Mc Graw Hill Education

Open Court Reading

Foundational Skills: Five Ways to Build the Cornerstone of Proficient Reading

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The purpose of this paper is to present the best practices for teaching primary grade students the foundational skills needed for language and literacy development. Foundational literacy skills are defined and the implications for instructional practices on student performance are discussed. Phonological and phonemic awareness, decoding and phonics, word analysis, and fluency are all reviewed, with an emphasis on what research has revealed and the best practices for teaching these critical skills.

INTRODUCTION

Language is critical for learning to read and write (Roskos et al., 2003). From birth, children are sensitive to the elements of oral language; listening and speaking are instinctive activities. Yet learning to read and write, both language-based activities, are not acquired in the same way. The process of learning a written language is much more challenging than the acquisition of spoken language. Written language requires young learners to reflect on their spoken language—to be aware that their language is made up of sentences, words, parts of words and individual sounds. This awareness is not something that speakers of a language consciously think about. While children speak in sentences made up of words and words made up of sounds, they never consciously think about the order of words in sentences or sounds in words. When children are first learning to read, however, this understanding of oral language and its connection to letters and words is key to later reading success.

FOUNDATIONAL SKILLS

Reading is about making sense of text, enjoying complex literature, examining information, expanding knowledge and building new ideas. It is a complex activity requiring a range of skills and strategies that must work in concert. The Common Core State Standards reflect the importance of these goals as critical for preparing students for college and for a successful career. Students need to learn to read literature and informational text closely, to use textual evidence, make logical inferences, determine the central idea of text, analyze and summarize text, understand and explain author craft and structure, and integrate ideas and concepts.

Attaining these outcomes or standards begins in the primary grades where critical foundational skills should be part of a comprehensive program of reading instruction. In other words, if students are to become fluent, confident and enthusiastic readers—readers who easily gain meaning, pleasure and knowledge from a variety of print materials—they need extensive experiences with language and literature plus instruction in critical foundational skills. Foundational skills support decoding words and using word knowledge to comprehend complex writing across varying levels of complexity and text types. These skills should be taught early and well, but not to the exclusion of other literacy skills.

Beginning at the kindergarten level, children should develop concepts of print, phonological awareness and the alphabetic principle. Fluency at this point should involve the rapid recognition of sounds and letters and high-frequency sight words as well as exposure to good models of fluent reading during big book and other literacy activities. In Grade 1, print concepts and phonological awareness should be reviewed. Foundational skills instruction should emphasize expanding the alphabetic principle by connecting sounds to letters or spelling and introducing inflectional endings. Accurate and automatic fluency for reading connected text should be practiced. By Grade 2, decoding instruction should include reviewing common and variant spellings, as well as teaching common affixes, syllabication generalizations and building fluency. In Grade 3, the instructional focus should shift from sounds/letters or spellings relationships to recognizing and understanding roots, prefixes and derivational suffixes and building fluency. This shift to morphological units—affixes and roots—should continue through fifth grade in order to expand word knowledge and vocabulary.

Open Court has had a long and successful history of teaching the critical foundational skills using materials that integrate knowledge from research on the learning theory and cognitive science as well as language and literacy development combined with instructional practice and teacher expertise.

FOUNDATIONAL SKILLS DEFINED

Foundational skills include a range of proficiencies that are developmental in nature. These skills are key to early reading success as they connect and build upon each other.

Print Awareness:

Children are surrounded by print from words on signs and household products to words in books. And often children seemingly understand words like “stop” or “toothpaste.” But ask a young child to point to and name the individual letters in those words, and he or she is unable to. A young child just runs his or her finger under the word and says “toothpaste.” Often he or she will give the actual name of the product. Print awareness develops the awareness of the forms, functions and purposes of print. Children learn about letters and how they work together to create words.

Print awareness ranges from realizing that the arbitrary lines and curves that make up letters represent spoken language—words and sentences—to knowing that English words and sentences are read from left to right. Also, print awareness focuses on the concept that words in sentences have spaces between them and that punctuation is used to delineate sentences and parts of sentences.

Phonological and Phonemic Awareness:

Phonological awareness is an umbrella term that encompasses the understanding that sentences are made up of words and that words are made up of parts. Phonemic awareness, a subset of phonological awareness, is the conscious understanding that spoken words contain individual and separable sounds known as phonemes. A phoneme is the smallest unit of speech that conveys a distinct meaning (for example, the word “sat” contains three phonemes, /s/ /a/ /t/, and differs by one phoneme from the spoken words “sad,” “sap,” “hat,” “mat” and “sit.” A change in the initial, medial, or final phoneme in these words changes the meaning of these words.)

Phonemic awareness focuses on sounds in words. While it lays the foundation for phonics and overlaps with phonics instruction, phonemic awareness is not decoding words or understanding their meanings. Phonemic awareness is about manipulating the sounds in words.

Phonics:

Phonics is a tool for decoding words. Simply put, phonics is an instructional practice that helps students develop an understanding of the alphabetic principle—that the sounds of language are represented by symbols (letters, graphemes, spellings or letter patterns). For example, the sound /m/ can be represented by the letter “m” in “man,” as well as by the letter combination or spelling “mb” found in “lamb.” Similarly, the sound /ā/ can be represented by the single letter “a” but also by the spelling “a_e,” “ai,” “ay” or “ey” as in “made,” “paid,” “say” and “they” respectively. Phonics instruction should focus not only on learning the connection between sounds and spellings, but also on how to use that knowledge to read and spell words.

Word Analysis:

Word structure involves students developing morphemic awareness which facilitates reading fluency, increases vocabulary and supports reading achievement (Carlisle, 2000; 2004; Carlisle and Nomanbhoy, 1993; Elbro and Arnback, 1996; Fowler and Liberman,1995; Singson, Mahoney, and Mann, 2000; Windsor, 2000).

While a phoneme is the smallest unit of sound, a morpheme is the smallest unit of meaning or grammatical function in a language. There are two types of morphemes—free and bound morphemes.. Free morphemes stand alone as words and include many common Anglo-Saxon words such as “cat” and “girl.” In contrast, bound morphemes cannot stand alone. They include prefixes, suffixes and Greek and Latin roots. For example, “cat” is a free morpheme—it has a specific meaning and can stand alone as a word. The “s” that is added to the end of a word to indicate plurality (meaning more than one) is also a morpheme, but it is a bound morpheme. It cannot stand alone. When “s” is added to the word ”cat,” the meaning is changed to “more than one cat.”

Fluency:

Fluency involves reading accurately and automatically with prosody. Accuracy in decoding words is a foundational first step toward fluent reading. But students can be accurate readers who read too slowly. Rate is how quickly and automatically one reads connected text. An important feature of reading rate is automaticity, which is the immediate, effortless recognition of words as they are encountered. Automaticity allows readers to focus their attention on the meaning of the text, rather than continually switching their attention from decoding to comprehension, limiting their ability to do either one well (Samuels, 2006).

Fluency is also defined by prosody, which includes appropriate inflection, expression, intonation, phrasing and attention to stress patterns. Prosodic reading indicates that readers are able to actively construct the meaning of text as they are reading (Torgeson and Hudson, 2006). Prosodic reading is interpretive and meaningful, indicating that the reader is focusing on comprehension. The reader recognizes and uses appropriate phrasing and features during oral reading, and probably during silent reading. Accuracy, rate and prosody work in tandem to facilitate fluent reading.

THE WHY AND HOW OF FOUNDATIONAL SKILLS

Print Awareness and Alphabetic Knowledge

The Why! What Does Research Tell Us about Print Awareness and Alphabetic Knowledge?

Children are surrounded by print. Print awareness helps children understand the different functions of print. For example, lists are functional while books tell stories or provide information. At a more discrete level, children need to learn about letters. Children develop alphabetic knowledge by learning about letters in the following sequence:

- Name the letters
- Discriminate the shapes of letters
- Form letters
- Identify and map the sounds of letters (Mason, 1980).

Recognizing and forming letters is a difficult task for young children. Adams (1990) describes letters as graphically sparse and composed of minimal visual features, such as simple curves and lines. The spatial relationship and orientation of letters is another challenge. Children know that an object is still the same object despite a change in its orientation. A toy is the same toy no matter how it is turned, but some letters (b, d, p and q) do not follow the rules of orientation. Letters can be different depending on how they are turned. Consequently, these letters should not be taught with each other since they are easily confusable. It is best to separate their introduction until students are thoroughly familiar with one letter in such a pair before they encounter the other (Beck and McCaslin, 1978).

In fact, children must learn more than 26 letters of the alphabet since there are upper and lower case letters. Some of the upper and lower case letters are the same excerpt for size. Examples are “o” and “O” or “s” and “S.” Others are completely different, such as “r” and “R” and “a” and “A.” After students learn some letters, they should be encouraged to write them. As their knowledge of letters and printed language increases, many kindergarteners will begin to use what they learn to communicate their ideas and thoughts, just as they see adults do. Along with phonological awareness, the foundational skill of accurate and rapid letter naming is one of the key predictors of later reading success (Richey, 2004; Richey and Speece, 2006; Evans, Bell, Shaw, Moretti and Page, 2006; National Reading Panel, 2000). Schlagel (2007) also notes that being able to form manuscript letters supports letter naming.

Without the ability to name the letters and identify and discriminate their shapes (alphabetic knowledge), phonemic awareness is of limited value. Further, until students can identify the shape of each letter and discriminate one letter from another, it is pointless to introduce them to the alphabetic principle. Unless students can recognize letters quickly and effortlessly, they cannot begin to appreciate that words are constructed of letters, or connect sounds to letters. However, after students are able to quickly identify letters, they have little difficulty learning letter sounds and word spellings (Adams, 1990).

The progression of difficulty in learning how the system of written language works is somewhat the reverse of the system for learning spoken language. Spoken language is learned by hearing whole words and sentences and focusing on meaning. Written language begins with learning the smallest unit (letters) and advancing to the largest unit (text). As children attempt to reproduce the letters they see in print, they gain an awareness of how lines form letters. Next, they notice how these letters can be combined to form words, and finally, how words can work together to make sentences and text (Maxim, 1993). Unless students can recognize the shapes of letters automatically, without having to stop and think about which letter is made by what combination of lines, they cannot recognize words quickly. Learning to print letters is an excellent way to develop alphabetic knowledge and promote children’s interest in using written language to communicate. Indeed, for many children who read well before starting school, writing comes before reading (Durkin, 1965). Interestingly, analyses of early writing efforts show that as young children decide how to use letters to make words, they rely heavily on letter names, not letter sounds: YL (while), PPL (people) (Chomsky, 1979).

Because the nature and function of words may not be obvious to many young children, training in word awareness is an important part of early literacy instruction. Providing them opportunities to recognize spaces between words in shared reading of big books helps children realize that the strings of letters between the spaces are the same units that are found in their speech. Exploring word length is also important to the concept of word. Comparing and contrasting lengths of printed words helps young learners discover the correspondence between the printed and spoken length of words, a basic relationship between speech and (alphabetic) writing (Adams, 1990).

Many children enter school with a great deal of alphabetic knowledge. They have gained this knowledge through listening to storybooks; singing songs; reciting nursery rhymes; playing with alphabet books, blocks and shapes; watching and listening to children’s television shows; and playing computer and computer alphabet games. Other children need instructional opportunities to develop this knowledge. Along with phonemic awareness, alphabetic knowledge measured at the beginning of kindergarten is one of the best predictors of reading success at the end of kindergarten and first grade (Chall, 1996; Share, Jorm, Maclean, and Matthews, 1984). Alphabetic knowledge is correlated strongly with students’ ability to remember the forms of written words and with their ability to understand that words are sequences of letters (Ehri, 1987; Ehri and Wilce, 1985). Children who have little or limited alphabetic knowledge when they enter school are likely to have difficulty later in learning letter sounds and in recognizing words (Mason, 1980; Sulzby, 1983).

The How! What Does Print Awareness and Alphabetic Knowledge Instruction Look Like in the Classroom?

Fostering print awareness in the classroom involves creating a print-rich classroom environment coupled with solid instruction. Children need on-going exposure to print, such as classroom labels and signs and books. Reading big books and discussing conventions of print—reading from top to bottom and left to right, using spaces between words and identifying beginnings and endings of sentences—not only develops print awareness, but builds academic language and supports student writing.

Instruction in letter knowledge involves singing alphabet songs and pointing to the letters as children sing. Activities created around alphabet songs or alphabet games engage students and provide them with "pegs," such as rhymes and rhythm, on which to hang their developing knowledge. Additional activities like "Letter of the Day" encourages children to find words in the room that contain the target letter. Having children identify which letters come before and after the letter of the day helps them place letters in alphabetical order without singing the entire song each time.

Children should have many opportunities to learn the shapes and names of the letters of the alphabet. Kindergarten students' existing knowledge of letters is most often of capital letters; on the other hand, ease in recognizing lowercase letters is more important in learning to read text. For this reason, it is probably best to focus first on lowercase letters with first-grade students who have limited alphabetic knowledge. Research suggests that it is not a good idea to try to teach uppercase and lowercase letters at the same time, especially for students with limited alphabetic knowledge (Adams, 1990).

In addition to big book and alphabet activities, children should have fun exploring how letters work to make words and the importance of word order. Give children different individual letter cards and then write one-syllable words on the board. For example, write the word "most" on the board. Read the word and have children with the letters corresponding to "most" come up and stand in front of their respective letters. Then change the "m" to "p" and have the child with the "m" sit down while the student with the "p" comes up. Children quickly learn that changing a single letter can change the meaning of a word. Children should also learn that a word is spelled the same way each time. The word "and" is spelled "a" "n" "d" no matter where it appears in a sentence. Have children find common high frequency words and compare their spellings. Play games like "I Can Spell Anything" where children give you a word and you write it on the board or chart paper. Activities like this help children understand the function of the 26 letters of the alphabet.

As children's knowledge of letters and printed language increases, many kindergarteners will begin to use what they learn to communicate their ideas and thoughts, just as they see adults do. Children should be encouraged to write words, phrases and sentences. Engaging in invented spelling—using letter knowledge to write words—is an especially productive way to develop interest in written communication. It also contributes to children's understanding of the alphabetic principle and phonemic awareness as they reflect on the sounds in spoken words and use letters to represent those sounds. Alphabetic knowledge should be well established before students enter first grade.

Phonological and Phonemic Awareness

The Why! What Does Research Tell Us about Phonological and Phonemic Awareness?

When young children enter school, the level of their phonological awareness appears to be a strong indicator of the success that they will experience in learning to read (Stanovich, 1986). In fact, students who become successful readers invariably have phonemic awareness, whereas those who lack it invariably have difficulty in hearing and distinguishing individual phonemes (Tunmer and Nesdale, 1985). Students' ability to attend to and manipulate phonemes strongly correlates with their reading success throughout their school years (Calfee, Lindamood, and Lindamood, 1973). Good readers can recognize and manipulate phonemes and can put them together to make words and phrases quickly, accurately and automatically. Students who lack this ability find it difficult to read single words, much less sentences, paragraphs or entire texts (Bradley and Bryant, 1983; Juel, 1991; Stanovich, 1994; Tunmer and Nesdale, 1985).

Given the importance of phonemic awareness, it is alarming, though understandable, that 25 percent of middle-class, first-grade students do not possess phonemic awareness. The percentage is even higher for students who come to school from literacy-poor homes (Adams, 1990). Becoming aware of phonemes is not easy. They are not defined distinctly by their sounds, but rather by their manner of articulation. As words are said, sounds are coarticulated. In other words, a sound in a word is influenced by the sounds that come before and after it. Say the words “see” and “so” and feel the difference as each word is articulated.

As language is heard and spoken, attention is focused on the meaning of the message, not on individual words and sounds. Why bother at all, then, to teach students to attend to sounds in words? The answer is that letters represent sounds—students must learn to think about the composition of words if they are to understand the alphabetic principle and, thus, become successful readers (Stahl and Murray, 1998).

The good news is that phonemic awareness can be taught (Ball and Blachman, 1991; Lundberg, Frost, and Peterson, 1988; Williams, 1980). Indeed, fifteen minutes per day of direct instruction throughout the school year can significantly help kindergarten students develop important phonological analysis skills (Cunningham, 1990). For first-grade students, approximately fifteen minutes of instruction each day for two or three months should be sufficient (Reading and VanDeuren, 2007). For second-grade and older students, phonemic awareness instruction may be necessary only for those who have difficulty recognizing words or who do not read at grade level (Diamond and Gutlohn, 1999).

Phonological awareness generally follows a developmental progression with awareness of words, syllables and rhymes developing in preschool and kindergarten, and awareness of phonemes emerging in late kindergarten. Thus, effective phonological awareness instruction for kindergarten and first-grade students follows a sequence of difficulty that begins with larger linguistic units—sentences, words and syllables—and progresses through onsets and rimes (the initial consonant or blend of a syllable is called an onset; the remainder of the syllable is called a rime) to the smallest linguistic unit—phonemes or individual sounds. However, instruction can focus on more than one unit at a time, and some of the units may overlap (Adams, 1990). A number of activities develop students’ phonological awareness and help them move through the levels of awareness in a reasonable fashion. Such activities include
the following:

- Listening games
- Attending to and producing rhymes
- Matching words with the same beginning sounds
- Identifying individual words within sentences and comparing word length
- Segmenting words into syllables
- Segmenting syllables into onsets and rimes
- Identifying, isolating and matching initial and final phonemes
- Blending phonemes to make words
- Segmenting phonemes to make new words
- Adding, deleting and substituting phonemes in words to make new words

By the end of kindergarten, students should be able to do oral blending (blending individual sounds to make words) and oral segmentation (breaking words into component sounds). These lay the foundation for reading and spelling respectively.

The How! What Does Phonological and Phonological Awareness Instruction Look Like in the Classroom?

Developing phonological awareness should be fun and engaging. Listening games can involve the identification of non-speech sounds—such as a bell ringing, a pencil being sharpened or a door opening—to focus attention on sounds and on listening attentively. Activities with sentences and words introduce students to the concept that a stream of language called a sentence consists of smaller units, called words. In turn, work with syllables, onsets and rimes helps students gain the important insight that even words can be broken into smaller parts. It is when students are able to manipulate the smallest part or unit of spoken language, phonemes, that they are ready to map sounds to spellings—that they are ready for the alphabetic principle (Houston Independent School District, 1996).

Children should be encouraged to think about sentences and to break them into words by counting words and moving an object or taking a step for each word, or engaging in other playful activities. When doing rhyming activities, they should be oral. Words like "blue" can rhyme with "hue," which has the same final spelling, but it can also rhyme with "too," "two," "grew" and many more words that have different spellings. When words like these are listed on the board or chart, children are confused. These words may sound the same but they sure look very different, so how can they rhyme? Using pictures is helpful. Showing sets of pictures of rhyming and non-rhyming words—pictures of a blue, shoe and bee—allows children to review and rehearse words to determine if they rhyme.

In introducing students to phonemes, the hierarchy of difficulty appears to be consistent and reliable. Blending is less difficult than segmentation. Isolating and blending initial sounds is easier than isolating and blending final sounds. Isolating and blending final sounds is easier than isolating and blending medial sounds. And finally, segmentation is less difficult than manipulating phonemes through deletion, addition and substitution. Indeed, even at the end of the year, many kindergarten students are not able to perform these tasks. Such activities may be more appropriate for first graders.

Oral blending and oral segmentation focus students' attention on sounds. Oral blending begins with blending syllables and compound words. As oral blending shifts to sounds, early phonemic blending activities—blending sounds like /m/, /a/ and /n/— should use words that begin with continuous consonants (s, m, l, f and r), which can be sustained without distortion. Teachers should stretch out and connect the sounds (mmmmaaaannnn), rather than separating them (/m/, /a/, /n/) (California Department of Education, 1999). Oral segmentation compliments oral blending. While oral blending requires children to put sounds together to make words, oral segmentation has children break words into their phonemic elements. For example, the teacher may say the word "tray" and the students need to say the word without the initial sound /t/ so the word would be "ray." As the student becomes comfortable with segmenting initial sounds, the activity can shift to deleting the final sound as in "card," drop the /d/' and the word is "car." One of the most challenging phonemic awareness activities requires children to substitute sounds. For example, the word is "map." If we change the /ă/ to /ŏ/, the new word is "mop."

From their review of studies that investigated phonological awareness instruction and training, Smith, Simmons, and Kame'enui (1995) discovered several characteristics common to effective instruction.

Teachers:

- Use explicit instruction
- Focus on combinations of blending, segmenting and phoneme detection
- Scaffold linguistic complexity: (a) word length, (b) size of phonological unit, (c) relative difficulty of phoneme position in words, and (d) relative difficulty of phonological properties of words

During instruction:

- Articulate sounds clearly and cleanly
- Make pauses between sounds obvious
- Make sure there are multiple and varied examples
- Work with minimal contrasts, using pairs like trap/trip, tray/ray, train/rain
- Have fun—children naturally enjoy playing with language

Decoding: Phonics

The Why! What Does Research Tell Us about Decoding and Phonics?

As Stahl and his colleagues (1998) point out, it is often difficult to talk about phonics because different people hold different beliefs about what phonics means. What was true in the 1990's is still true today. Why is phonics instruction important? Simply put, skillful reading—reading with fluency and comprehension—depends in no small part on a reader's ability to recognize a printed word quickly and accurately and then link it with its meaning (Adams and Bruck, 1995; Stanovich, 1991). Phonics helps students learn to sound out and read words, and it gives them a strategy for accessing text on their own (Adams, 1990). Without such a strategy, students tend to rely too much on context to get meaning from words. Using context is an unreliable way to identify and read words (Schatz and Baldwin, 1986). The problem is that the words likely to contribute the most to the meaning of a text are words that occur less frequently in written and oral language. Consequently, these words are less familiar to students (Finn, 1977–1978). Thus, when students rely on a text's context to determine the meaning of its unfamiliar words, the actual context depends in large part on the meanings of the unfamiliar words (Adams, 1990). This is not to say that students should never use context; rather, teaching students to rely only on context may interfere with learning to recognize and process words. When students encounter a word they do not recognize, they should learn to think about the grapheme make-up of the word—the actual spellings in the word—and after reading the word consider its meaning. After this, the information available from the context will be more helpful (Adams, 1990).

A wealth of research about what skillful readers do as they read has revealed a great deal about the role of rapid word recognition in reading for meaning. Eye-movement research, for example, shows that skillful readers visually process almost every letter of every word on a page, seldom skipping a word or guessing at what it is. In a fraction of a second—too rapid for readers to be aware of the process—they take in the individual letters that make a word and translate each of them to speech sounds, using the knowledge they gain to identify the word and determine its meaning (Just and Carpenter, 1987; McConkie, Kerr, Reddix, and Zola, 1988; McConkie and Zola, 1981). The result is that every encounter with a word in print, even an unfamiliar word, increases readers' knowledge of the word's spelling, as well as its spelling-to-meaning relationships (Adams, 1994). Again, the process is instantaneous. The ability to translate spellings to sounds to word meanings automatically and effortlessly allows skillful readers to move smoothly through text (Kucera and Francis, 1967).

However, reading really is about comprehension, and the comprehension of a text depends not on the recognition of its individual words, but on the relationships among those words. Nonetheless, without the ability to obtain meaning from each word, readers would struggle to get the meaning of the entire text. Skillful readers note each word in a sentence and then pause briefly at the end of units of meaning and at punctuation marks. At the pause, they construct meaning. If something is amiss, they quickly reread to determine the problem (Just and Carpenter, 1987). Simply put, word recognition is at the core of reading (Connelly et al, 2001; Daneman, 1991; Stanovich, 1991).

Poor reading comprehension is often linked to poor word recognition skills (Rack, Snowling, and Olson, 1992; Stanovich, 1991; Vellutino, 1991). According to Stanovich (1991), without fluent word recognition, "comprehension processes do not have the raw materials to operate efficiently and understanding of text will be impaired (p. 443)."

Therefore, comprehension depends on rapid word recognition, which depends on the ability to map speech sounds to spellings quickly and accurately. By encouraging students to examine every letter or spelling of every new word they encounter and by helping readers link speech sounds to the spellings in words, phonics instruction provides students with a powerful strategy to decode written language and recognize words in running text. Initially, the words children read are part of their oral vocabulary, but soon this should lead to reading words that expand vocabulary and increase word knowledge.

The importance of providing students with this strategy cannot be overstated. How well young students develop the skills necessary to read with fluency and comprehension profoundly affects their entire lives. Indeed, it is overwhelmingly probable that a student who is a poor reader at the end of the first grade will remain a poor reader (Juel, 1988). Furthermore, in reviewing results from studies where students are taught to connect sounds to spellings, the students not only comprehend text better than controls, but are also more confident reading unfamiliar words (Connelly et al. 2001) and their spelling is better (Christensen and Bowey, 2005) .

What seems to work best in teaching the alphabetic principle is explicit, systematic instruction. Much research suggests that for many students, an explicit, systematic approach to learning the connection between sound/spelling relationships is more effective than an implicit or indirect, approach (Abt Associates, 1977; Adams, 1990; Bond and Dykstra, 1967; Chall, 1967, 1996; Foorman, Francis, Novy, and Liberman, 1991; Kean, Summers, Raivetz, and Farber, 1979). Connor et al. (2007) found that students who received teacher-directed phonics had better reading skills than those without the benefit of such instruction. In brief, without explicit, systematic instruction, students will never catch on to the alphabetic principle.

A large-scale comparison of more-explicit and less-explicit instructional approaches has found that the degree of word-reading skill of first grade and second grade students appears to be associated with the explicitness of the instructional approach. Students who receive more explicit instruction achieve higher gains in word reading (Foorman, Francis, Fletcher, Schatschneider, and Mehta, 1998).

Systematic phonics instruction means there is a planned sequence for the introduction of sounds and spellings. Once spellings are taught, they logically build upon each other so students can connect and combine new with previously learned sound/spelling relationships to read words. Explicit phonics instruction involves explaining and modeling how to connect sounds to letters or spellings and then teaching how to apply that knowledge to read words. For example, the teacher might:

- Write the letter “m” on the board and explain that the letter “m” makes the sound /m/. The teacher then has students repeat the spelling or letter and the sound.
- Write a word such as map, which contains the sound /m/ and other sound/spellings that have been previously taught, for example, /p/ spelled “p” and short /ă/ spelled “a,” and have students blend the sounds to form the word. Then blend more words with /m/ and other previously learned sounds and spellings.
- Encourage students to define words (or define them for the class), give examples and then use the words in sentences.
- Have students practice the sound/spelling by reading a story that contains a high percentage of words with the /m/ sound.

Note that while the sound and spelling are explicitly taught, students are expected to use this knowledge to read words and to talk about meaning.

While this process may appear simple to successful adult readers, for children who have not learned the rules of the reading game, this explicit approach helps them understand the connection between sounds and letters or spellings, and how to use that knowledge to access words. Direct explanation is particularly important to present spellings that contain more than one letter and make the letters, sounds and spellings clear. Not only is long /ā/ spelled “a” but also “ai,” “ay,” “a_e” and “ey.” Direct explanation helps students understand that there are multiple spellings for certain sounds and that when they read, they need to recognize these spellings quickly and accurately. In the word “pail,” the “ai” is a single unit and makes the sound /ā/.

This explicit and systematic approach is in marked contrast to implicit instruction of decoding which involves children analyzing words and developing the phonics generalizations. Indeed, students’ ability to analyze words into their separate sounds may depend upon their already having learned something about the sounds associated with letters (Anderson, Hiebert, Scott, and Wilkinson, 1985). For example, if students are presented with a series of words beginning with “b”—bat, bin, but and bad—children are expected to analyze the words and identify the common element “b” and its sound /b/. Students may not be able to distinguish the /b/ sound from the /a/ sound and the /t/ sounds as the word is spoken. Many children may actually mispronounce sounds, like /buh/ for /b/ or /guh/ for /h/. Direct explanations provide models for the correct pronunciation of sounds and reduce student confusion. Also, with implicit instruction, students are regularly encouraged to use context to read unfamiliar words. This approach is inconsistent with research on skilled reading that shows that all the letters in each word are processed. In fact, a reliance on context is a hallmark of less-skilled readers (Spear-Swerling, 2006; Stanovich, West, and Freeman, 1981; Stanovich, 1994).

While there is no single best sequence for introducing sounds and letters or spellings, the most effective instruction is geared toward helping students read words as soon as possible. Therefore, the sequence of introduction should begin with relationships that have high utility in making words (Adams, 1990; Moats, 2009; Simmons and Kame’enui, 1998). Some sound/spellings that are more useful than others include /m/ spelled “m,” /ă/ spelled “a,” /t/ spelled “t,” /s/ spelled “s,” and the like. It also is productive to begin instruction in sound/spelling relationships by selecting some consonants whose sounds can be pronounced in isolation with the least distortion, such as /f/, /m/, /n/ and /s/. These sounds are hard to distort and can be exaggerated in isolation and in the words in which they occur (Adams, 1990; California Department of Education, 1999; Stahl et al., 1998). In addition to introducing high utility consonants, short vowels should be introduced gradually, followed by diagraphs, inflectional endings and long vowels (Moats, 2009).

Phonics is not a set of invariable rules and absolute pronunciations. The most reliable and functional generalizations should be taught first. For example, the spelling “ck” at the end of a word or syllable is preceded by a short vowel as in “back,” “pick” and “luck”; or the ending spelling “dge” pronounced /j/ is also preceded by a short vowel sound.

Sound/spelling instruction is of little value if young learners do not have ample opportunities to read, in connected text, words that conform to the relationships they are learning. From late kindergarten through much of first grade, decodable texts are the most appropriate materials for students to use to practice reading. Decodable texts are stories that include a large number of words that contain the sound/spellings the students are learning, along with some high-utility words, or high-frequency words—such as the, are, said, was and have—which are necessary in writing comprehensible and interesting text. Drawing on what they have been taught, students should be able to decode with ease most of the new words they encounter in these texts. Before reading, high-frequency words in the text should be taught explicitly so that these words do not distract students from focusing on the words they are able to decode (Adams, 1990). Decodable books are for practicing decoding. They are not intended to replace big book reading and other early literacy experiences.

Skilled readers accurately identify multisyllabic words effortlessly by breaking words into syllabic units. Once students are able to read short vowel-consonant pattern words, know long and variant vowel spellings, and understand the concept of open and closed syllables, it makes sense to introduce the concept of syllabication. It is important to distinguish between spoken and written syllabication; they are

different. Young children are able to clap syllables at an early age. Children listen for vowel sounds and almost intuitively identify the number of syllables in words. Breaking written words into syllables does not necessarily come as naturally. It requires readers to identify breaks in words that help with pronunciation and reading. Instruction should focus on the six common syllable generalizations: open syllables, closed syllables, -ble, r-controlled vowels, vowel-consonant-e, vowel-vowel pattern, and long vowel spellings and other variant vowel spellings.

The How! What Does Instruction in Decoding Look Like in the Classroom?

Beginning in kindergarten and continuing through first grade, effective instruction should include the explicit and systematic teaching of sound/spelling relationships. In developing an instructional sequence for teaching the alphabetic principle and ordering the sounds and spellings, the following characteristics should be considered:

- Choose high-utility sounds and spellings that can be easily pronounced, like /m/ and /s/
- Do not teach easily confusable sounds together
- Immediately use the spellings to read words

A well-sequenced introduction should encourage students to read words as soon as possible. For example, when students have learned the sound/spellings /m/, /s/, /a/, /h/, /p/, /t/, /n/ and /i/, they can read all these words by blending the sounds of the letters together: am, Sam, sat, map, mat, Matt, ham, hat, hiss, hit, pat, past, pass, Pam, Pat, pan, tan, tap, man, it, in, sit, sip, spin, stamp, hit, hip, him, pit, tip, Tim and tin. Note that students can comfortably read words with blends like spin and stamp because they have learned how to blend sounds. There is no need to teach blends as a separate skill. The instructional sequence should separate the introduction of sound/spellings that are easily confused auditorally—such as /b/ and /v/, /i/ and /ĕ/ and /ĭ/—or visually—such as b and d or p and g.

After the introduction of simple consonants and short vowels, other instruction can be presented to permit students to read common words, such as feet, make, wheel, that and ship. The other instruction includes long vowels (single spellings like “a” and “o”), the VCE Generalization (when two vowels appear in a word and one is an “e” at the end of the word, the first vowel is generally long and the final “e” is silent) and digraphs (wh, th, sh). From this point, instruction can proceed to include increasingly complex or difficult relationships, including long vowels, variant vowel spellings and diphthongs.

Helping students acquire skills in blending is an important part of sound/spelling instruction. Familiarizing students with a particular procedure or routine for blending early on can be valuable since a routine helps students focus on the sounds and spellings they are learning rather than on what to do with them. For example, the teacher might establish a procedure similar to the following:

- On the blackboard, build the word sound by sound, asking students to sound out each letter or spelling.
- After the whole word has been written, move a hand beneath the letters or spellings, and have students give the sounds, blend the sounds and then say the word.
- Initially, scaffolding helps students learn to blend words effortlessly. For instance, if a word begins with a consonant, blend the sounds through the vowel before sounding and blending the complete spelling. An example of this would be: Sound /p/- sound /o/- blend /po/, sound -/t/, blend /pot/!

If the word ends in more than one consonant, blend through one consonant before adding the next. For example: /l/, /a/,/la/, /m/, /lam/, /p/, /lamp/, lamp!

If the word has more than one syllable, sound and blend each syllable before moving to the next one. For example, if the word is "habit," blend /h/, /a/, /ha/. . . /b/, /i/, /bi/, /t/, /bit/. . . /ha/–/bit/, /habit/, habit! Students should always be encouraged to pronounce words naturally, as they would speak them. Scaffolding can also include cues to help students see how some spellings work. For example, when teaching "ai" for the sound of a long /ā/, cuing students with a "_" (blank) at the end of the spelling—ai_ —helps students recognize that this particular spelling of long /ā/ does not occur at the end of an English word. It must be followed by a consonant, as in "mail," "plain" or "main." This is in contrast to the long /ā/ spelling "ay" which does come at the end of a word or syllable, but is preceded by a consonant as in "may," "play" and "crayon."

While modeling and scaffolding are used during initial phonics instruction, students should begin to take greater ownership of learning. Once students understand the connection between sounds and spellings and the VCe generalization, the students should be able to explain that there needs to be a consonant between the vowel and final e or that the spelling "ai" must be followed by a consonant. Actively involve students by giving them opportunities to explain what they know.

Students should also have opportunities to become familiar with an increasing number of key sequences of letters and spelling patterns that make words (Foorman, 1995). Word families are groups of words that have a common spelling pattern or a phonogram. A phonogram consists of a vowel sound plus a consonant sound and is often called a rime. It can be less than a syllable but more than a phoneme—and it needs an initial consonant or blend (onset) to make a word (Honig, 1996). A word family based on the rime "ug" includes bug, dug, hug, jug, mug, pug, rug, tug, chug, drug, plug, slug, smug, snug and thug. Helping students recognize phonograms is important because, with only a few exceptions, word families are phonetically regular and comprise a large part of the early texts that students read. For example, as many as five hundred words can be made from thirty-seven common phonograms. The ability to recognize common phonograms can facilitate the process of mapping letters and letter patterns to sounds. It can also facilitate recalling from memory the word and meaning that correspond to that pattern (Adams, 1990; Honig, 1996).

Teaching word families to students can lead to increased word learning by reinforcing the understanding that a spelling pattern can appear in many words (Adams, 1990). Teaching word families is most effective when it is presented after students have learned the sound/spelling relationships (Ehri and McCormick, 1998 cited in California Department of Education, 1999). Remember, phonics is a means to an end. It is not an end in and of itself. Once words are read, students should discuss their meaning and use the words in sentences.

In order to keep students focused on the idea that they are learning about sounds, spellings and blending in order to read, connected text should be part of phonics instruction. While beginner decodable books may appear silly to adults, they have a sound instructional purpose. Students read these books because they have access to the code and know how to apply that knowledge. Nothing is more motivational to young readers than to be able to pick up a book and read it without help. Students who read stories that contain a high percentage of words with previously taught letter-sound relationships have significantly higher word recognition than do students who read stories with no words that match their instruction (Juel and Roper/Schneider, 1985).

Decoding: Word Analysis

The Why! What Does Research Tell Us about Word Analysis?

Once students have acquired basic decoding using sounds and spellings, the instructional emphasis needs to shift to working with meaningful parts of words (Ehri, 2005). This shift toward word analysis involves processing parts of words or morphemes and is supported by the work of Carlisle and Fleming (2013) who found that third graders were significantly better than first graders at analyzing word forms and meanings.

Older students identified which words could be broken into parts as well as define and use the words. In contrast, first graders were less able to identify meanings when suffixes were added to familiar words. Understanding affixes and base words develops over time.

According to Henry (1988), fluent readers look for familiar morphemes in words that aid in syllable division and the successful reading of words. Skilled elementary readers revert to sound-letter correspondences only when they are unable to recognize units or morphemes in words. This is in contrast to beginning or poor readers who rely on sounds and spellings. While this is an efficient early reading strategy, it is not efficient for longer words. Verhoeven and Perfetti (2003) suggest that as readers encounter chunks or word parts (roots and affixes) or word types, they build up "frequency-sensitive memory representations" of these chunks. This reduces the cognitive energy needed to read these words, supports fluent reading and frees readers to focus on meaning.

While successful readers use morphological knowledge to read and understand words, the question remains—how do children acquire the meanings of the word parts that might aid in determining the meanings of unknown words? For competent readers, they may acquire this knowledge from reading and using prior knowledge to infer meanings. Reading in large volume might create morphological awareness but what is disturbing is that many high school students are unaware that deconstructing words into their parts can help with meaning and that there are older students who do not even know the meaning of common roots and affixes (Stahl, 1999). Stahl suggests that these students could benefit from explicit instruction.

Rasinski et al. (2011) notes that there is no scientifically-based order for the teaching of roots and affixes. They did, however, develop a list of roots and affixes based upon the following criteria:

- Reviews of language arts and content area materials
- Reviews of roots that appear most frequently in English
- Identification of roots and affixes that have the greatest utility

Morphemes are introduced initially through basic inflectional endings like the plural "s" and past tense "ed" in grades K and 1. Instruction then progresses to recognizing and using meaningful word parts such as base words and common affixes which support fluency as well as spelling and word knowledge (Mountain, 2005; Moats, 2000). Increased morphemic knowledge helps students read text of increasing difficulty and understand text of increasingly complex content.

If phonemic awareness is defined as sensitivity to the specific sounds (phonemes) of language and the ability to manipulate those sounds, then morphemic awareness can be defined as sensitivity to the units of meaning in language (morphemes) and the ability to identify and manipulate those structural units to understand and read words. Morphemic awareness facilitates reading fluency, increases vocabulary and supports reading achievement (Carlisle, 2000; 2004; Carlisle and Nomanbhoy, 1993; Elbro and Arnback, 1996; Fowler and Liberman,1995; Singson, Mahoney, and Mann, 2000; Windsor, 2000).

A morpheme is the smallest unit of meaning or grammatical function in a language. There are free and bound morphemes. Free morphemes stand alone as words. They include many common Anglo-Saxon words such as "boy," "cat" and "girl." In contrast, bound morphemes do not stand alone as words. They include prefixes, suffixes and many Greek and Latin roots. A morpheme can be a word, a syllable or a letter. For example, "cat" is a free morpheme, has a specific meaning and can stand alone as a word. The "s" that is added to the end of the word "cat" also has meaning, but it is a bound morpheme indicating plurality (meaning "more than one"). When "s" is added to "cat," it changes the meaning of the word to "more than one cat." Other familiar inflectional endings that are bound morphemes are "ed" for an action that has already happened, "es" for plural and "ing" for action happening now.

Sometimes words are made up of two free morphemes. Compound words are usually made up of two words, usually Anglo-Saxon, each of which can stand alone. The meaning of some compound words is obvious. A dishwasher is something or someone who washes dishes. A hairbrush is something used to brush hair. These are in contrast to compounds like butterfly or ladybug which are not merely the sum of their parts. Students can break these words into parts to read them, but need to learn their meanings. Affixes (prefixes and suffixes) are also bound morphemes. Prefixes are "fixed" to the beginning of words and suffixes are fixed to the end. Suffixes can be defined in two ways: inflectional and derivational. Prefixes can either change the meaning of a word or make the meaning more specific. When "un"—the morpheme meaning "not"—is added to the word "happy," the meaning of the word changes to "not happy." When "re" is added to "visit," it makes the meaning more specific—to visit again. Twenty prefixes make up 97 percent of the words with prefixes. "Un" (not or opposite), "re" (meaning again or back) and "in, im, ir and ill" (meaning not or opposite of) are found in 51 percent of the commonly used words with prefixes.

Inflectional suffixes will alter the tense, number or other aspect of a word. They do not, however, change the grammatical function of the word. For example, adding the plural "s" morpheme to the noun "girl" does not change the part of speech—"girls" is still a noun. The same is true when a suffix is added to a verb, such as changing "walk" to "walked," or "drive" to "driving" or "driven." The tense in these words changes, but the words are still verbs. Other inflectional suffixes show possession, such as "hers," or comparison, as in "taller" and "tallest." The inflectional suffixes include the plural "s," past tense "ed" and the present participle "ing," all of which make up 65 percent of suffixes used in English. Derivational suffixes change the meaning or grammatical function of a word. When the suffix "al" is added to the noun "nation," the new word "national" is an adjective with a clearly related meaning. When "less" is added to a word, however, the meaning changes. An example is the change of "hope" to "hopeless."

A root or base word is a morpheme—the part of the word where meaning is derived. Sometimes the term "root" and "base" are used synonymously; other times a distinction is made between the two. Base words exist on their own as a recognizable word in the English language. They are basically free morphemes. For example, in English, the word "inspect" is the base word of inspection, inspected, inspecting and inspector. "Inspect" is also a morpheme. Root words are portions of a base word that do not stand alone and in English have no meaning by themselves. Roots are usually derived from Greek or Latin. The root of "inspect" is from the Latin word "spec" meaning to see.

When affixes (usually bound morphemes) are added to the root "spec" or "spect" (meaning "to look or see"), the meaning of the bound morpheme becomes clear. Examples include the prefix "in" for "inspect," "or the prefix "retro" for "retrospect," or a prefix and suffix as in "in" and "ion" for "inspection." Henry (2003) provides a list of the Latin roots. In an examination of 12 Latin roots, including scrib or script (to write); fer (to bear or yield); duc, dice or duct (to lead); fac, fact, fect, fic (to make or due); spec, spect, spic (to see, watch or observe); mit or miss (to send); and the Greek forms "graph" and "ology," these roots provide clues to the meaning of over 100,000 words.

Like phonological awareness, morphological awareness is not something most people consciously think about. Free and bound morphemes are naturally combined in oral language, but in order to use this knowledge for reading, understanding words and spelling, students need to learn to use morphemes intentionally—to be able to break words into meaningful and recognizable units and then recombine them into a comprehensible word. For example:

- Triangle has two morphemes—tri and angle. The meaning is a shape with three angles.
- Transcontinental has three morphemes—trans, continent and al. Understanding that the prefix "trans" means "across," that "continent" means "land mass" and that "al" makes the word an adjective allows the reader to understand that the word has the meaning of spanning a continent. In this sense, a transcontinental railroad would be a railroad that connects the east and west coasts. Even before learning to read, children are acquiring morphological knowledge. Morphological awareness, like other oral language skills, follows a developmental progression with inflectional endings understood and

used as early as kindergarten beginning with plurality, possessives, contractions, third person singular verbs and past tense. These are followed by past tense "ed," comparative and superlative, and the suffix "er" as in singer.

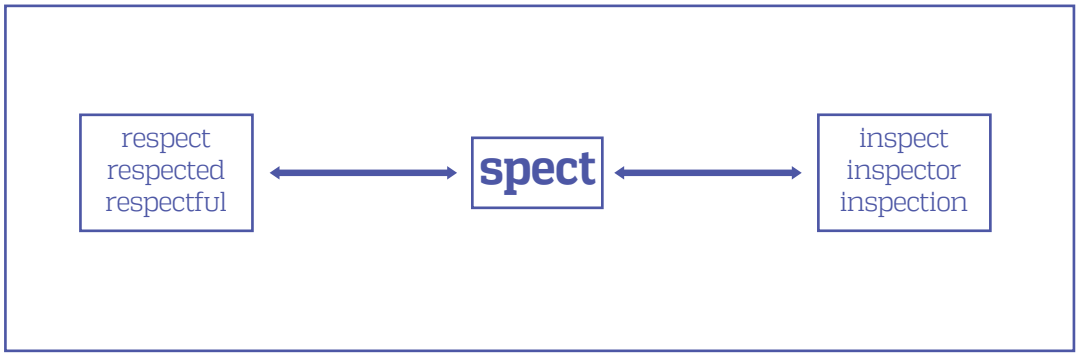
Developmentally, children understand and use inflectional endings, such as plurals and tense, in their speech by first grade. It is natural, then, that they begin connecting plurals and tense to commonly understood Anglo-Saxon words found in first grade reading. Children add inflectional endings to familiar words so they can focus on the meaning of the ending and its impact on the word.

The How! What Does Word Analysis Instruction Look Like in the Classroom?

Direct instruction of morphology is an effective means to help with understanding and applying word structure for decoding, spelling and vocabulary study (Wilson, 2005). Specifically, students can be taught strategies to segment or manipulate words according to their morphological units—affixes and roots. As a result, students should be able to read and understand words by analyzing their morphological unit (Carreker, 2005). Moats (2011) suggests "three rules of thumb" when teaching morphology.

1. Transparency: Instructionally, this means begin with the morphemes that have stable meanings and spellings. For example, "review." "Re" means "again" so the meaning of "review" is "to look at again." The importance of transparency can also be seen when students learn to use suffixes. When the suffix "ly" is added to the word "bad," the new word is "badly." The root word is obvious or transparent. This is in contrast to "preparation" where the root "prepare" is less transparent or obvious because of the spelling change when the suffix is added.

2. Generativity: Use roots (morphemes) that have high utility. By using the root "scribe" meaning to write, many familiar words can be generated: prescribe, transcribe, inscription and script. Archer and Hughes (2011) recommend using graphic organizers and semantic maps to help students see the relationship among words with the same root or the same affix. For example, if the Latin word root is "spect" (to look), students may generate related words such as inspect, spectator, suspect, perspective, inspection, aspect, circumspect and introspection. This makes it easy for students to see the common root and recognize these words as members of the family "spect." It also helps students see the root or morpheme "spect" as a unit that is easily recognized when reading words that contain it.



Use of these graphic organizers should not be static—completed once and then put aside. Students should be encouraged to keep them in a notebook and continue to add new words to the different organizers as they encounter related words in reading.

3. Complexity: Initial instruction should focus on roots that do not change in pronunciation or spelling when the suffix is added, e.g., disrupt and disruption. The concept of transparency and complexity is supported by Templeton (2010). He suggests the initial teaching of prefixes and suffixes should begin in the context of familiar words and with words that do not have spelling changes when the affix is added. Not only does "rupt" not change its spelling when a prefix is added, it does not change its spelling when suffixes are added as in "disruption" and "rupture."

Stahl (1999) notes that at the high school level, many students seem unfamiliar with the strategy of decomposing words into parts in order to read and comprehend longer, unfamiliar words. If morphemic awareness is to have a positive effect on reading fluency, vocabulary and comprehension, instruction should begin early and be explicit.

Moats (2011) suggests beginning in first grade with compound words and inflectional endings. Teaching compound words introduces children to the concept of examining words for meaningful parts. Raskinski et al. (2011) suggests that teachers help young readers "look inside" words for familiar letters and words and that working with compound words helps children make the shift from sound to meaning. Like Moats, Rasinski et al. (2011) recommends the early teaching of common prefixes such as "un" and inflectional endings. Since many of the words children are learning to read are familiar single syllable Anglo-Saxon words, attaching inflectional endings is manageable and understandable. Templeton (2010) also supports using familiar base words since children readily understand the meaning of the root or base word so they can focus on the role and meaning of the inflectional endings. He suggests an instructional progression:

- Use words which require no spelling changes
- Introduce word with spelling changes and analyze the words in which spellings do change
- Model how to use morphological knowledge including the importance of context to confirm meaning

For example, children can add and delete inflectional endings from words like eat (eating or eats), ball (balls) and walk (walks, walking, walked). Once children understand the purpose and meaning of adding inflectional endings, words with spelling changes can be taught (hops, hopping, hopped; bakes, baking, baked). Beginning in second grade, the instructional focus should expand to include common prefixes such as "un."

Diamond and Gutlohn (2006) and Baumann and Kame'enui (2004) urge the use of explicit instruction of morphemes or word-part clues. This involves teaching the meaning of the word parts, the roots and affixes, in order to disassemble the word, identify the word part meanings and then reassemble the word parts to determine the meaning.

Two caveats should be noted when teaching students to use affixes. First, what appears to be a prefix or suffix may not be. In the word "under," "un" is not a prefix. In the word "sandy," the "y" is a suffix but it is not a suffix in the word "lady." Second, suffixes can have more than one meaning. "Er" can be an inflectional suffix that denotes the comparative form of an adjective as in "smaller" or it can mean the person or things that does something as in "singer."

Students need to develop strategies to independently acquire new words. "Knowing some common prefixes and suffixes (affixes), base words and root words can help students learn the meanings of many new words (Armbruster, Lehr, and Osborn, 2001)." In an on-line chapter published by Pearson Higher Education (www.pearsonhighered.com/assets/hip/us/hip_us_pearsonhighered/), a set of best practices for teaching affixes is presented.

1. Break words into meaningful parts, discuss the parts and then put the word back together.
2. Teach the “peel-off” strategy. Students learn to ask themselves questions like: Do I see a prefix? If so, peel it off. Do I see a suffix? If so, peel it off. Do I know the meaning of the base word? Then put the word back together.
3. Teach inflectional suffixes in first and second grade.
4. Provide students with practice reading and writing different words with the same prefixes and suffixes.
5. Teach the meaning of base words.
6. Teach affixes in meaningful contexts.

Similarly, Baer et al. (2008) suggest that teachers model a process similar to the “peel-off” strategy. The following is an adaption of the strategy by Baer et al.

1. Identify the meaningful parts in the word.
    - If there is a prefix, take it off. Identify the meaning.
    - If there is a suffix, take it off. Identify the meaning
    - Identify the base and identify the meaning.
    - Reassemble the word using the knowledge of the word parts to figure out the meaning of the word.
2. Use the word in a sentence and see if it makes sense. Confirm the meaning by checking the meaning in the context of the text from which it came.
3. If the meaning is still unclear, look it up.

Once students begin to use these strategies, it is critical that they think aloud about how they are figuring out the meaning of the word—identifying the parts and their meanings and then reconstructing the word.

When teaching roots, it is particularly useful to connect morphologically related words. For example, if students are working with the word apologize, related words include apologized, apologizing, apologetic, apology and apologetically (Lubliner and Hiebert, 2008). Similarly Stahl and Nagy (2006) suggest using a newly taught prefix or suffix with other root words to demonstrate the impact of the affixes on other words. This can be done using a graphic organizer.

After roots and affixes are taught, there are many activities students can do with partners or in small groups to reinforce and expand their understanding. Books by Bear et al. (2008) and Templeton et al. (2008) provide a wealth of resources and activities for word games and sorts that reinforce and expand word knowledge. Examples of these activities include:

- Word building games using cards with prefixes, suffixes and roots allow students to combine morphemes to make words.

- Word generating activities, such as giving students a prefix and having them generate as many words as possible with the prefix, helps students see roots and prefixes as distinct units. Wolter (2005) and Bear et al. (2008) suggest using word sorts to help students quickly recognize common roots and parts in words. Word sorts are a commonly used activity in which students arrange words or word parts by some common characteristic or element. This type of activity can help students focus on specific morphological elements, clarify meanings and make relationships explicit. For example, have students sort words with “in,” “im,” “il” and “ir” meaning “not.” After sorting the words see if they can figure out why “im” is used with some base words but not with others. Analyzing words at this level helps students spell as well as read. “Il“ is used with base words beginning with “l,” “im“ with words beginning with “m” and “p,” and “ir” with words beginning with “r.” “In“ is used with words beginning with any other of the letters of the alphabet.

When doing activities like this, students need to be careful of words beginning with the same letters as the prefix that are not actual prefixes or morphemes. Examples of this include words such as “irritate” and “immune.”

- Morpheme searches can be used with any text students are reading. Students can search for prefixes, suffixes or roots. Students may want to work in groups for this activity and then tally their results by prefix, root or suffix and then chart the results to see which are the most common.

Fluency

The Why! What Does Research Tell Us about Fluency?

Fluency depends upon well-developed word recognition skills which are necessary but not sufficient for fluent reading. Although there is a benefit to isolated word recognition instruction, it may fail to transfer when the words are encountered in meaningful text (Allington, 1983). Understanding any text requires readers to access the words on the page fluently and automatically in order to focus all of their mental energies on comprehension. Laberge and Samuels (1974) used information-processing theory to explain the importance of fluency to comprehension. This theory holds that people basically attend to one activity at a time. When doing more than one activity, people have to alternate their mental energies between the different activities. Reading requires both decoding and comprehension. If readers are constantly switching between the two activities, comprehension suffers since insufficient attention can be directed to constructing meaning. Consequently, one of the two reading activities needs to become automatic. Automatic decoding frees readers to concentrate all of their cognitive efforts on comprehension, making connections among ideas in the text as well as with their own background experiences (Armbruster, et al., 2006).

In contrast, less fluent readers who are concentrating primarily on decoding words have little cognitive attention left for constructing meaning. Duke, Pressley and Hilden (2006) suggest that word recognition and fluency may be a major factor for more than 90 percent of comprehension problems. Chall’s (1996) model of reading development describes fluency as one of the six stages of reading development. The third stage, confirmation and fluency, is when the reader’s knowledge of decoding is confirmed and when reading sounds more like conversation. Similarly, Ehri (2002) notes that students move from the full alphabetic phase, in which their decoding is slow and laborious, to the consolidated alphabetic phase, in which students begin to focus more on word chunks or patterns to identify words. In the consolidated alphabetic phase, the student learns to integrate knowledge of sound-symbol relationships, sight words and knowledge of language conventions of connected text to create fluent reading.

Before the identification of fluency as one of the five goals of reading identified in the National Reading Panel Report (2001), fluency was considered the “neglected goal” of reading (Allington 1983). Twenty- five years later Allington proposed that there is still much to be learned about the role of reading fluency in reading acquisition, including how to best foster reading fluency that enhances comprehension, motivation and proficiency (Allington, 2006). Although there is a general consensus among researchers regarding the importance of fluency instruction, there remain varying opinions about how best to help students achieve fluency.

Since fluency is about the accurate and effortless reading of words, it cannot be discussed apart from reading instruction that emphasizes decoding and structural analysis. Developing decoding skills and building a high-frequency sight word bank is critical to reading accuracy. In the primary grades, children need to develop a strong foundation in decoding which allows them to read text accurately and independently. Consequently, fluency instruction usually does not start until the middle of grade one (Samuels, 1979; 1997).

Structural analysis, which follows early phonics instruction, also supports fluency. Instruction emphasizing morphemic knowledge—affixes, inflectional endings and root words—helps students access longer words easily and confidently. In addition, knowledge of these elements helps students access lexical or word knowledge, which is one of the elements Fuchs et al. (2001) identify as a critical component of the fluency process.

The standard for adequate decoding to achieve continuous reading accuracy of text is 90 to 95 percent accuracy. This range indicates the instructional level of the text. A 96 to 100 percent level of accuracy is considered independent or relatively easy for the reader. Below 90 percent indicates that the text is too difficult for the reader or at the frustration level (Rasinski, 2003).

Percentage of Words Read Correctly	Level of Performance
96-100%	Independent
90-95%	Instructional
Below 90%	Frustration

There is some disagreement among researchers regarding the level of text difficulty for students to read and reread to improve fluency. Clay (1993) argues that rereading easy or independent level passages improves fluency. Rashotte and Torgesen (1985) failed to find significant differences between their treatment and control groups when using relatively easy text. Rasinksi (2003) suggests that text at the instructional level provides the student with the best opportunity to make progress, since it is challenging but still manageable with assistance. A number of other studies that used materials at or above the child's instructional level resulted in greater gains in achievement (Kuhn and Stahl 2003). A one minute reading probe can be used to assess word recognition over time to determine how well a student is responding to phonics and word analysis instruction. The reading probe is conducted by having the teacher choose a grade level passage, which the student has not read before (a cold read). While the student reads aloud, the teacher follows along with a copy of the passage, marking any errors. At the end of one minute, the teacher stops the student and marks that point in the passage.

The words correctly read in one minute (WCPM) is determined by subtracting the errors from the number of words read in one minute:

88 words read – 3 errors = 85 WCPM

The percentage of accuracy is determined by dividing the number of words read correctly by the total number of words read in a minute:

85 words read correctly ÷ 88 total words read in a minute = 96 percent accuracy

Based upon the percentage, teachers can determine the level of student performance and analyze errors in order to plan instruction.

Errors	Not Errors
Mispronunciations	Mispronunciations due to dialect or accent
Omissions or word transpositions	Word insertions or repetitions
Hesitations of more than three seconds	Self-corrections within three seconds

Analyzing the errors made by a student provides clues to the student's approach to decoding. For example, a significant amount of mispronunciations may indicate that the student is not focusing attention on the sound-syllable patterns in words. A student who is omitting words may be reading too quickly. This overly rapid reading may be the result of students misunderstanding the purpose of the timed reading. Students often attempt to read the text as quickly as they can, resulting in careless reading that does not focus on meaning.

Listening to a recording of the reading or sharing the scored teacher copy of the probe to discuss errors with students helps them see the connection between accuracy and understanding. Goodman (2008) also points out that miscues can help students gain insight into themselves as readers.

Struggling readers often have very negative attitudes about themselves as readers. They describe themselves as poor readers because they make errors, read too slowly or don't know the meaning of the words. Rather than seeing the fluency measure as a confirmation of their lack of reading ability, students and teachers see it as a problem-solving opportunity. As teachers discuss the plans of instruction they developed in response to the error analysis with their students, both have ownership in solving the problem. For example, when students understand that their rapid reading causes poor punctuation or phrasing, they can focus their practice on prosodic reading. They can discover that the more they read the better readers they become.

Increasing Rate: Rate is the ability to process information automatically. According to Torgesen and Hudson (2006), automaticity requires the quick and accurate identification of words that results in the rapid reading of connected text. Benchmark end-of-year oral reading rates (at the 50th percentile) for grades 1-8 (Hasbrouck and Tindal, 2006) are found in the table below. By third grade, students who are not reading at least 107 words per minute may be at risk for reading and learning failure in the upper grades.

Grade	Words per Minute
First	53 wpm
Second	89 wpm
Third	107 wpm
Fourth	123 wpm
Fifth	139 wpm
Sixth	150 wpm
Seventh	150 wpm
Eighth	151 wpm

After calculating the WCPM for three passages, identify the highest score, the lowest score and the median score. The median score is the most helpful for determining the fluency rate of students and for graphing their progress. WCPM is calculated by subtracting the errors from the number of words read in one minute. If the student reads the entire passage in less than one minute, the score can be prorated. For example, 120 words read in 50 seconds: 60 seconds x 120 ÷ 50 = 144 WCPM.

Monitoring Fluency: In many cases, students can take responsibility for monitoring their own fluency growth by graphing their progress on repeated readings. Using a timer, students read for a minute, circle the last word they read and then count the total number of words read to get the words per minute. This is done after each reading so students can see immediately how their fluency is progressing, which is highly motivational for readers. Teachers should also be involved in the monitoring process—particularly with younger and less fluent readers. Teachers should listen to these students read, count the number of words per minute, evaluate errors, review the data and plan instruction.

Perhaps because rate and accuracy are measured by counting the number of words read correctly per minute by students on oral reading of grade level passages, students often perceive fluency as just "reading fast." Teachers need to evaluate students' oral reading abilities in terms of accuracy, rate and prosody to plan effective fluency instruction. One important discussion to have with students is that reading rapidly is not the goal. Reading naturally with expression is.

At the primary grades, where so much of the instruction and assessment is focused on reading rate and accuracy, it is important to continue to communicate to students that reading is about understanding. Allington (2006) asks educators to consider the possibility that only using measures of rate and accuracy to assess fluency might communicate that fluency is more about word-reading efficiency than reading with meaning.

Improving Prosody: For fluency to truly be the bridge between decoding and comprehension, it must involve more than accuracy and rate. Prosodic reading is critical. Prosody is reading text using suitable phrasing and appropriate expression, volume, stress, intonation and pitch. Torgesen and Hudson (2006) note that appropriate prosody indicates that the reader is constructing meaning while reading. Rasinksi (2004) suggests that prosody is an actual aid to comprehension.

Teachers can model prosodic reading in read-alouds or shared reading. Prosodic modeling will encourage students to read expressively even in the early stages of reading. Guided reading of leveled books and decodable text also provides opportunities for students to focus on punctuation and expression so that their reading "sounds like they talk."

As students move through the grades and are reading accurately with increasing degrees of automaticity, fluency instruction should incorporate more attention to other dimensions of prosodic reading, such as phrasing. Fluency measures should include prosody rubrics that help students understand that fluent reading is about reading for meaning, which means rate and accuracy are necessary, but not sufficient.

Fluent readers read in phrases. One way to help students attend to units of meaning and punctuation is to not only explain the importance of punctuation, but to use phrase-cued texts which focus on grouping words into syntactically appropriate units (Rasinski, 1994). To help students develop an awareness of these phrases, phrase-cued lessons involve taking a short passage written at the students' independent or instructional level and marking the selection with slashes at naturally occurring syntactic breaks. Slashes indicate the importance of a quick breath or pause. Some students even benefit from putting two slashes after the final punctuation of sentences, suggesting a longer pause. Breaks may come at the end of prepositional phrases, noun and verb phrases, or the end of clauses. Initially, teachers work with students to mark the passages, discussing the rationale for the placement of slashes. Gradually, students can work in pairs to mark and practice passages and then the slashes are phased out completely. These breaks help students read longer sentences more smoothly by parsing sentences into meaningful phrases rather than reading individual words or racing through the entire sentence in a single breath. Discussion, modeling and practice help students ultimately develop sensitivity to natural breaks in text enhancing their ability to read smoothly and with understanding.

In addition to phrasing, students need to learn that authors provide many text clues that support prosodic reading and comprehension. Students should look for text features like words in bold or italics, in quotation marks, or of different sizes. Also, there are verbal cues that support prosodic reading—words that suggest mood, feelings, imagery and the like that tell readers to amplify of soften their voices, read with sarcasm or suspense, or apathy or enthusiasm. Literary elements such as similes, metaphors, personification and onomatopoeia can also impact reading aloud.

Unlike the objective assessments of accuracy and rate, prosody is measured by observing and listening carefully to students as they are reading aloud. While it may be more challenging to assess prosody, it is important for teachers to listen for inflection, expression and phrase boundaries (Hudson, Lane and Pullen, 2005), and provide appropriate feedback. Use of prosodic features while reading orally enhances comprehension for both the reader and listener.

Although accuracy, rate and prosody are important components of effective reading, they are not sufficient for the comprehension of proficient readers who must focus on word meanings and integrate the words into a coherent understanding of the text. Fluency allows readers to apply their strategic knowledge, connect the text to their prior knowledge, read closely and construct meaning. The end goal of reading instruction is always comprehension. It is important for teachers to help students understand that fluency supports comprehension.

Fluent readers adjust their silent reading rate as they monitor their comprehension. Complex or technical text may require readers to slow their rate of reading in order to make sense of the text. Reading text for which one has little background knowledge may result in slower and more focused reading. Reading for specific information may require skimming or scanning text. This is especially true for on line reading, in which the reader must also be able to integrate information from a variety of sources.

It is important to help students make a connection between their silent reading and what they are learning while oral reading. Oral reading brings the reading process out into the open. It can be observed, supported and practiced. What is learned through oral reading fluency instruction can be transferred to independent silent reading. Proficient readers bring their expressive voice to silent reading as they construct meaning. Encouraging students to discuss and share what they are reading independently promotes their engagement with the text. Sharing interesting, meaningful or humorous portions of a text or passages that evoke emotion allows readers to make their inner expressive voice public for a purpose—to share what they find interesting or enjoyable in what they are reading.

Combining oral and silent fluency practice seems to make a difference. Fluency-Oriented Reading Instruction (FORI) combines repeated reading and assisted reading with independent silent reading. This intervention produced a reading performance gain of approximately two years in a study of 14 second grade classrooms (Stahl et al. 2006). It involves repeated teacher modeling and teacher-led oral reading and partner reading of a selection from the core program. In addition, independent student reading is monitored through reading logs and parent oversight.

The How! What Does Fluency Instruction Look Like in the Classroom?

The following instructional activities designed for developing fluency have one feature in common—they are all alternatives to the traditional “round robin” reading in which students take turns reading short sections of text. Round robin reading gives students minimal opportunities to read connected text. The interruptive nature of taking turns provides a dysfluent rather than a fluent model of reading to students. Ash, Kuhn and Walpole (2009) caution that taking turns only guarantees that one child at a time is engaged with the text. Poor readers are often embarrassed to read aloud and more able readers are often disengaged unless they are reading aloud themselves. In addition, readers who struggle to orally read text usually do not understand what they are reading.

While the direct instruction of phonics and word structure is accepted practice, there often is little actual direct instruction of fluency in classrooms. Rasinski, et al. (2009) discuss the importance of students developing “an internalized model of fluent reading” that incorporates all three aspects of fluency—accuracy, rate and prosody. Direct instruction and modeling support this.

Raskinski et al. (2009) discuss the role of teachers as coaches to model fluent reading, discuss why reading is fluent and provide feedback and monitor student growth. There is no question that these activities are critical, but they presume that students understand what fluency is and how to do it. Some students need direct instruction in fluency in order for models and practice to make sense. For example, teachers should discuss why it is important to read words automatically, then model fluent reading and then have students reread the text (Armbruster et al, 2006).

Direct instruction is defined as explicitly demonstrating what something is and how to do it, followed by opportunities for practice (Clark, Kirschner and Sweller, 2012). Rosenshine (2012) elaborates on this definition, providing a structure for direct instruction that has clear implications for fluency. According to Rosenshine, instruction should begin with a review of previous thinking, present materials in small steps, model and guide students in the skill being taught, provide practice opportunities for students, check for student understanding, scaffold the instruction, require independent practice and engage students in regular reviews. This instructional progression can be readily translated into a fluency lesson.

- Review: Begin with a quick review of what was previously taught. For example, a teacher could say, "Yesterday, we talked about the importance of prosody to reading fluency. This means that we must pay attention to reading with expression so our reading sounds like the way we speak. We pause quickly at commas within sentences and pause longer at ending punctuation. Our voice falls at the end of a declarative sentence and rises at the end of a question."

- Present new materials: Explains the focus of the lesson, models the lesson and then provides practice. A teacher presenting new material might say, "Today we are going to expand our understanding of prosody. We know we need to pause at commas and ending punctuation, but when we are reading more complex sentences, we need to be aware of the phrases and sometimes take a quick pause at the end of phrases so we aren't reading long sentences without taking a breath. We also need to look for author clues like words written in bold letters or words that suggest excitement, sadness or boredom and read these words with expression and appropriate feeling. I am going to read the paragraph on the white board and every time I make any kind of pause, I'm going to make a slash mark." The teacher then reads the paragraph, marking pauses and then revisits the paragraph with the class to discuss the pauses and how they helped make the reading sound natural and understandable. The class can then discuss what the teacher did. It is important that students understand that the pauses come after a unit of meaning and are not random.

- Provide models: Give students a copy of a second paragraph, read it and have the students mark the pauses.

- Guided practice: The teacher breaks the class into pairs to practice reading the same paragraph that was just read. Each student reads the paragraph, giving the other student the opportunity to mark pauses as the passage is being read. It is important for students to understand that in addition to pauses for punctuation, pauses also come after units of meaning, including after prepositional phrases or embedded clauses. Also have students underline typographical and verbal cues that support prosodic reading.

- Provide feedback: Circulate around the room listening to students read, noting students who may need additional instruction and providing feedback as necessary.

- Scaffold learning after initial practice: Not all students will need additional instruction. For students who have not progressed to reading practice passages using prosodic features, the teacher takes passages and marks them, and then works with students who need additional support. The teacher reads the passage, pausing at the slashes and then has the students do the same.

Strategies and Activities for Fluency Practice

Repeated Oral Reading

Repeated reading was one of the first approaches developed to improve fluency. It is well-researched, shown to improve fluency and comprehension, and has been used for over 20 years (Armbruster et al., 2006; Chard, Simmons and Kameenui, 1998; Dowhower 1987, 1989; Raschotte and Torgesen, 1985; (Rasinski,2011; and Samuels 1979/1997).

Repeated reading is rereading the same text until a desired level of fluency is attained. The goal of subsequent readings is to increase reading rate by a few words. The number of words read is charted so students can readily see their progress. This can be done several times a week. Once students are no longer increasing the number of words read per minute, they begin with a new piece of text. The advantage to this process is that students see their progress. Through repeated readings, students have multiple exposures to spelling patterns and words. This teaching method supports improved word recognition, speed and accuracy while improving students' ability to parse or break sentences into syntactic units. It works well with young and old students.

Repeated readings can be made even more motivational by varying the instructional setting, the purpose and materials. Teachers often ask comprehension questions after the piece is read fluently, or have students reread for different purposes, e.g., to find out about the content, the characters or the author's purpose (Blum and Koskinen, 1991). After reading for speed and accuracy is achieved on a particular text, the passage can be used for repeated readings to develop prosody. Passages for repeated reading should be at or slightly above a student's instructional level and present content that might be of interest to the reader.

Choral reading is a variation of repeated readings. It is for students needing support with a scaffold, helping them read at an appropriate rate with expression to build confidence (Raskinski, 2003). Choral reading involves a group of students reading the same text or short book in unison. Groups consist of fluent and less fluent readers. While this is often used in the primary grades, using songs, speeches and poetry with older students can be very productive. Any text can be used, but Raskinski (2003) suggests matching text to the type of choral reading. Using shorter texts with good rhythm and clearly defined parts is recommended, such as the Preamble to the Constitution and other patriotic pieces. Regardless of grade level, choral reading begins with teachers modeling the skill and then having students read it several times chorally.

Trainin and Andrzejczak (2006) and Martinez, Roser and Strecker (1999) found that Readers Theater improved reading fluency and comprehension. Readers Theatre gives students purpose for reading aloud—to perform in front of their class. With very little movement and no props, staging, scenery or costumes, the performers have only their voices to make their performance meaningful and entertaining. Their ability to communicate with expression and clarity while using sufficient volume is essential for audience engagement.

Other options for oral reading include poetry readings and reading historical radio oratory presentations. Students do not need to memorize the poems or speeches. People who deliver speeches and recite poetry have the text before them when they deliver the speech or perform the poetry before an audience.

At the primary grades, where so much of the instruction and assessment focuses on reading rate and accuracy, it is important to continue to communicate to students that reading is always about understanding. Allington (2006) asks educators to consider the possibility that using only measures of rate and accuracy to assess fluency might present fluency as being more about word-reading efficiency than reading with meaning. With repeated readings of leveled books and decodable text, students have the opportunity to focus on punctuation and expression so that their reading "sounds like they talk."

Furthermore, reading and rereading for fluency should not preclude reading for different purposes. Shanahan et al. (2012) encourage rereadings that emphasize different aspects of the text. Rereadings of the same text can be interrupted to discuss meaning, identify details and main ideas, and discuss structural elements.

Assisted Reading

Assisted reading provides students with a model of fluent reading. Students need to hear proficient fluency models to learn how a reader's voice can help make sense of text. Methods of assisted reading include adult-assisted reading, peer-assisted reading and audio-assisted reading. All emphasize practice and support to improve students' fluency. Most assisted reading methods provide students with a model of fluent reading. By listening to good models of fluent reading, students learn how a reader's voice can help text make sense (Kuhn and Stahl, 2003).

- Teacher-Assisted Reading involves the teacher providing a model while working one-on-one with a reader. The teacher reads the text while the student follows along. The student then reads the same passage to the teacher, who provides feedback on word recognition, expression, attention to punctuation, etc. The student rereads the passage until the reading is fluent, usually three to four times.

- Partner reading involves students reading to each other from the same piece. Students can be paired in one of several different ways. A fluent reader can be paired with a less fluent reader. In this pairing, the fluent reader reads the passage first and then the less fluent student reads the same passage. Students continue to reread the same passage until both are more fluent. If a fluent reader is paired with the top ranked less fluent reader, Osborn et al. (2003) suggest the following procedures: Teaching procedures for partner reading is essential for students to benefit from this form of fluency practice. Teachers must monitor partner reading and provide feedback until the students are able to stay on task for a sustained amount of time. If the procedures are carefully modeled and practiced, even young children can learn to give each other helpful feedback.

- Tape-Assisted Reading has the benefit of students working independently while still hearing models of fluent reading. It has been found effective with various groups of students (Kuhn and Stahl, 2003). Students read along with a recording and then practice reading independently. Initially students read the book aloud along with the recording, a form of scaffolding. Students reread until they can read the book fluently without any scaffolding. Teachers can record the books themselves or use commercially produced tapes. Another option is to have students from an upper grade who need to practice fluency read selections for students at the lower grades. When upper grade students become fluent, they can record the selection for use as tape-assisted reading in the lower grade.
  As with other independent practice, monitoring, guidance and feedback make a difference.

- Echo Reading is an assisted reading technique in which the teacher reads a portion of the text and the class or group echoes it back, using the inflection or expressive interpretation that is modeled by the teacher. In a shared reading of a repetitive text with young readers, children can read the repetitive portions of the text with the teacher, imitating the teacher's expression.

- Adult assisted reading, peer tutoring and cross-age tutoring are assisted reading instructional strategies that have been found successful as Tutor-Based Reading Approaches (Stahl, 2003). Additional information is found under the section "Support for English Language Learners and Struggling Readers."

Reading Aloud

Children are introduced to fluency early in life as they listen to adults reading aloud. They hear models of fluent reading that incorporate accurate word recognition, appropriate rate and expression, and intonation (reading that sounds natural). Unfortunately, few teachers above first grade make reading aloud a literacy priority (Jacobs, Morrison, and Swinyard, 2000).

The effect of read-alouds depends on the choice of books, engagement of the students and the ability of the teacher or other adult to read with prosody. Indirect instruction is possible during a read aloud as students hear how the voice can be used to create and extend meaning. Through the use of intonation, phrasing, expression, appropriate pauses, etc., the reader demonstrates how meaning is embedded in the interpretation of the words, as well as the words themselves. A read aloud should make a text come alive and sends the message that one enjoys and comprehends text much more fully when it is read in an expressive and meaningful way (Rasinski, 2003).

Modeling a poor example of fluent reading once in a while during a read aloud can also be effective. Reading a brief portion of the text, without expressive interpretation, brings a quick response. Students will quickly recognize and communicate their displeasure when they hear "robot reading" (no inflection); speed reading that ignores punctuation; or slow, choppy reading without meaningful phrases. Afterward, as the teacher reads the portion again with expressive interpretation, the students are more aware of the prosodic elements the teacher used. It also provides a reminder for them as they practice oral reading that the goal is to engage the listener by not reading too fast, too slowly or like a "robot."

Independent Silent Reading

A widely questioned finding of the National Reading Panel (NRP, 2000) was that independent or non-monitored reading was not shown to be effective in building fluency in the experimental studies. On the other hand, consistent findings from the process-product studies of effective teaching, such as Kuhn and Stahl's study (2003), as well as experimental work reviewed by the NRP (NICHD, 2000) support the idea that increasing the time spent reading has a positive influence on children's achievement, at least as long as the children are guided and monitored during that reading. But all practice is not equally effective. Correlational studies by Anderson, Wilson, and Fielding (1998), Taylor et al. (1990) and others found that the amount of reading children do correlates strongly with reading gains. But correlations between variables do not prove that one variable causes the other, which is why correlational studies were not used by the NRP.

Of the few experimental studies on the effects of silent reading, most have found small or no gains in reading achievement. Researchers suggest several reasons why time spent doing silent reading in the classroom seems to produce such small gains in reading achievement (Carver and Liebert, 1995; Holt and O'Tuel, 1989, Vollands, Topping, and Evans, 1999). One explanation is that when students are not monitored or held responsible for reading, many may not actually read. Those who do read often choose relatively easy books to read. Finally, silent reading does not allow teachers to evaluate the rate, accuracy or prosody of the readers, and they cannot provide students corrective feedback. And yet we know that struggling readers are unlikely to make reading gains if they do not read more on their own inside and outside of school. The recommendations of Anderson (1990) listed below are still valuable for making reading time more productive:

- Help students select books at appropriate reading levels that are related to their interests. Make book selection part of their regular reading group activity.
- After silent reading, set aside a time for students to discuss what they read. Have them recommend books to each other.
- Involve parents and other family members by giving them tips on how to read to their children.

CONCLUSION

How well students learn to read profoundly affects their accomplishments throughout their school years—and their lives. Students who quickly develop the skills necessary to read with fluency and comprehension acquire the power to expand their range of learning because they have access to all the world's knowledge, thought and reflection. The evidence is strong and enduring, however, that students who do not develop such skills seldom achieve reading success (Juel, 1988; Stanovich, 1986).

Helping students acquire reading skills demands our most serious attention. It requires balanced instruction based on the best available knowledge from research and practice. Acquiring foundational skills is key to learning to read. If students are expected to read and interpret complex text, they must be able to access text. Foundational skills are a means to that end. Foundational skills should be taught early and well as part of a comprehensive reading program.

A final note. For too long, foundational skills have been compartmentalized from reading for meaning. Phonics has been removed from real reading and considered an appendage, something only poor readers need. Word structure has been separated from building vocabulary knowledge and understanding language skills. And fluency has been viewed as a race to the end rather than a tool for applying decoding and word structure knowledge and comprehending text. Now with the Common Core State Standards and the emphasis on reading increasingly complex text, instruction in foundational skills is again in jeopardy. Yet, how can students comprehend and analyze complex text and thrive as readers and learners if they cannot read the words on a page correctly, fluently and confidently?

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