific recommendations for activities to teach phonemic awareness. These include isolating, identifying, categorizing, substituting, adding, and deleting phonemes. However, the most critical phonological skills are phoneme blending and segmentation (Blachman, 2000). Learning to blend phonemes aids in the development of decoding skills; learning to segment phonemes is essential for encoding, or spelling (Armbruster, Lehr, & Osborn, 2001). As children develop phonemic awareness, incorporating letters in instruction as soon as possible promotes the acquisition of decoding skills (NRP, 2000). Phonemic awareness instruction is appropriate for all beginning readers and less able older readers (Armbruster et al., 2001). Most students who struggle with decoding have weak phonemic awareness (Uhry, 2011), and intervention in this area is necessary. For most students, fewer than 20 hr of instruction in phonemic awareness is sufficient, and small group or individual instruction tends to be more effective than whole class instruction (NRP, 2000).

**Word recognition and word study.** To learn to read an alphabetic language such as English, one must develop an understanding of the alphabetic principle—that fundamental insight that letters and sounds work together in systematic ways to form words (Adams, 1990; Snow et al., 1998). As children develop an understanding of the alphabetic principle, they



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become consistent in their use of letters and sounds to figure out unfamiliar words (Adams, 1990; Ehri, 2005). Most children need explicit phonics instruction in order to break the alphabetic code and become good readers (Beck & Juel, 1995; Foorman et al., 1998), and mastery of the code is critical to early reading success (Adams, 1990, 2001).

Most theoretical models of word reading development have proposed a phase-based progression from novice to skilled readers (Roberts, Christo, & Shefelbine, 2011). Such models suggest that skilled word reading develops in phases that are characterized by specific literacy behaviors (Rack, Hulme, & Snowling; 1993; Vellutino & Scanlon, 2002). The most widely recognized model belongs to Ehri (2005), who described the phases of word reading development that lead to proficient reading. The pre-alphabetic phase represents the period before children are aware of the alphabetic principle. During this phase, children may recognize logos or guess words based on pictures, but they do not use letter-sound correspondences. During the partial alphabetic phase, children begin to use letters and sounds, but the connections are incomplete, so they tend to guess words based on one or two letters. As children develop decoding skills, they move into the full alphabetic phase, in which they read every letter in a word. Reading during this phase is far more reliable, but it tends to be somewhat slow and laborious. As automaticity begins to develop, letters are combined into chunks or patterns. This is known as the consolidated alphabetic phase, and it represents proficient decoding.

Systematic and explicit phonics instruction significantly improves children's reading proficiency and is particularly beneficial for children who are at risk for reading difficulties (Adams, 2001; Tunmer & Arrow, 2013). Using a systematic instructional sequence (i.e., easier to more complex and most common letters and letter patterns first); providing ample opportunities for practice; and employing evidence-based methods of phonics instruction



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(e.g., synthetic, analogy, successive blending, manipulatives) results in better student outcomes (Armbruster et al., 2001). It is important, however, that systematic phonics instruction is integrated into the literacy curriculum, rather than taught as an isolated set of skills, because students tend to achieve better outcomes when they have ample opportunities to practice word reading skills as they acquire them (Brady, 2011). It is also important to understand how to differentiate phonics instruction based on students' entering skill levels. Connor, Morrison, and Katch (2004) found that children who entered first grade with weak reading skills responded better in classrooms with substantial emphasis on systematic phonics instruction, and children entering school with strong skills performed better in classrooms with less emphasis on phonics.

Word study goes beyond teaching basic letter-sound correspondences. Instruction in encoding has been shown to improve both encoding and decoding skills (Moats, 2006; Weiser & Mathes, 2011). It is beneficial to understand syllable types and syllable division patterns in order to assist students in decoding and encoding multisyllabic words (Carreker, 2011a). Morphemic analysis helps students' decoding and encoding skills advance from one-syllable base words to bases with affixes to other derivatives and multisyllabic words (Carreker, 2011a, 2011b). Knowing the etymology or origin of English words also helps with both decoding skill and vocabulary development (Henry, 2011).

Systematic phonics instruction is most effective in kindergarten and first grade (Armbruster et al., 2001), but it is essential for older readers who struggle to decode (Carreker, 2011a). About 2 years of phonics instruction is sufficient to develop the necessary level of proficiency with decoding, but some students may require more (NRP, 2000).

**Fluency.** Reading fluency, which can be defined as a combination of word reading accuracy and automaticity, reading rate, and prosody, is a vital part of reading proficiency



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(Hudson, Lane, & Pullen, 2005) because there is a very strong correlation between fluency and comprehension (e.g., Rasinski, Reutzel, Chard, & Linan-Thompson, 2011). According to Wolf and Katzir-Cohen (2001), reading fluency is “a level of accuracy and rate where decoding is relatively effortless, where oral reading is smooth and accurate with correct prosody, and where attention can be allocated to comprehension” (p. 219). Fluency is an important contributor to comprehension, especially in the primary grades (Schatschneider et al., 2004), but it is also important for motivation (Good, Simmons, & Kame'enui, 2001); syntactic development (Chomsky, 1972); and vocabulary development (Nathan & Stanovich, 1991). Fluent readers come in contact with more text in the same amount of time, and this increased exposure to text promotes both fluency and comprehension (Spear-Swerling, 2006).

Fluency tends to be neglected in many reading curricula, but numerous recommendations of instructional practices to promote fluency have emerged from research findings (Rasinski, Blachowicz, & Lems, 2012; Samuels, Schermer, & Reinking, 1992). These recommended practices include developing automaticity with word recognition skills (Chard, Pikulski, & McDonagh, 2012; Ehri, 2005); providing adult models (Blevins, 2001; Rasinski, 2003) and recorded models (Carbo, 1992; Dowhower, 1987; Hasbrouk, Ihnot, & Rogers, 1999) of fluent oral reading; practice with repeated readings of the same text (Rasinski, 2003; Samuels, 1979); timed readings (Mercer, Campbell, Miller, Mercer, & Lane, 2000); extensive independent reading of carefully selected text (Allington, 2000); and cueing phrase boundaries (Rasinski, 2003) or practicing expression (Schwanenflugel & Benjamin, 2012) to promote prosody. Several of these can be accomplished via computer-assisted instruction or other assistive technologies (ATs; e.g., Hasbrouck et al., 1999). Of these, repeated oral reading with feedback has the most robust research support (Armbruster et al., 2001).



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Fluency is also an indicator of competence or confidence with a skill, so measures of fluency, especially rate and accuracy, tend to be effective measures to use for screening and progress monitoring (Deno & Marston, 2006; Raskinski, 2006). Oral reading fluency is assessed by having a student read a grade-level passage for 1 min and calculating the correct words read per minute (Hudson et al., 2005). Charting a student's progress allows the teacher to determine whether instruction is having the desired effect over time. Published norms (e.g., Hasbrouck & Tindal, 2006) allow the teacher to compare each student's performance with grade-level expectations.

### **Understanding Words and Text**

Although alphabet knowledge, print awareness, phonemic awareness, word recognition, and reading fluency are all critical and necessary aspects of literacy, they are insufficient for reading proficiency. The purpose of reading is to understand text, so instruction must go beyond these basic skills. Knowledge of the meanings of words in text and having a repertoire of strategies for accessing the author's meaning are both essential for understanding.

**Vocabulary.** Vocabulary refers to the corpus of words that an individual uses to speak, listen, read, and write, and vocabulary knowledge has long been recognized as an excellent predictor of both later reading comprehension (Davis, 1972; Thorndike, 1917) and overall school achievement (Beck, McKeown, & Kucan, 2002, 2008). The more words a reader knows, the easier it is for the reader to read and understand text (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Kamil, 2004; NRP, 2000). Generally, one is able to understand more words than one uses, so receptive vocabulary is larger than expressive vocabulary (Beck et al., 2002), but both are important to literacy. It is also important to develop both vocabulary breadth (i.e., knowing many words) and vocabulary depth (i.e., knowing some words very well). Depth of word



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knowledge can vary from unfamiliar to acquainted to established (Beck, McKeown, Omanson, & Pople, 1985). One may associate a word with a single definition or context, have a broad understanding and ability to use a word, or be able to generate novel applications of a word (Hiebert & Kamil, 2005).

Unfortunately, many students enter school with an inadequate level of vocabulary knowledge to support reading success, and the range of vocabulary knowledge among children at school entry is great (Blachowicz et al., 2006). There is a marked difference in vocabulary knowledge among students from different socioeconomic groups or learning abilities, (Beck et al., 2002; Hart & Risley, 1995), and these differences can be observed throughout the school grades (Beck et al., 2002; White, Graves, & Slater, 1990). Students must develop both breadth and depth of vocabulary (Hiebert & Kamil, 2005).

Vocabulary instruction is particularly important for students with reading difficulties because their improvements in comprehension are particularly dependent on vocabulary instruction (Elleman, Lindo, Morphy, & Compton, 2009). Vocabulary instruction does not increase comprehension when the focus is on superficial, rote learning of definitions (Beck & McKeown, 1991; Durso & Coggins, 1991), so a focus on depth over breadth is worthwhile (Lesaux, Kieffer, Faller, & Kelley, 2010). Studies of vocabulary growth in which students are asked to look up a dictionary definition and use the word in sentence have found consistently poor results (McKeown, 1991; Miller & Gildea, 1987; Scott & Nagy, 1997). Knowing a word cannot be equated with knowing a definition (Nagy & Scott, 2000), but dictionaries can be useful for independent word learning if students are taught how to use them, including looking up a word after encountering it in context rather than before (S. A. Stahl & Kapinus, 2001). To promote better reading comprehension, vocabulary instruction should include multiple exposures



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to a word, teach both definitions and contexts, and engage students in deep processing (Beck et al., 2008).

A critical element of effective vocabulary instruction is the careful selection of words to teach. Beck and colleagues (2002) suggested using tiers of word utility to determine which words should be taught in a particular context. In addition, teachers should choose words that can be connected to what students know, can be explained with words students know, and will be useful and interesting to students. Tier 1 words are those that most children learn through their daily exposure to language (e.g., *pretty*, *clock*). These words seldom need to be directly taught. Tier 2 words are unusual for most children, but they are high-frequency words for mature language users (e.g., *exquisite*, *astonish*, *occurrence*). These words are ideal for instruction, because they are useful and can be connected with familiar words. For example, if a child understands the meaning of *sad*, learning *miserable*, *distraught*, and *forlorn* can be quite manageable. Tier 3 words are lower frequency, content-specific words. These words are best learned in the content area (e.g., *plutocracy*, *photosynthesis*, *perpendicular*).

In addition to directly learning word meanings, vocabulary development involves learning to use word parts to access word meanings. This process requires morphological awareness, or the understanding that many English words are combinations of morphemes (i.e., the smallest units of meaning within words). “Children learn morphemes as they learn language” (Carlisle, 2010, p. 465). Carlisle (2003) explained that because morphemes serve as phonological, orthographic, syntactic, and semantic units, they help students with word recognition and comprehension, and knowledge of morphological composition plays a role in the ability to read and understand complex words. Morphemic analysis allows students to infer meaning from unknown words by examining word parts (Hennessy, 2011). Learning the



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meanings of word parts that appear in many larger words is more effective and more efficient than independently learning each larger word (Rasinski, Padak, Newton, & Newton, 2011). In fact, understanding of morphology is a better predictor of reading comprehension than vocabulary level (Kieffer & Lesaux, 2007).

By first grade, students begin reasoning about words, and this morphological problem solving involves making inferences about the meaning of a word based on an analysis of the meanings of the morphemes found in the word (Anglin, 1993). Instruction in morphological awareness should begin with an emphasis on simple compound words made up of familiar words (i.e., free morphemes) and move to common prefixes (i.e., bound morphemes) with base words. Eventually, students should learn Greek and Latin roots and how these roots can be combined with affixes to form complex words (Henry, 1997; Rasinski, Padak, et al., 2011).

Beck and colleagues (2008) have promoted the use of vocabulary instruction that focuses on words students need to know while providing ample experience applying those words in meaningful contexts to solidify learning. Beck and colleagues (2002) suggested the use of Text Talk, a book discussion strategy that emphasizes talking about the meanings of a few key words. Anchoring a discussion with a short piece of engaging text encourages the use of academic vocabulary over conversational language (Lesaux et al., 2010). Forming strong connections between new labels and familiar concepts is a critical component of effective vocabulary instruction (Beck et al., 2008). Graphic organizers, such as semantic feature analysis (Anders & Bos, 1986) or word spoke charts (Rasinski, Padak, et al., 2011), can be useful in making these connections clear (Dexter & Hughes, 2011).

Although a focus on depth of vocabulary learning is important to ensure mastery, students still must learn many words. Incidental learning of new words most readily occurs



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when one notices and thinks about words when they are encountered, so a goal of vocabulary instruction should be to increase word consciousness. Word consciousness involves being aware and interested in words and word meanings (Anderson & Nagy, 1992; Graves & Watts-Taffe, 2002) and noticing when and how new words are used (Manzo & Manzo, 2008). A teacher can increase word consciousness by frequently using mature words in place of words that are familiar in the classroom routine (Lane & Arriaza-Allen, 2010). Promoting word consciousness and incidental learning through frequent, deliberate modeling of sophisticated vocabulary is a simple way to add breadth to children's vocabularies.

**Text comprehension.** To develop strong reading comprehension, children need experiences carefully designed to teach strategies, encourage vocabulary development, expand background knowledge, increase the ability to understand relationships between concepts, and actively use strategies to ensure understanding (Adams, 1990; Pressley, 2000; Snow et al., 1998). The RAND Reading Study Group (2002) defined reading comprehension as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (p. 11). The use of the words *extracting* and *constructing* emphasizes both the importance and the insufficiency of the text as a determinant of reading comprehension; essentially, the reader and the activity are just as important contributors. Readers can interpret and evaluate textual messages only as much as they possess and use the vocabulary, syntactic, rhetorical, topical, analytic, and social knowledge that is required in understanding text (Adams, 1990; RAND Reading Study Group, 2002).

Many reader factors contribute to comprehension, including background knowledge (Fisher et al., 2012); vocabulary (Kamil, 2004); verbal reasoning ability (Cain, Oakhill, & Bryant, 2004); knowledge of text structures and conventions (Duke et al., 2011); use of skills and



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strategies for close reading of text (Fisher & Frey, 2012); and reading fluency (Rasinski, Reutzel, et al., 2011). Text factors that influence comprehension include vocabulary (Lively & Pressey, 1923); use of conversational elements in narrative (Engleman, 1936); frequency of affixed morphemes (Flesch, 1948); level of abstraction (Flesch, 1950); and the amount of detail or amplification of abstract ideas (Wilson, 1948). A reader must be able to get through the process of recognizing and decoding words to access meaning, but being able to accurately and automatically decode all the words does not guarantee comprehension will occur. It is important that teachers recognize the many influences on comprehension and that all reading instruction should serve the purpose of increasing comprehension.

According to Duke and Pearson (2002), good readers are active readers who have clear goals in mind for their reading and constantly evaluate whether their reading is meeting their goals. Good readers selectively read, making decisions about what to carefully read, what to quickly read, what to skip, or what to reread. They construct, revise, and question the meanings they make as they read. They try to determine the meanings of unfamiliar words and concepts in the text. They actively build meaning by using prior knowledge to make appropriate inferences and build meaning that is consistent with the details presented in the text. They use mental strategies that assist in the building of meaning (e.g., predicting, questioning, visualizing, summarizing, inferring). Good readers draw from, compare to, and integrate their prior knowledge with the material in the text, and they monitor their understandings of the text, making adjustments in their reading. Good readers also use self-regulation, solving problems that occur while building meaning, modifying meaning in light of new information, and matching the intensity and type of reading to the purpose of reading and the nature of the text.



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They also maintain motivation, flexibility, and persistence throughout the reading task, and they are cognitively active before, during, and after reading.

The role of oral language in reading comprehension is also critical. In addition to knowledge of word meanings, a reader must have a command of other aspects of language (Beck, McKeown, & Kucan, 2003). According to Connor and colleagues (2011), proficient reading comprehension requires “flexible use of oral language (including semantic, morphosyntactic, and pragmatic skills)” (p. 191). Similarly, Babayiğit (2012) found that oral language, as represented by vocabulary and morphosyntactic skills, emerged as the most powerful unique predictor of reading comprehension in both monolingual and bilingual students. Fortunately, oral language intervention designed to develop listening comprehension, vocabulary, figurative language, and oral narrative skills can significantly improve reading comprehension (Snowling & Hulme, 2012).

Instruction in reading comprehension should take all of these factors into account. All teachers, whether they teach reading or content-area courses, should support and emphasize comprehension of text and ensure that the strategies they are using are evidence based and likely to result in improved comprehension. Duke and Pearson (2002) identified the several important characteristics of a classroom that supports reading comprehension: (a) sufficient time devoted to actually reading, (b) experience reading a range of text genres, (c) rich vocabulary and concept development, (d) support for accurate and automatic decoding of words, (e) time spent writing texts for others to comprehend, and (f) plentiful high-quality talk about text. They also suggested that effective comprehension instruction requires purposeful and explicit teaching and classroom interactions that support the understanding of specific texts.



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The Institute for Education Sciences (IES) convened a panel of distinguished researchers and practitioners to examine EBPs in reading comprehension instruction in the primary grades. This panel subsequently published a practice guide called *Improving Reading Comprehension in Kindergarten Through 3rd Grade* (Shanahan et al., 2010). This practice guide outlines five specific recommendations for teaching reading comprehension with young children.

The first recommendation is to teach students how to use reading comprehension strategies (Shanahan et al., 2010). Strategies are defined as “intentional mental actions during reading that improve reading comprehension” (Shanahan et al., 2010, p. 11) or “deliberate efforts by a reader to better understand or remember what is being read” (Shanahan et al., 2010, p. 11). Strategies that have an evidence base—either as an individual strategy or as part of a combination of strategies—include activating prior knowledge or predicting, questioning, visualizing, monitoring or fix-up strategies, inferencing, and summarizing or retelling. Teachers should teach multiple strategies, either one at a time or in combination, and explain to students how each strategy can help with comprehension. It is also important to provide students with extended opportunities to use the strategies they have learned, and doing this using a gradual release of responsibility (i.e., explanation, modeling using think-alouds, guided practice, and independent practice) can be particularly effective (Fisher & Frey, 2008). As Beck, McKeown, Hamilton, and Kucan (1997) cautioned, “a potential drawback of strategy-based instruction is that the attention of teachers and students may be drawn too easily to the features of the strategies themselves rather than to the meaning of what is being read” (p. 16). In fact, in a study directly comparing instruction focused on strategies versus content, students receiving content-focused instruction significantly outperformed those who received strategy-focused instruction (McKeown, Beck, & Blake, 2009).



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The panel's second recommendation is to teach students to identify and use the text's organizational structure to comprehend, learn, and remember content (Shanahan et al., 2010). From the earliest grades, students should be exposed to a variety of texts that employ a range of text structures. Most texts can be categorized as either narrative or informational. Narrative texts can include both fictional and non-fictional content portrayed as a story or sequence of related events. In addition to traditional storybooks, narrative text in the elementary grades can include historical fiction, biographies, and fables. Informational text can include expository or descriptive text, argumentative or persuasive text, or procedural text. Students tend to comprehend better when they have learned the features of a text's structure via practices such as story mapping in narrative or identification of clue words in informational text.

The third recommendation is to guide students through focused, high-quality discussion on the meaning of text (Shanahan et al., 2010). Although there have been very few studies that have examined the use of discussion as a comprehension practice with young children, positive effects with older children suggest that this is a worthwhile approach for younger children. In particular, the panel supports the use of activities in which students "argue for or against points raised in the discussion, resolve ambiguities in the text, and draw conclusions or inferences about the text" (p. 23). Teachers should ask questions that require students to deeply think about text and ask follow-up questions that will encourage and facilitate discussion. As soon as students are able, they should begin leading their own discussions

The fourth recommendation is to purposefully select texts to support comprehension development (Shanahan et al., 2010). Comprehension instruction should include a wide range of text structures and should support students' needs. In particular, text selected for comprehension instruction should (a) be rich in terms of its depth of ideas and information, (b) be at an



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appropriate level of difficulty in terms of both students' word reading skills and their comprehension skills, and (c) support the goals of the lesson.

The final recommendation is to establish an engaging and motivating context in which to teach reading comprehension (Shanahan et al., 2010). Teachers should ensure that students see the importance, purpose, and benefits of reading through modeling. Choosing texts that are relevant to students' lives can enhance their motivation to read. It is important for teachers to clearly convey to students how learning the comprehension strategies will help them learn. Providing opportunities to choose what they read and to work with their peers can also be motivating.

### **Considerations for Assessment, Instruction, and Intervention**

High-quality reading instruction requires that teachers understand more than simply what to teach. Effective teachers understand how to identify their students' instructional needs, select appropriate materials, organize instruction to maximize learning, and differentiate instruction to meet individual needs.

#### **Assessment**

Assessment plays a critical role in reading instruction. Assessment data can determine who is making adequate progress and who needs intervention, which instructional methods are working and which need to be adjusted, and how students in a given class or school compare with students from other classes or schools (Coyne & Harn, 2006; K. A. D. Stahl & McKenna, 2012). In their study of effective teachers and schools, Taylor, Pressley, and Pearson (2002) found that teachers' systematic assessment of reading progress was closely linked with students' reading growth. Reading assessment can take the form of a formal standardized test, an informal teacher-made test, or a teacher's observation of a student's classroom academic performance or



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behavior. The selection of an assessment method and instrument should be made only after considering the purpose of the assessment (i.e., screening, diagnosis, progress monitoring, or outcome measurement).

Screening assessments, usually brief measures that give teachers a general idea about students' abilities, can be thought of as the filter that separates students who are achieving as expected from those who are likely to need extra help (Compton et al., 2010). Once a student has been identified as likely to need extra help through the use of a screening measure, additional information about the nature of the student's needs is collected using diagnostic assessment or an in-depth analysis of a student's strengths and weaknesses used to plan intervention (Torgesen & Wagner, 1998). Once instruction or intervention begins, frequent ongoing assessment can provide the teacher with information about the effectiveness of the instruction. This progress monitoring assessment may be conducted daily, weekly, monthly, or quarterly, using equivalent measures so that comparisons may be drawn over time, but consistent use leads to more accurate assessment (Stecker & Fuchs, 2000). Progress monitoring assessment may be used to (a) estimate rates of improvement; (b) identify children who are not making adequate progress and, therefore, require additional or different forms of instruction; and (c) compare the efficacy of different forms of instruction (K. A. D. Stahl & McKenna, 2012). Outcome assessment is used to determine whether students have achieved expected levels of performance after a given period of time. These assessments are usually conducted once each year to measure mastery of grade-level objectives. Classrooms, schools, districts, and states are compared using the results of outcome assessments.

Teachers must understand these various purposes for assessment, along with how to select appropriate assessment tools. Basic understanding about measurement validity and



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reliability and how to identify and use valid and reliable instruments is essential. Teachers must also understand how to provide testing accommodations and modifications, including how to determine who needs them and which are appropriate. Finally, and perhaps most important, teachers must understand how to interpret and use assessment results (K. A. D. Stahl & McKenna, 2012).

## **Instruction**

Although many students learn to proficiently read no matter what their reading instruction looks like, most students need instruction that is systematic and explicit (Beck & Beck, 2012; Birsh, 2011; Carnine, Silbert, Kame'enui, Tarver, & Jungjohann, 2006; Smartt & Glaser, 2010). Systematic instruction is teaching that follows a sensible order and progression that ensures that students have the prerequisite skills and knowledge they need to learn new material. "The goal of systematic instruction is one of maximizing the likelihood that whenever children are asked to learn something new, they already possess the appropriate prior knowledge and understanding to see its value and to learn it" (Adams, 2001, p. 74). Explicit instruction does not leave anything to chance and does not make assumptions about the skills and knowledge children will acquire on their own. "The goal of explicit instruction is one of helping children to focus their attention on the relations that matter . . . because one learns that to which one attends" (Adams, 2001, p. 75). Explicit instruction includes a gradual release of responsibility, beginning with clear explanation and modeling of skills, moving to guided practice in the application of those skills, and culminating in ample opportunities to practice the skills in authentic contexts (Fisher & Frey, 2008; Rupley, Blair, Nichols, 2009).

It is important that teachers make careful choices of text as they assess and intervene with struggling readers. Choosing inappropriate text can lead to inaccurate, invalid, and unreliable



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assessments and to frustration, boredom, or resistance during intervention. Selecting appropriate text depends on three interrelated sources of data, all of which are critical to effective teaching: (a) quantitative information, often expressed as Lexiles; (b) qualitative measures, including benchmark texts or exemplars agreed upon by educators; and (c) information about the reader and tasks (Hiebert, 2012). Teachers also must understand the varying demands of different text genres (Duke & Carlisle, 2010).

### **Intervention**

Differentiated instruction should be an integral part of reading instruction.

Differentiation provides adjustment in intensity of instruction, degree of explicitness, amount of scaffolding during guided practice, and amount of independent practice. Teachers differentiate their methods in core instruction as well as when providing highly individualized and targeted intervention instruction (Haager, Klingner, & Vaughn, 2007). Intervention instruction is most effective when it provides systematic and explicit instruction on whichever component skills are deficient (Armbruster et al., 2001); a significant increase in intensity of instruction (O'Connor, 2000); ample opportunities for guided practice of new skills; independent practice in applying and using those skills (Denton, Vaughn, & Fletcher, 2003); and appropriate levels of scaffolding as children learn to apply new skills (Foorman & Torgesen, 2001). To implement effective intervention, the teacher must understand the intricacies of grouping for instruction, including planning for instructional intensity, determining the amount of teacher regulation of learning, group size, instructional time allotment, and opportunities to respond (Elbaum, Vaughn, Hughes, & Moody, 1999).



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## Multi-Tiered Systems

The use of a multi-tiered Response-to-Intervention (RtI) framework has become widespread since the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA). Although the law does not specify or mandate any particular model or approach for Multi-Tiered System of Supports (MTSS), most models consist of three tiers: (a) core instruction (i.e., Tier 1), (b) intervention provided by the classroom teacher (i.e., Tier 2), and (c) intervention provided by a specialist (i.e., Tier 3; Ehren, Ehren, & Proly, 2009; Wixson, Lipson, & Valencia, 2012). These tiers of support are layered based on students' needs, with all students receiving high quality core instruction (i.e., Tier 1)—typically in whole-class arrangements, and some students receiving supplemental intervention (i.e., Tier 2)—usually in small groups. When core instruction and initial intervention are insufficient to produce desired student outcomes, more intensive interventions (i.e., Tier 3) are implemented (Cusumano, Algozzine, & Algozzine, 2014). This level of intensive intervention is typically delivered in either a small-group or one-on-one format.

Such systems also typically include universal screening, progress monitoring, and use of data to make decisions (Deshler & Cornett, 2012). Screening is used to identify students who are not responding to core instruction, and interventions are then designed and modified based on students' needs that are identified through ongoing progress monitoring (Klinger & Edwards, 2006). To make decisions based on data, teachers must be knowledgeable in the design or selection of appropriate measures and in the interpretation of data to solve problems. Deno (2012) explained that problem solving begins with identifying the student's current level and rate of development, the desired level and rate of development, and the difference between the two



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levels. From there, teachers examine alternatives to address the problem, apply the chosen alternative, examine the effects, and make modifications, as needed.

For MTSS to be effective, the core curriculum must also be based on research that provides evidence of a high likelihood of student success (Fien et al., 2011), and instruction and intervention must be delivered with a high degree of fidelity (Noell et al., 2005). Intensive interventions in reading require explicit and systematic instruction with effective modeling, practice with feedback, and plentiful opportunities to respond (Fuchs, Compton, Fuchs, Bryant, & Davis, 2008). Implementation of a multi-tiered system requires that teachers are well versed in methods for effective instruction and intervention, ongoing assessment, and data-based decision making (Haager et al., 2007; Shinn & Walker, 2010; Stahl & McKenna, 2012).

In addition to this IC, the ICs on Universal Design for Learning (Israel, Ribuffo, & Smith, 2014), technology (Israel, Marino, Delisio, & Serianni, 2014), and evidence-based practices in writing (Troia, 2014) and mathematics (VanDerHeyden, & Allsopp, 2014) provide teacher educators with information to guide teachers in the implementation of MTSS. In addition, the IC on principal leadership (Billingsley, McLeskey, & Crockett, 2014) outlines the role of principals in the MTSS process. Effective MTSS requires consensus among stakeholders about the need for the approach, careful implementation, and an infrastructure to support it (Cusumano et al., 2014), so the principal's role is critical. When implemented with a high degree of fidelity, MTSS can have powerful effects, but more work is needed to convince educators to invest in evidence-based prevention (Algozzine et al., 2012).

### **Conclusion**

Ensuring that all students become proficient readers during their first years in school is the responsibility of all educators. When teachers have in-depth knowledge of the essential



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components of reading and how to provide the necessary instruction, it is likely that most students will learn to read. This includes knowledge about the foundations and processes of language and literacy development, the structure of language, the role of text, and EBPs for reading instruction and intervention.

To acquire this knowledge and skill applying evidence-based instructional practices, teachers need excellent pre-service preparation, including ample opportunities to practice with students accompanied by specific feedback from preparation program supervisors. Classroom teachers and school leaders need ongoing opportunities for learning to enhance their skills to work with the most challenging students, including those with disabilities, to ensure that all students are prepared for college and their careers. When all the systems of support are aligned and focused on EBPs, teachers and students should be successful.



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Appendix

Innovation Configuration for Evidence-Based Reading Instruction for Grades K-5

Essential Components	Implementation Levels				
<p>Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.</p>	Level 0	Level 1	Level 2	Level 3	Rating
	<p>There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.</p>	<p>Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/demonstration, or quiz.</p>	<p>Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.</p>	<p>Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small group student teaching, or whole group internship.</p>	<p>Rate each item as the number of the highest variation receiving an X under it.</p>
1.0 Influences on Reading Policy and Practice in the United States					
<p>1.1 - Recommendations contained in important syntheses of evidence on reading instruction (e.g., <i>Beginning to Read: Thinking and Learning about Print</i> by Adams, 1990; National Reading Panel (NRP) report, 2000; RAND Study Group report, 2002).</p> <p>1.2 - Federal policies that affect reading instruction and intervention (e.g., No Child Left Behind [NCLB]).</p> <p>1.3 - Nationwide initiatives that affect reading instruction and intervention (e.g., Common Core State Standards [CCSS])</p>					



Essential Components	Implementation Levels				
	Level 0	Level 1	Level 2	Level 3	Rating
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/demonstration, or quiz.	Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small group student teaching, or whole group internship.	Rate each item as the number of the highest variation receiving an X under it.
<b>1.0 Influences on Reading Policy and Practice in the United States</b>					
1.4 - Standards related to reading instruction and intervention that have been put forth by professional organizations (e.g., International Reading Association [IRA], Council for Exceptional Children [CEC], International Dyslexia Association [IDA], National Council for Teachers of English [NCTE])					



Essential Components	Implementation Levels				
	Level 0	Level 1	Level 2	Level 3	Rating
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/demonstration, or quiz.	Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small group student teaching, or whole group internship.	Rate each item as the number of the highest variation receiving an X under it.
<b>2.0 Foundation Concepts About Oral and Written Language</b>					
<p>2.1 - The structure of the English language</p> <ul style="list-style-type: none"> <li>• Phonology and phonetics of English</li> <li>• Orthography (e.g., common spelling rules and patterns)</li> <li>• Morphology (e.g., common prefixes, suffixes, syllables, derivational and inflectional morphemes)</li> <li>• Semantic organization (e.g., lexical and sentential semantics, antonyms, synonyms, polysemous words, semantic feature analysis)</li> <li>• Etymology of English words (e.g., Anglo-Saxon, Latin/Romance, Greek)</li> <li>• Syntax (e.g., dependent clauses, independent clauses, parts of speech)</li> <li>• Pragmatics (e.g., social language use, cultural conventions, idioms)</li> </ul>					



Essential Components	Implementation Levels				
	Level 0	Level 1	Level 2	Level 3	Rating
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/demonstration, or quiz.	Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small group student teaching, or whole group internship.	Rate each item as the number of the highest variation receiving an X under it.
<b>2.0 Foundation Concepts About Oral and Written Language</b>					
<p>2.2 - Theories about reading (e.g., connectionist, simple view, schema)</p> <p>2.3 - Language processing requirements of proficient reading and writing.</p> <p>2.4 - Aspects of cognition and behavior that affect reading.</p> <p>2.5 - Environmental, cultural, and social factors that influence literacy development.</p> <p>2.6 - Typical developmental phases in reading development and reasonable goals and expectations for learning at various phases (e.g., Ehri, 2005)</p> <p>2.7 - Role of various aspects of oral and written language used in reading, how they are related, and how relationships change as reading develops:</p> <ul style="list-style-type: none"> <li>• Oral language</li> </ul>					



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<b>2.0 Foundation Concepts About Oral and Written Language</b>					
<ul style="list-style-type: none"> <li>Alphabet knowledge, including recognition, identification, letter formation, and letter sounds</li> <li>Print concepts</li> <li>Phonological skills, especially phonemic blending and segmentation</li> <li>Decoding and encoding</li> <li>Accurate and automatic word recognition</li> <li>Text reading fluency</li> <li>Background knowledge</li> <li>Vocabulary</li> <li>Cognition and metacognition</li> <li>Comprehension, including both listening and reading comprehension</li> </ul> <p>2.8 - Role of text in language development, dialogue generation, and vocabulary development.</p> <p>2.9 - Needs of English language learners.</p>					



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<b>3.0 Phonemic Awareness</b>					
<p>3.1 - Individual speech sounds known as phonemes.</p> <p>3.2 - Levels of phonological awareness (e.g., word, syllable, onset-rime, phoneme).</p> <p>3.3 - Reciprocal relationships among phonological processing, decoding, spelling, and writing.</p> <p>3.4 - Incorporating letters in instruction as soon as possible.</p> <p>3.5 - Critical phonological skills for decoding: phoneme blending and segmentation.</p>					



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<b>4.0 Decoding (Instruction and Principles)</b>					
<p>4.1 - Instruction in phoneme-grapheme correspondences (i.e., correspondence of sounds and letters) for decoding and encoding in the early grades and with struggling readers in later grades.</p> <p>4.2- Systematic instructional sequence—easier to more complex, most common letters and letter patterns first (e. g., teach <i>s, m, t, d, a</i> before <i>ch, th, z</i>).</p> <p>4.3 - Evidence-based methods of phonics instruction (e.g., synthetic, analogy, successive blending, manipulatives).</p> <p>4.4 - Explicit and direct teaching of decoding skills.</p> <p>4.5 - Alphabetic principle, or the insight that letters and sounds work together systematically to form words.</p>					



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<b>4.0 Decoding (Instruction and Principles)</b>					
4.6 - Six syllable types and syllable division patterns to assist in decoding and encoding multisyllabic words.					
4.7 - Common orthographic rules and patterns.					
4.8 - Etymology of English words.					
4.9 - Use of pseudoword reading for assessment.					



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<b>5.0 Fluency (Role, Instruction, and Assessment)</b>					
5.1 - Role of fluency in word recognition, reading comprehension, and motivation.					
5.2 - Role of fluency in reading difficulties.					
5.3 - Role of accurate, automatic decoding or word-level automaticity in fluency development and text comprehension; evidence-based methods for improving word-level automaticity.					
5.4 - Role of rate or text-level automaticity in fluency development and text comprehension; evidence-based methods for improving text-level automaticity.					
5.5 - Role of prosody as both an aid to and an indicator of text comprehension; evidence-based methods for improving prosody.					



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<b>5.0 Fluency (Role, Instruction, and Assessment)</b>					
5.6 - Benefits of practice and instruction in fluency.					
5.7 - Fluency performance standards as a guide.					
5.8 - Evidence-based methods for improving word-level automaticity.					
5.9 - Evidence-based methods for improving text-level automaticity.					
5.10 - Evidence-based methods for improving prosody.					
5.11 - Curriculum-based measurement and significance of measurable goals.					
5.12 - Methods and value of charting fluency progress.					



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<b>6.0 Vocabulary (Types, Role, and Instruction)</b>					
6.1 - Types of vocabulary: listening, speaking, reading, and writing automaticity.					
6.2 - Role of vocabulary in comprehension—readers must know the meaning of most of the words in text to be able to understand that text.					
6.3 - Role of vocabulary breadth (i.e., knowing many words).					
6.4 - Role of vocabulary depth and levels of word knowledge (i.e., unknown, acquainted, and established).					
6.5 - Evidence-based methods of teaching word meanings.					
6.6 - Evidence-based methods of teaching word-learning strategies.					



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<b>6.0 Vocabulary (Types, Role, and Instruction)</b>					
6.7 - Principles of vocabulary instruction (i.e., multiple exposures, with deep understanding, connected to what students know).					
6.8 - Considerations for selection words to teach (e.g., utility, connections to known, “tiers”).					
6.9 - Use of morphology and etymology in vocabulary instruction.					
6.10 - Developing word consciousness.					



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<b>7.0 Comprehension (Instruction and Strategies)</b>					
7.1 - Integrating instruction of essential components of reading for the goal of comprehension.					
7.2 - Importance of and methods for developing students' background knowledge before reading.					
7.3 - Strategies good readers use before, during, and after reading (e.g., set purpose, activate prior knowledge, and make predictions; generate questions, determine main ideas, make inferences, paraphrase, use fix-up to solve comprehension problems, summarize).					
7.4 - Factors that contribute to comprehension: background knowledge, vocabulary, verbal reasoning ability, knowledge of literary structures and conventions, use of skills and strategies for close reading of text, and reading fluency.					



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<b>7.0 Comprehension (Instruction and Strategies)</b>					
<p>7.5 - Use of evidence-based comprehension strategies:</p> <ul style="list-style-type: none"> <li>• Generating questions</li> <li>• Summarizing, retelling</li> <li>• Questioning strategies (i.e., asking questions before, during, and after reading)</li> <li>• Making inferences</li> <li>• Prediction</li> <li>• Graphic organizers</li> <li>• Monitoring comprehension</li> <li>• Metacognitive strategies (i.e., thinking about thinking)</li> <li>• Recognizing both narrative and informational text structures</li> </ul> <p>7.6 - Modeling of strategies (e.g., think-alouds).</p> <p>7.7 - Close and critical reading of complex text.</p>					



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<b>8.0 Explicit and Systematic Instruction</b>					
8.1 - Direct, straightforward instruction.					
8.2 - Modeling and demonstrating skills and strategies.					
8.3 - Providing examples and non-examples.					
8.4 - Planned, purposeful, and sequential instruction.					
8.5 - Step-by-step.					
8.6 - Organization of skills from easy to difficult (e.g., easier phoneme-grapheme correspondences such as <i>m</i> , <i>t</i> , and <i>a</i> , before more difficult ones, such as <i>y</i> , <i>x</i> , and <i>tch</i> ).					
8.7 - Methods for determining if reading programs use an appropriate skills sequence and provide adequate practice.					



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8.0 Explicit and Systematic Instruction					
<p>8.8 - Gradual release of responsibility: I do (teacher models), We do (guided practice with teacher support), You do (student completes tasks independently).</p>					



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9.0 Organization for Instruction					
<p>9.1 - Selecting appropriate text for instruction, including the role of reading level, complexity, genre, and interest.</p> <p>9.2 - Grouping for reading instruction (e.g., ability grouping, flexible grouping).</p> <p>9.3 - Planning for instructional intensity, including amount of teacher regulation of learning, group size, instructional time allotment, and opportunities to respond.</p> <p>9.4 - Managing Multi-Tiered System of Supports (MTSS).</p>					



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<b>10.0 Literacy Assessment</b>					
10.1 - Purposes of assessment: screening, diagnosis, progress monitoring, and outcome measurement.					
10.2 - Using data for planning or modifying instruction and identifying students who require additional support.					
10.3 - Measurement validity and reliability and how to identify and use valid and reliable instruments.					
10.4 - Formative and summative approaches.					
10.5 - Role of norm-referenced and criterion-referenced assessments; types of scoring.					
10.6 - Assessment accommodations and modifications.					



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10.0 Literacy Assessment					
<p>10.7 - Interpretation of assessment results.</p>					

