

## Chapter 5

**The Components of Language and Reading Instruction**

Multiple references have been made in preceding chapters to the use of “balanced” reading instruction in studies of reading instruction. Prior to describing the components of reading, an introduction to the components of language that shape that foundation is warranted.

## Components of Language

Reading would not exist without the human capacity for language. Because the components of language and their associated terminology align with our demarcations for many of the elements of reading, they are described briefly in this section. Linguists have identified five basic components (phonology, morphology, syntax, semantics, and pragmatics) found across languages.<sup>1</sup> Language acquisition progresses across these components with increasing quantity (e.g., sounds, words, and sentence length) and gradual refinement, and understanding of the subtler and more complex points of usage (e.g., using “taught” rather than “tached”). Readers are encouraged to explore the literature in the field of language development to better understand and appreciate the oral language skills students may bring to the reading process. Speech and language pathologists are a great resource for identifying resources in this area and assisting in determining whether a child’s language skills are developing normally and providing support when assessment and intervention may be required.

*Phonology*

The study of speech structure within a language, including both the patterns of basic speech units and the accepted rules of pronunciation, is known as phonology.<sup>2</sup> The smallest units of sound that make up a language are called *phonemes*. For example, the word “that” contains three phonemes the “th” represents one phoneme /th/, the “a” maps to the short a sound /ă/, and the “t” to its basic sound /t/.

*Morphology*

Moving to the next level of language, we find the study of the smallest units of meaning, *morphemes*. Morphemes include base words, such as “hat,” “dog,” or “love,” as well as affixes, such as “un-,” “re-,” the plural “s” or “es,” and the past tense “ed.” Knowledge of the morphology of our language is critical to vocabulary development and reflects the smallest building blocks for comprehension.

### *Syntax*

The study of how individual words and their most basic meaningful units are combined to create sentences is known as syntax. As words are grouped together when we communicate, we must follow the rules of grammar for our language, in other words, its syntax. It is the knowledge of syntax that allows us to recognize that the following two sentences, while containing different word order and levels of complexity, have the same meaning.

- The boy hit the ball.
- The ball was hit by the boy.

Syntax also allows us to accept “I went to the store” as a meaningful (grammatical) sentence while “To store went I” would not be acceptable English.

### *Semantics*

Not only does the grammatical structure of our language provide the needed clues for understanding, we also have a wealth of figurative language and rich description that adds color and nuance to our communication. *Semantics* refers to the ways in which a language conveys meaning.<sup>3</sup> It is our understanding of semantics that allows us to recognize that someone who is “green with envy” has not changed hue, or that “having cold feet” has less to do with the appendage at the end of our legs and more to do with our anxiety about a new experience. Because semantics moves beyond the literal meaning of words and is culture-dependent, this is among the most difficult aspects of language for individuals who are not native speakers and even those who speak the same language but come from different cultures and convey meaning using words in unique ways. Anyone who has attempted to converse with a teenager in his own vernacular can appreciate the importance of sharing a semantic base for communicating clearly.

### *Pragmatics*

“Pragmatics’ refers to the ways the members of the speech community achieve their goals using language.”<sup>4</sup> The way we speak to our parents is not the same as the way we interact with a sibling, for example. The language used in a formal speech may bear little resemblance to what we would hear at a lunch with five friends. The conversational style of day-to-day interactions is quite different from the language used even when reading a

storybook to a toddler. Knowing the difference and when to use which style is the essence of pragmatics.

Facility with language is critical to social interactions. Our ability to effectively communicate with others through spoken and written language is considered one of the ultimate goals of our educational system, with reading receiving much-needed emphasis. “Reading is essential to success in our society. The ability to read is highly valued and important for social and economic advancement.”<sup>5</sup> In the following section the components identified by experts as critical to developing reading skills are reviewed.

## Developing an Integrated Reading Program

Effective and powerful instruction from knowledgeable teachers is the key to successful early reading achievement. Balanced instruction providing all children with opportunities to master concepts of print, learn the alphabetic principle, acquire word recognition skills, develop phonemic awareness, engage in and sustain an interest in reading, and experience a wide range of materials in the context of developmentally appropriate instruction continues to be the major deterrent against reading failure (Adams, 1990; Hiebert, Pearson, Taylor, Richardson, & Paris, 1998; Snow et al., 1998).<sup>6</sup>

The National Research Council Committee cautioned educators about use of the word “balance” proposing that “integration” is more appropriate. Balance does NOT mean dividing one’s time equally among the components of a comprehensive reading program, but, instead, developing an approach that is coherent and adjusts to the developmental reading needs of students.<sup>7</sup> While the term “balanced” may be used more frequently, to reflect the NRC Committee’s suggestion, the term “integrated” will be employed in the current review of the critical components of effective reading programs.

The consensus regarding the five components described below evolved from the work of the National Research Council Committee and the National Reading Panel, which subsequently became the foundation for the Reading First initiative found in NCLB. Evidence regarding these components is shaping state- and school-district decisions regarding reading program adoption as is clear in the list of accepted Reading First Programs. In many cases, it has significant financial and instructional implications. For example, it was recently reported that Anne Arundel County in Maryland was purchasing the Open Court reading series, which has a heavy phonics emphasis that has been promoted by reading experts and credited with rising test scores, including nearby Baltimore. The adoption would be an \$8 million expense at a time when the district’s budget was being cut by \$13 million. Although concerns have been voiced that the program limits teacher flexibility, Arundel had begun implementing the program in schools with the lowest performance and reported that the curricular assessments indicated progress. Also, administrators noted that teachers were reluctant when the program began, but were more accepting after working with the series.<sup>8</sup> Effective implementation of reading programs is influenced by such fiscal pressures and educators’ difficulty accepting change.

## Instructional Components of Teaching Reading

Quality instruction “includes explicit explanations, modeling, and scaffolded practice that is engaging and meaningful ...meeting students where they are with respect to affect, motivation, and cognition; explicitly teaching them strategies for taking charge of tasks, situations, and personal styles; and scaffolding the successful completion of academic tasks.”<sup>9</sup> While the full parameters for quality instruction cannot be included in this review of reading components, we will incorporate as many as possible. Each of the components will be described with several examples of how it may be integrated into reading instruction and, finally, how the component may apply to high-poverty/highly mobile students.

### *Phonemic Awareness*

Phonemic awareness is one of the underlying language skills considered highly predictive of later reading success. CIERA identified<sup>10</sup> phonemic awareness instruction in kindergarten as closely related to emergent literacy skills. Some researchers suggest that the best predictor of reading difficulty in kindergarten or first grade is the inability to segment words into their sound units.<sup>11</sup> Even among children with limited English proficiency, strong phonological awareness in their native language was a strong predictor English reading success.<sup>12</sup> Before describing this component in early reading instruction, it is helpful to recognize that phonemic awareness is a subset of phonological awareness.

*Phonological awareness.* Recall that phonemes refer to the smallest units of sounds, but there are other units of oral language that are easier to hear and manipulate, such as words and syllables. The ability to hear and manipulate words, syllables, and phonemes is known as *phonological awareness*. Children acquire the ability to identify and play with words and syllables before they can do the same with individual sounds. These simpler tasks are common preschool activities and the types of games that youngsters often play with their parents and other caregivers. Phonological awareness, including phonemic awareness, does NOT involve written alphabetic letters or words. It focuses exclusively on oral language. While some children who have difficulty hearing differences in sounds may benefit from the visual representation, this component involves prereading skills. The following tasks are samples of activities related to phonological awareness, starting with the skills that are mastered earlier and progressing in complexity.

Type of Task	Description	Example
Rhyme	Being able to match the ending sounds in words.	Hit, pit, sit, lit, mitt (remember this is sounds, not letters)
Alliteration	Being able to generate words that begin with the same sound.	Six, silly, squirmy, seals sang
Sentence segmentation	Being able to break spoken sentences into separate words.	Tia hit the ball. 1 2 3 4
Syllables	Blending syllables into words or segmenting words into the corresponding syllables. This skill begins to emerge about the age of 4.	/pup/ /pet/ - puppet seven - /sev/ /en/
Onsets and rimes	Blending or segmenting the initial consonant or consonant cluster (onset) and the vowel and following consonant sounds (rime). Around the age of 4 to 5, this skill becomes evident.	/m/ /op/ - mop stripe - /str/ /ipe/
Phonemes	Blending, segmenting, and manipulating individual sounds in words.	/t/ /r/ /o/ /t/ - trot stick - /s/ /t/ /i/ /k/ sound substitutions: change the /h/ in hat to /b/ - bat

Table 4. A Continuum of Phonological Awareness Tasks

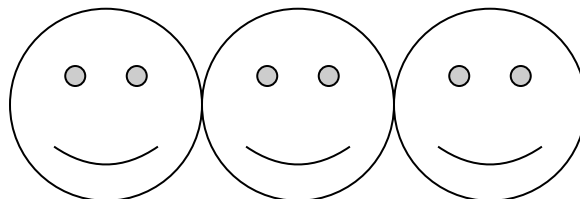
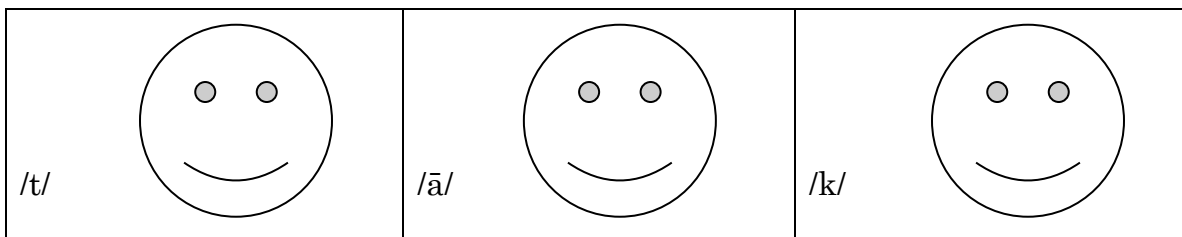
*Instructional considerations for developing phonemic awareness.* Rhymes and alliteration can be reinforced through a variety of children's literature, including nursery rhymes and poems, and children often enjoy making up their own. (How many of us can remember our names being manipulated to rhyme with words we would rather not have linked, such as plain Jane or fatty Patty!) The activities listed in Table 4 involve greater manipulation of speech sounds, both blending and segmenting. Several simple techniques can be used regardless of the level being addressed. For

example, words, syllables, onset-rimes, and phonemes can be clapped, tapped on fingers, or manipulated with concrete objects such as blocks. A technique that incorporates the use of concrete objects is the Elkonin sound boxes. Boxes (parking spaces or other terms that attract the children’s attention) can be drawn on a board or sheet of paper and blocks, coins, counters, M&Ms or any other item can be used to present each word, syllable, onset-rime, or sound. The following examples model these activities using one of the speech units; however, the same activities can be interchanged for different units.

1. Clapping words: the – dog – barks (3 claps)
2. Tapping fingers for syllables: de-li-cious (3 taps)
3. Blocks on onset-rimes: s – and (2 blocks) (push the blocks together to blend or pull them apart to segment)

A word about onset-rime: Awareness of individual sounds within rime units usually requires direct instruction. There are 37 rimes that appear in over 500 different words commonly seen in early grades. These rimes provide a more stable pattern for vowels than individual phonemes. There is conflicting research regarding whether to start with phonemes or with rimes.<sup>13</sup> Starting with the phoneme level may provide the best results after some consonant and vowel knowledge is mastered; however, rimes may assist children in making the leap to “chunks” and seeing patterns when learning to decode.

Elkonin sound boxes for phonemes: Move one smiley face counter into each box for each sound in “take”; slide the counters together and say the word “take.” (A “parking lot” format with cars or trucks may be used, as well as many other motivators.)



take

Notice that throughout these activities no written language is used. Phonological awareness, including phonemic awareness, addresses speech, not print. As a result, many of these activities can begin during preschool years. The development of phonemic awareness is considered an important component of reading instruction in kindergarten and first grade. When explicit instruction is used to introduce a concept or skill, small-group and one-to-one grouping is recommended.<sup>14</sup> Whole-group instruction for read-alouds and incidental reminders through daily activities is appropriate for reinforcement of previously introduced skills.

*High-poverty/high-mobility and phonological skill development.* The development of phonological awareness and phonemic awareness, in particular, are dependent upon language-rich environments. The quality and quantity of verbal interactions young children experience play a significant role in building reading readiness.<sup>15</sup> Children in poverty are less likely to be exposed to the kinds of language play that nurture this foundation to emergent literacy. Families who are moving frequently and facing the stressors related to poverty may be focused on survival, making the adults less “available” to their children, resulting in fewer verbal interactions. Further, depression, whether clinical or situational, is common given the challenges of poverty. Depression also suppresses the quantity of verbal expression a child experiences.<sup>16</sup> The story books and nursery rhymes of middle-class America may not be part of the culture of children moving frequently and living in poverty, and the limited access to books in poor communities compared to more affluent communities has been well documented.<sup>17</sup>

Also noted is a relationship between high school dropout and poverty. Thus, it is parents without diplomas who are most likely to benefit from quality preschools as a means to counter the limited resources in their homes and communities; yet, these are the parents least likely to have access to quality programs.<sup>18</sup> This is illustrated by the limited funding for Head Start, which allows programs to serve only approximately 40% of those eligible and the most recent USDE Homeless Child Estimate in which states identified over 250,000 preschoolers who experienced homelessness and reported that only 15% had access to preschool.<sup>19</sup> Programs serving these children may need to consider how to incorporate the creative language-based play that will nurture the development of such skills. That is, it may be necessary to review or even introduce preschool-level skills when students have not had the benefit of experiences to develop the phonological skills that form part of the building blocks for early reading acquisition and to ensure that the continuum of phonological awareness is addressed by beginning with larger linguistic units and moving to phonemes as students are ready.



## *Phonics*

While phonological and phonemic awareness focus on speech without print, phonics brings speech sounds and print together. Knowledge of the alphabetic principle and how letters are combined to represent the sounds of our speech is phonics. The National Reading Panel noted that phonics taught early is more effective than if introduced after first grade. Similarly, the authors of the CIERA<sup>20</sup> studies for grades 1 through 6 reported a high level of phonics instruction was NOT found to be helpful for students' growth in fluency in grades 2-3 or to their phonemic awareness development in kindergarten. This does not mean phonics should be ignored at these levels, but the proper mixture of a well-integrated reading program should include more direct phonics during early reading in first grade and gradually decrease in terms of direct instruction. Teachers continue to explore phonics with their students, as needed, in other grades.

English is notorious for its lack of one-to-one correspondence between letters (graphemes) and phonemes. The adoption of words from other languages that have different pronunciation and spelling rules and the introduction of the printing press have been identified as causes for some of these challenges. In the 15<sup>th</sup> and 16<sup>th</sup> centuries, many words were pronounced as they were spelled. Over the years, we have changed pronunciation, but little has changed in the way the words are translated into their written form.<sup>21</sup>

The English language has only 26 letters to generate approximately 45 different sounds.<sup>22</sup> Some researchers have found that most comprehensive phonics programs provide direct instruction in about 90 rules, yet there are over 500 spelling-sound rules in English.<sup>23</sup> That means that we must use a variety of letter combinations to produce the unique sounds. To further confound this challenge, the same letter combinations can represent a variety of phonemes. Consider the following unusual spelling for a common word proposed by the author George Bernard Shaw:

*ghoti*

What word could this represent? Well, the “gh” refers to the /f/ phoneme as found in the word “enough,” the “o” refers to the /i/ phoneme as used in the word “women,” and the “ti” refers to the /sh/ phoneme as in “nation.” By mapping these sounds to the letter combination, we would arrive at the word “fish!”<sup>24</sup>

*Instructional considerations for teaching phonics.* Despite the number of irregular letters and sound combinations, an understanding of the sound-symbol relationship and mastery of basic rules is strongly associated with early reading success. Some educators who work with students who are highly mobile have noted their inadequate progress with whole language approaches that lack structured phonics instruction as the explicit structure

is seen as a critical building block for these students.<sup>25</sup> Thus, explicit phonics instruction in the primary grades, as noted in previously cited studies, was associated with more effective classrooms as defined by acquisition of reading skills; however, an emphasis on phonics in later grades was less effective. Table 5 outlines developmental steps children go through in developing word recognition skills, which is the purpose of phonics instruction.<sup>26</sup>

Phase	Description
<b>Pre-alphabetic</b>	Children attend to distinctive visual cues. For example, they focus on logos to recognize brands or locations such as the golden arches for MacDonald's. <sup>27</sup>
<b>Partial alphabetic</b>	Students have knowledge of some letters and sounds and use those phonetic cues when trying to read.
<b>Full alphabetic</b>	Students can fully analyze the spellings of words.
<b>Consolidated alphabetic</b>	With reading practice, spelling patterns become joined into "multiletter units consisting of blends of letter-sound matches" <sup>28</sup> and students use these larger units to read sight words (e.g., onset-rime patterns).

Table 5. Stages in Developing Word Recognition Skills

Despite the ability to directly teach all possible phonics rules and letter combinations, this component of reading instruction plays an important role in early reading development. Rather than ensuring students master all the rules for decoding words, phonics provides children with an awareness of word structure, and this awareness, in turn, allows them to generalize the rules they have mastered to read new words. Practice in writing letters to represent words, a common way to practice phonics skills, allows children to recognize that their spoken words can be separated into smaller units of sounds and a visual representation can be assigned. "Armed with this awareness, a child can then go on to induce for himself the multitude of spelling-sound correspondences that are actually required to read."<sup>29</sup>

Students need to understand the goals and rationale for the instruction they receive as it allows them to develop metacognitive control over the word-learning process. For example, they can think about how they are learning words, the relationship between their reading and classroom instruction, and even how to adjust their approach to reading tasks when they are not successful.

There are several approaches to teaching phonics. Synthetic phonics emphasizes letter-by-letter phonological decoding to combine sounds into whole words, whereas analytic phonics focuses on breaking words into their component sounds. A third approach involves the use of analogies with onsets and rimes taught through the use of keywords or other known words to

identify unknown words.<sup>30</sup> These processes are similar to those described under phonemic awareness, and similar activities may, therefore, be used for instruction. The major difference is the addition of written words to the verbal cues. Steps teachers or tutors may use include:

- Modeling of self-talk (verbalizing how you approach a new word so the student understands the internal process);
- Guided practice where the students explain why number of sounds and number of letter might not match;
- Letter substitution practice with Elkonin boxes (e.g., here is the word “hat” if I change the “h” to “m,” the word is ...“mat.”);
- Reading texts with controlled vocabulary and predictable rhyme pattern or easy trade book;
- Reading to students having students point to the words and follow along;
- Echo and choral reading (students repeat after the teacher or everyone reads along aloud together);
- Solo reading; and
- Maintaining “What-I-Know-About-My-Language” journals that allow students to review features of our language. Students develop their own observations of rules, which can be motivating because it gives them control over their own word learning.

Despite such a variety of activities, teachers and students face challenges when working with phonics to provide practice in the phonics rules that have been taught. Reading is not intended to mean decoding words in isolation, but rather getting meaning from print. As noted above, actual stories and expository writing are needed. A variety of controlled vocabulary texts and trade books are available that emphasize particular patterns and gradually increase in complexity. The benefit of these books is that they give students the opportunity to practice words they know and be successful. One drawback to such controlled texts is that the limitations on word choices can make the readings less interesting and sometimes force sentence structures that are less common for students. This, in turn, can impede motivation to learn if the students view the stories as dull or difficult to understand. Teachers must balance the need for practice with the use of engaging reading. The percentage of words that needs to appear in such texts is another area for continued research.<sup>31</sup> Some researchers suggest phonics texts may be considerably reduced and still achieve the goal of the text.<sup>32</sup>

“If children successfully negotiate all the texts normally encountered by the end of eighth grade, they will encounter over 80,000 words. In third grade alone, they will encounter over 25,000 distinct words”<sup>33</sup>

Not all words can be deciphered by applying phonics rules; such words are described as “sight words.” Students will need to learn additional strategies to tackle the texts and storybooks they want to read. Juel and Minden-Cupp<sup>34</sup> explored primary-grade reading to determine which and how many strategies for word recognition should be used with first graders. (It should be noted that the classrooms involved in the study were stable. Whether these results would apply to classrooms with high mobility is unknown.) The researchers observed students and teachers in four first-grade classrooms that used different reading approaches (e.g., structured phonics or trade book emphasis) and tracked when and how students were encouraged to:

- Sound out words,
- Make an analogy,
- Use context clues (use the surrounding text meaning to predict the unknown words; e.g., “Does it make sense?”),
- Apply a combination of strategies, or
- Have the teacher just tell the word.

In addition, the researchers looked at which students were encouraged to use certain strategies and under what conditions (such as group size). Less skilled decoders were encouraged to sound out words more frequently, and those with some decoding skills were more likely to use the onset-rime approach. The results suggested:

- Differential instruction may be helpful in first grade. While low-group members in a trade book classroom tend to be relatively poor readers at the end of first grade, their classmates in higher groups make exceptional progress;
- Children who enter first grade with low literacy benefit from early and heavy exposure to phonics; once they can read independently, however, these children then profit from the increased vocabulary work, text discussions, and variety of text types that is characteristic of their higher range peers’ reading curriculum; and
- A structured phonics curriculum that includes both onsets and rimes and sound and blending phonemes within rimes appears to be very effective.<sup>35</sup>

Furthermore, the most structured phonics classroom had the strongest, statistically significant overall outcomes despite the lack of beginning-of-year differences across classrooms; peer coaching was not successful with poor readers, yet students with some reading skill benefited from such coaching, suggesting that a threshold of competence may be required before students can benefit from such a strategy.<sup>36</sup> The following classroom practices were identified for students with minimal reading skills as having the greatest success in learning to read:

1. Teachers modeled word recognition strategies by (a) chunking words into component units such as syllables, onset/rimes, or finding little words in big ones, as well as modeling and encouraging the sound and blending of individual letters or phonemes in these chunks; and (b) considering known letter-sounds in a word and what makes sense.
2. Children were encouraged to finger-point to words as text was read.
3. Children used hands-on materials (e.g., pocket charts for active sorting of picture cards by sound and word cards by orthographic pattern).
4. Writing for sounds was part of phonics instruction.
5. Instructional groups were small with word recognition lesson plans designed to meet the specific needs of children within that group.<sup>37</sup>

How to balance the needs of highly mobile students who may be older but lack mastery of phonetic relationships has not been addressed in the literature to date and is an area for further research.

While meaning is the ultimate goal of reading, it is believed that decoding must come first. A good reader uses meaning to determine if decoding was done properly, but readers should not start by looking at picture clues or context. They must attend to letters first. For skilled readers, this occurs at such a rapid rate that it is almost automatic and they often are unaware that the decoding process is occurring.<sup>38</sup>

Automaticity is fostered by the intervention of a teacher who provides explicit instruction in the use of externalized dialogue to control learning (Lovett, et al., 1994), teaches students to fully analyze words (Stanovich, 1991), and provides daily opportunities for students to read connected text containing words with high-frequency phonograms or spelling patterns (Ehri, 1992). Students need plenty of practice reading words in order for words to be stored in memory as fully connected sight words that can be read automatically.<sup>39</sup>

The goal of instruction should be to motivate students to be reflective and analytic—in other words, to become “word detectives.”

## Vocabulary

The knowledge that students have for many words is far more complex than could be attained through instruction that relies primarily on definitions. Not only are there too many words to teach them all to students one by one; there is too much to learn about each word to be covered by anything but exceptionally rich and multifaceted instruction.<sup>40</sup>

Vocabulary in readings refers to students' understanding of the *meanings* of the words they encounter while reading. Part of the complexity of this process may be explained by realizing that many aspects of language, as well as reading, come into play at this stage. Knowledge of morphology, syntax, semantics, and even pragmatics influences the student's ability to understand what a word means, both in general terms and, with time, the subtle nuances of meaning that different words evoke in different contexts.

The concept of a "word" can be challenging for 5-year-old preschoolers, who may have difficulty dissociating a word from its referent.<sup>41</sup> For example, when a young child hears or reads the word "table," he thinks about the concrete object and cannot separate that object from the written or spoken "word." For young children, the object IS the word, and the word IS the object. The ability to manipulate this abstract component of language usually does not begin to emerge until age 7, and deeper understanding seems to occur around age 9 or 10.<sup>42</sup> Thus, it takes time for children to realize that the label we choose to use to identify an object is arbitrary and not inherently linked to the object. (Why couldn't a table be called a "splosh"? For a young child, the answer may likely be, "No! It's a table!")

In one study of children's vocabulary growth, Anglin found that the number of root words children knew increased by about 4,000 words between first and fifth grade. When derivations of these words (changes based on the addition of a prefix or suffix) were included in the count, the increase in vocabulary acquisition reached about 14,000 words! Anglin found a "veritable explosion in children's knowledge of derived words, especially between third and fifth grades. . . the bulk of this increase appears to reflect morphological problem solving, that is, interpreting new words by breaking them down into their component morphemes."<sup>43</sup> Incidental discussions and direction instruction in root words (including etymology), suffixes, and prefixes have a place in reinforcing this skill development.

The high rates of vocabulary growth seen in many children occur only through immersion in massive amounts of rich written and oral language. Students who need help most in the area of vocabulary—those whose home experience has not given them a substantial foundation in the vocabulary of literate and

academic English—need to acquire words at a pace even faster than that of their peers, but by no means do they always find this process easy or automatic.<sup>44</sup>

The fact that exposure to rich written and oral language is so critical for this component of reading makes it a likely area for further research for children who are highly mobile as a result of poverty or other family stressors. Such families are less likely to have the mental energy to engage in rich dialogues with their children (or such interactions may not be part of their cultural experience).<sup>45</sup> In addition, families living in poverty and moving frequently are not likely to have expansive libraries in their homes, nor may they find it easy to access books through the public library. Checking out books is often tied to residency—something families on the move may have difficulty substantiating.<sup>46</sup> Similarly, students with limited English proficiency may have little access to print, especially in the family’s native language, compared low income and middle income schools and neighborhoods. There tend to be significantly fewer written sources in preschools, libraries, and neighborhoods in high-poverty communities.<sup>47</sup>

Spanish is a common language found in U.S. schools today, especially among one subpopulation of highly mobile students—those of migrant families. Certain characteristics of Spanish may assist these students in acquiring English vocabulary. For example, researchers have noted that both languages share many cognates with similar spelling, pronunciation, and meaning. The large number of English words with Latin roots reinforces this claim. Thus, researchers found that Spanish-English bilingual students’ ability to recognize morphological relationships increased dramatically between 4<sup>th</sup> and 8<sup>th</sup> grade. Whether this was due to increased ability or greater sensitivity at this age was unclear.<sup>48</sup> Looking for such commonalities and sharing the similarities with all students in the class may provide students who are learning English with an opportunity to be the “expert” and instruct their classmates. Such acknowledgment of the special skills these students have can enhance their self-esteem, build greater understanding of similarities rather than differences, and strengthen community in the classroom.

Effective vocabulary instruction must provide students with multiple and varied encounters with words.<sup>49</sup> Table 6 summarizes key elements that are part of the development of vocabulary skills.



Element	Description	Examples
Incrementality	Students develop progressive approximations of adult understanding of words.	Simplified scale of increments: <sup>50</sup> <ul style="list-style-type: none"> <li>○ Never saw it before</li> <li>○ Heard it but don't know what it means</li> <li>○ Recognize in text, know it has something to do with ...</li> <li>○ Knows it well</li> <li>○ Can use it in a sentence</li> </ul> While research supports that learning can be incremental, we know less about what limits the effectiveness of different exposures to the word. <sup>51</sup>
Multidimensionality	Word knowledge consists of qualitatively different types of understanding.  There are many ways to categorize words and no one aspect predicts how well a student will grasp another.	Examples: spoken form, written form, frequency, association with other words, semantic relationships (synonyms and antonyms, morphological relationships (affixes)  Learning tasks: new concepts, new labels for known concepts, moving words into students' working/productive vocabularies
Polysemy	Understanding that words can have multiple meanings, even when spelled exactly the same way (e.g., "bear" – the animal and bear as a verb – to carry a load).	Students "must not only be taught to choose effectively among the multiple meanings of a word offered in dictionaries, but to expect words to be used with novel shades of meaning" <sup>52</sup> (e.g., the use of figurative language). <sup>53</sup>
Interrelatedness	Word knowledge is dependent on understanding of other words.	Students must learn that words are not isolated units of meaning. Students benefit from linking new knowledge to prior. Therefore, a high level of mastery of previous relationships among concepts facilitates learning new words. <sup>54</sup>
Heterogeneity	What it means to know a word differs substantially depending on the kind of word.	This requires understanding of syntax and being able to identify parts of speech and how the word is being used grammatically influences meaning (e.g., You have two "eyes" differs from Tom "eyes" the dessert table).

Table 6. Elements of Vocabulary Acquisition

*Instructional considerations for developing vocabulary skills.* Many of us recall the weekly vocabulary lists with words whose definitions were found in a dictionary and copied verbatim. The culminating event was a Friday test.<sup>55</sup> You may have memorized a word for Friday’s test, but did you recall its meaning the following Monday? Could you use the word spontaneously in your speech or writing? While definitions provide explicit information for students and many such practices may be better than waiting for chance encounters, traditional approaches to vocabulary run counter to what the research tells us and do not address the nuances of meaning and usage. For example, it will not help a student differentiate the subtle difference between saying, “Maria was annoyed.” or “Maria was furious.”

So, what can we do if there are too many words to learn for teachers to teach directly and the subtleties needed for deep understanding and effective usage are missed by those common vocabulary tests? Here are a few suggestions identified by researchers:

- Students need at least some information about the nature of words if they are to take an active role in word learning and assume increasing responsibility for their own vocabulary growth.<sup>56</sup>
  - Talk about words—where they come from, how they are used.
  - Read aloud from high-quality children’s literature that uses rich, descriptive language and discuss the author’s choice of words and why they make the story more exciting and engaging.
  - Provide students with opportunities to copy an author’s style in their own writing or have them suggest alternative words to make a dull passage more lively.
- Context training can increase students’ ability to learn words.<sup>57</sup>
  - Since meaning is not clear when words are in isolation, play word games in which the same word has different meanings depending upon the rest of the sentence or passage. Help students identify cues surrounding the word that assist in understanding its meaning.
  - Use cloze passages (passages in which words are omitted) and have students practice identifying possible ways to fill in the blank. Discuss how those different options can change the meaning of the passage.
- Metacognition (thinking about thinking), as used in strategy instruction, can provide a structure for thinking about the meanings of words.
  - When reading, model the thought process you use when approaching an unknown word.
  - Have students share their approaches to figure out words that are unfamiliar.

- Metalinguistic awareness, in other words, knowledge of morphology, correlated with reading ability into high school<sup>58</sup> and makes a difference even when phonemic awareness is taken into account.<sup>59</sup> Give the students an opportunity to add to their skills as “word detectives.”
  - Look at different parts of speech, and how they impact word usage.
  - Provide direct instruction in root words, prefixes, and suffixes.
  - Find children’s books that emphasize a play on words.<sup>60</sup>

Caution – for some irregular words, morphology must be used strategically and flexibly as a strategy. Context also is needed to recognize the difference between an “s” added to a present tense verb (runs fast) or added to make a plural (runs in stockings).<sup>61</sup> Areas for future research include the effects of varying levels of metalinguistic awareness on students’ ability to profit from different types of vocabulary instruction and what effects instruction has on word consciousness and students’ vocabulary growth.

- Syntactic awareness training can lead to improvement in reading comprehension since knowledge of syntax impacts contextual predictions.<sup>62</sup>
  - Grammar lessons do not need to be the drill-and-practice activities out of a textbook. The ability to play with words and grammatical structures is the basis for many children’s jokes and our humor as adults.

The quality of vocabulary instruction must therefore be judged, not on whether it produces immediate gains in students’ understanding of specific words, but also on whether it communicates an accurate picture of the nature of word knowledge and reasonable expectations about the word learning process.<sup>63</sup>

### *Fluency*

Fluency refers to the ability to read smoothly with proper pacing to ensure the meaning is captured. Three components are included in fluent reading: rate, accuracy, and prosody (or intonation; i.e., reading with expression).

*Rate.* Speed in reading is calculated by looking at the number of words read per minute (wpm). This can include reading isolated word lists (such as one-minute probes) or short passages that are timed. The timing can be done for oral or silent reading on passages. Second graders should average approximately 100 wpm silent reading passages, while fifth graders will have

doubled that rate. For oral reading, the target rates listed in Table 7 are suggested.<sup>64</sup>

Grade Level	Target Rate
Second	85 wpm (50-80 wpm range at beginning of year)
Third	110 wpm
Fourth	120 wpm
Fifth	130 wpm

Table 7. Oral Reading Rate Targets

*Accuracy.* As would be expected, high levels of accuracy while reading are associated with greater fluency. Reading experts often look at students' accuracy to determine the appropriateness of texts and other reading materials being used by students. The following three levels are suggested:

- Independent reading level: When a student can read at least 98% of the words accurately, the reading should be easy enough to be read without teacher direction. This is the level to seek for work students do on their own. In addition, when working on increasing other fluency elements materials should be at the student's independent reading level.<sup>65</sup>
- Instructional level: Materials that can be read with 95-97% accuracy are appropriate when the teacher will be providing support while the student is reading.
- Frustration level: Materials that a student reads with less than 95% accuracy is difficult for the student to navigate successfully, even with teacher support.

*Prosody.* To read with expression, a student must be comfortable with the text. The student must be able to decode the words accurately and quickly in order to attend to the meaning as well. This will allow the student to read questions as questions, that is, with a rising tone at the end of the sentence, show excitement when reading exclamations, and even vary voices when dialogue.

*Instructional considerations for improving fluency.* To nurture growth in reading fluency several considerations should be addressed. Materials should be carefully selected to ensure they are at the student's independent

reading level. Repeated readings of familiar texts is one way to help students increase their rate of speed while reading and become more expressive while reading. How do we get students to reread materials they have already read? Here are some practices teachers frequently employ that can be used in tutoring programs as well as classrooms:

- Young children naturally enjoy rereading their favorite books. The many parents who know a large repertoire of Dr. Seuss books can attest to this! Use books the child enjoys. It will make the repeated readings fun rather than work.
- Choosing the proper level of difficulty will increase a student's willingness to reread. It is reinforcing to successfully perform a passage.
- Provide opportunities for the students to perform. This gives a reason for practicing. It may involve reading to peers, parents, or younger children.
- Practice reading into a tape recorder. Students can listen and evaluate their own performance. Keep samples so students can compare early readings with later efforts.
- Read along with the student or have a taped version of the passage that the student can listen to while reading along for independent practice.
- Graph the results of reading probes with the student. This provides a visual representation of improvement in reading rate and accuracy. Many students find such a concrete measure of progress motivating. If the student is not progressing, the graphing provides documentation and can be part of student-teacher discussions.

While practice does not make perfect, practice is a critical component to improve reading fluency.

### *Comprehension*

“All children have a hunger to read, think, and discuss ideas in literature as a way of understanding the world around them.”<sup>66</sup>

The fifth component in the reading process is comprehension. The ability to understand what is read is the ultimate goal of all our reading instruction. Gaining meaning from texts read requires the ability to orchestrate all previously described components. Reading for meaning should begin with the earliest reading activities; however, the focus on comprehension and its direct instruction gains greater emphasis as students master other reading components. A common expression is that the primary

grades focus on learning to read while the intermediate elementary grades shift to reading to learn.

The National Reading Panel concluded that the most effective instruction for comprehension uses strategies rather than relying on skill instruction. The Panel described skill instruction as teaching in which “students are engaged in traditional, lower level thinking activities, such as identifying main idea, cause-effect, or fact-opinion. When students are engaged in using a comprehension strategy, the skills used will transfer to other reading, and explaining how the skill transfers is part of the instruction. For example, predicting what will happen next can be addressed as a skill with students simply practicing predictions for materials being read. If the instruction includes how to identify clues and foreshadowing and the teacher discusses how the process being used in a novel study can be used when reading a history text, the skill instruction has been enriched and would be considered more strategic in nature.<sup>67</sup> Strategy instruction for comprehension also has been identified as a critical component when serving students with limited English proficiency.<sup>68</sup>

*Instructional considerations for improving comprehension.*  
Comprehension skills vary based on the type of text being read. For example, the structure of a storybook is very different from that of a history text, a newspaper article, or a user’s manual to set the time on your VCR. Despite the different types of reading materials (and writing expectations) students are expected to navigate effectively by the time they reach middle school, there tends to be a scarcity of informational texts in primary-grade classrooms.<sup>69,70</sup> Researchers have analyzed the types of reading materials in classrooms. Results included the following:<sup>71</sup>

- A 1998 study found a mean of 16% for the ratio of expository texts to total text types in classrooms compared with 38% on standardized tests;
- A 2000 study found 14% of materials primary teachers read to their classes was informational; another study identified only 6% of all material read (read aloud and by students) was expository;
- There was a discrepancy in percentage of informational texts between high and low SES districts with the gap more than doubling at middle-high school levels. Higher poverty classrooms tended to have fewer informational resources for students to read.

Stories and literature can be balanced with different informational sources from early grades, especially when the informational materials are linked closely with the students’ own experiences. Whether it is reading the directions to make a peanut butter and jelly sandwich or an ice cream sundae

or describing the animals and their habitats that were seen on a visit to the zoo, young students can benefit from such exposure.

Duke<sup>72</sup> offered the following arguments in favor of informational texts:

- Students become better readers and writers of such works;
- Facility with informational texts is an important survival skill, especially as the world becomes more technological;
- Students gain increased content knowledge, vocabulary, and comprehension skills and become better readers and writers of informational texts;
- Results on the NAEP suggest that higher reading achievement correlated with students' self-report that informational works were part of their reading habits. (Note: This is a correlation, and no causality can be assumed. It may be that good readers are more likely to select informational text.);
- Since there is more informational reading outside school (newspapers and magazines in homes), reading more informational texts in school could create a stronger link between school and home.

Instructional techniques for use with informational texts include read-alouds, independent reading, writing, and research. Given proper scaffolding and materials at the students' independent reading level, even second graders can begin creating research reports. Descriptions of comprehension strategies for various text forms will be included in the Tool section.

In addition to providing a variety of reading materials, teaching comprehension strategies, as the NRP recommended, should be incorporated into activities with students. Samples of strategies may be found in the Tools section of this document. One of the challenges noted for schools in high-poverty areas is the presence of lower expectations for student learning. Effective comprehension instruction requires changes in teachers' perceptions and common practices. Drill and practice with lower-level thinking skills must give way to greater emphasis on higher-level thinking skills. Increasing teachers' use of inquiry-based instruction for all students, including the least proficient readers, can improve reading skills and increase motivation. Higher-level thinking skills depend less on finding the "right" answer and more upon analyzing and supporting one's position. This open-endedness can be very engaging for students, but it may take teachers some time to adjust to less control when leading a discussion and letting the students direct the dialogue.<sup>73</sup> Finally, higher-order questioning is associated with higher achievement and more effective schools.<sup>74</sup>

### Other Factors to Consider

The five components identified in the National Reading Panel Report and incorporated in the Reading First Act were selected based on the presence of research to support their importance; however, additional elements play a role in successful programs, even if they are less objective and more difficult to measure. One of these critical factors has been included in justifications for instructional practices already listed. That is, a student must be excited and interested to remain engaged in reading tasks. In other words, educators should consider motivation when selecting instructional practices and materials. Allowing students to choose topics of interest, collaborate with one another, and work with materials with which they can experience success increases their motivation and interest in reading.<sup>75</sup>

In addition, relationships are a powerful force. Building rapport with students and being able to enjoy one another's company even when tackling challenging skills is important with all students. For students experiencing mobility, the opportunity to feel connected to an adult, whether a teacher, tutor, or mentor, can provide a needed anchor. For older students who have experienced much moving, building rapport may require extra effort, as these students may be cautious about establishing a relationship that will soon end. Patience and consistent efforts to learn about the student while respecting personal boundaries as trust is established may help the student feel more comfortable. Sometimes asking another staff person or peer to take the role of mentor works well. Different students may be more comfortable with different partners. While true for many students, but especially for students experiencing mobility, feeling welcome, safe, and valued is the foundation that must be established for learning to occur.

### Summary

What is the ultimate goal for adult proficiency in reading? The answer to this question will shape how teachers craft benchmarks and goals for interim levels throughout students' educational careers. To be considered literate in today's highly technological society requires a variety of skills, including the ability to read, comprehend, critically analyze, and apply information from a vast array of sources. Reading for pleasure and having a working knowledge of traditional and new "classics" may impact one's impression of being culturally literate; however, the ability to read technical manuals in the course of carrying out one's job or installing a new home appliance, to analyze stock performances when deciding upon a retirement plan, or to sift through the massive amounts of media information to decide which candidates to support in an election are among the day-to-day reading skills required to be a competent adult. Given the increasing demands of a literate society for economic survival, there is an increasing expectation for our schools to ensure 100% of the population is literate, a significant shift from the days of the industrial revolution or the expectations of many other societies outside the United States.<sup>76</sup>



It is this expectation for a fully literate society that has led to the increasing attention to early literacy experiences that are seen as critical to preventing reading failure and may be the key to achieving high levels of adult literacy. As Snow and her colleagues described, early reading difficulties are highly indicative of future reading success or failure. Research is emerging to suggest that if we can intervene to change those early difficulties, we can prevent young readers from experiencing later reading failure. One of the initial steps to providing appropriate instruction and intervention (when needed) is to identify developmentally appropriate reading skills that children should acquire at different ages and grades. A summary table that identifies critical skills expected from preschool through the elementary grades can be found in the Tools section. The guidelines for these benchmarks are based on the work of the National Research Panel. It is important to note that these are benchmarks, not hard and fast rules for each child. In fact, the NRC commented in an addition to the preface of the third printing of their report concern regarding over-interpretation of the recommendations for grade levels. Use these as general guidelines, remembering that individual students have unique needs and may be a different level of development than their peers or even vary in their mastery of different components of reading. Identifying students' unique needs requires the ability to assess students in ways that inform effective instruction.

## Endnotes for Chapter 5

- <sup>1</sup> The information in this section is based on the work of Elizabeth Wiig, Paula Menyuk and the following text: Fromkin, V., & Rodman, R. (1974). *An introduction to language*. New York: Holt, Rinehart and Winston.
- <sup>2</sup> Snow et. al. (2001). p. 22.
- <sup>3</sup> Ibid., p. 46.
- <sup>4</sup> Ibid., p. 46.
- <sup>5</sup> Ibid. p., 17.
- <sup>6</sup> Fisher, C., & Adler, M. A. (1999). pp. 3-4.
- <sup>7</sup> Snow et al. (2001). pp. vii-viii.
- <sup>8</sup> Loh, S. (2003, January 12). Smith adopts plan on reading. *The Baltimore Sun*. Retrieved January 13, 2003, from <http://www.baltimoresun.com>.
- <sup>9</sup> Gaskins, I. (1998). p. 536.
- <sup>10</sup> Taylor, B. M., Pressley, M., & Pearson, D. (2000).
- <sup>11</sup> Lyon, G. R. (1995). Toward a definition of dyslexia. *Annals of Dyslexia*, 45, 3-27.
- <sup>12</sup> Cohen & Horowitz. (2002). What should teachers know about bilingual learners and the reading process? *Literacy and the Second Language Learner*, 1, 29-52. Citing Durgunoglu, Nagy, & Hancin-Bhatt, 1993. p. 42.
- <sup>13</sup> Juel, C., & Cupp-Minden, C. (2000). Learning to read words: Linguistic units and instructional strategies. *Reading Research Quarterly*, 35(4), 458-492. (Page 463 discusses the work of Barbara Foorman, 1998.)
- <sup>14</sup> See Table 3 for a review of first-grade studies.
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- <sup>18</sup> National Center for Educational Statistics. (1999). *National household education survey*. Washington, DC: USDE.
- <sup>19</sup> USDE. (2000). *Education for homeless children and youth program, Title VII, Subtitle B of the McKinney-Vento Homeless Assistance Act: Report to Congress fiscal year 2000*. Washington, DC: Author.

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- <sup>21</sup> Fromkin & Rodman. (1974). pp. 297-298.
- <sup>22</sup> Depending on the linguist, the estimate of distinct sounds (phonemes) in English ranges from 34 to 52. Websites of interest include: <http://www.antimoon.com/forum/posts/4025.htm> and <http://www.putlearningfirst.com/language.08sounds/08sounds.html>
- <sup>23</sup> Juel, C. (1994). *Learning to read and write in one elementary school*. New York: Springer-Verlag.
- <sup>24</sup> Fromkin & Rodman. (1974). p. 33.
- <sup>25</sup> Anderson. (2003). p. 20.
- <sup>26</sup> Gaskins, I. W., Ehri, L. C., Cress, C., O'Hara, C., & Donnelly, K. (1997). Procedures for word learning: Making discoveries about words. *The Reading Teacher*, 50(4), 312-327.
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- <sup>28</sup> Gaskins et al. (1997). p. 316
- <sup>29</sup> Juel & Minden-Cupp. (2000). p. 461.
- <sup>30</sup> Gaskins. (1998). p. 539.
- <sup>31</sup> Juel & Minden-Cupp. (2000). p. 465.
- <sup>32</sup> Beck, I. L., & Juel, C. (1995). The role of decoding in learning to read. *American Educator*, 19(2), 8, 21-25, 39-42.
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- <sup>34</sup> Ibid.
- <sup>35</sup> Juel & Minden-Cupp. (2000). p. 459.
- <sup>36</sup> Juel & Minden-Cupp. (2000). p. 481.
- <sup>37</sup> Juel & Minden-Cupp. (2000). pp. 487-488.
- <sup>38</sup> See, for example, the work of Michael Pressley and Joe Torgesen for further discussion of this topic.
- <sup>39</sup> Gaskins. (1998). p. 317.
- <sup>40</sup> Nagy & Scott (2000). Vocabulary processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds), *Handbook of reading research, Volume III*. Mahwah, NJ: Lawrence Erlbaum Associates, 269-284. p. 273
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- <sup>42</sup> Nagy & Scott. (2000). p. 279.
- <sup>43</sup> Nagy & Scott. (2000). p. 275.
- <sup>44</sup> Nagy & Scott. (2000). p. 280.
- <sup>45</sup> Hunter, P. (2003). Keynote address for the National Association for the Education of Homeless Children and Youth Conference, Arlington, VA.
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- <sup>48</sup> Hancin-Bhatt, B., & Nagy, W. (1994). Lexical transfer and second language morphological development. *Applied psycholinguistics*, 15, 289-310.
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- <sup>51</sup> Nagy & Scott. (2000). p. 271
- <sup>52</sup> Ibid.
- <sup>53</sup> Ibid., pp. 271-272.
- <sup>54</sup> Ibid., p. 272.
- <sup>55</sup> Nagy & Scott. (2000). p. 270.
- <sup>56</sup> Ibid.
- <sup>57</sup> Kuhn, M., & Stahl, S. (1998). Teaching children to learn word meanings from context: A synthesis and some questions. *Journal of Literacy Research*, 30, 119-138.

- <sup>58</sup> Nagy & Scott. (2000). Citing Nagy, Diakidoy, & Anderson, 1993, p. 274.
- <sup>59</sup> Carlisle, J. (1995). Morphological awareness and early reading achievement. In L. Feldman (Ed.), *Morphological reality* (pp. 804-849). Hillsdale, NJ: Lawrence Erlbaum Associates.
- <sup>60</sup> See for example Gwynne, F. (1988). *A chocolate moose for dinner*. A little girl pictures all the things her parents talk about, such as chocolate moose, a gorilla war and shoe trees. ISBN: 0671667416 and Gwynne, F. (1988). *The king who rained*. Confused by the different meanings of words that sound alike, a little girl imagines such unusual sights as a “king who rained” and the “foot prince in the snow.” ISBN: 0671667440.
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- <sup>62</sup> Ibid.
- <sup>63</sup> Nagy & Scott. (2000). p. 281.
- <sup>64</sup> University of Texas Center for Reading and Language Arts (UTCRLA). (2001). *Essential reading strategies for the struggling reader: Activities for an accelerated reading program*. Austin, TX: Author. Retrieved May 21, 2004 from <http://www.texasreading.org>. p. 9.
- <sup>65</sup> UTCLRA. (2002). *Supplemental instruction for struggling readings, grades 3-5: A guide for tutors*. Austin, TX: Author. Retrieved May 21, 2004 from <http://www.texasreading.org>. p. 4.
- <sup>66</sup> Wheelock, A. (2000). *The Junior Great Books Program: Reading for understanding in high-poverty urban elementary schools*. ERIC Document: ED441927 (EDRS) p. 6.
- <sup>67</sup> Taylor & Pearson. (2002). p. 18
- <sup>68</sup> Muniz-Swicegood, M. (1994). The effects of metacognitive reading strategy training on the reading performance and fluent reading analysis strategies of third grade bilingual students. *Bilingual Research Journal*, 18, 83-97.
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- <sup>70</sup> Taylor & Pearson. (2002). p. 26.
- <sup>71</sup> Duke, Bennet-Armistead, & Roberts. (2002).
- <sup>72</sup> Ibid.
- <sup>73</sup> Wheelock. (2000). p. 7.
- <sup>74</sup> Taylor & Pearson. (2002). p. 26.
- <sup>75</sup> Gaskins. (1998). Citing Deci (1995). p. 543.
- <sup>76</sup> Snow et al. (2001). pp. 19-20.