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# The Significance of Vocabulary in the Common Core State Standards:

# An Overview of the Research Base and Instructional Implications

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## The Need for More Systematic, Intensive, and Efficient Vocabulary Instruction

Vocabulary has been empirically connected to reading comprehension since 1925 (Whipple 1925, NRP 2000, Snow 2002), and most recently in results from the 2009 and 2011 NAEP (NCES 2012). Yet, vocabulary instruction is neither frequent nor systematic in most schools across the country (Durkin 1979, Scott and Nagey 1997, Biemiller 2001).[[1]](#footnote-1) For decades, vocabulary instruction has been ill-defined in state standards and assessments, as well as in core reading programs (Hiebert 2009, Marzano et al 2005, Biemiller 2005, Nagy et al 1989, Nagy and Scott 2000).

The Common Core State Standards (CCSS) place a premium on vocabulary in the reading, writing, and speaking and listening strands. Anchor reading standard 10 requires students to “read and comprehend complex literary and informational texts independently and proficiently” while reading standard 4 and language standards 4,5, and 6 all call for emphasis on vocabulary and word awareness at every grade level. [[2]](#footnote-2)[[3]](#footnote-3)[[4]](#footnote-4)[[5]](#footnote-5) We know that of the many features of complex text, difficult or uncommon vocabulary likely plays the largest role in causing student difficulty (Nelson *et al* 2012). We also know vocabulary is one of the primary causes of the achievement gap (Becker 1977, Baumann & Kameenui 1991, Stanovich 1986), and many students from low-income households enter school with smaller vocabularies than their more affluent peers (Hart and Risley 1995, Biemiller 2010). For all of these reasons, vocabulary instruction in the era of the CCSS needs to be more systematic, intensive, and efficient than it has been to date. Fortunately, there is already some evidence this is happening (Beck and McKeown Webinar 2012).

The purpose of this paper is to provide teachers and administrators with efficient and effective research-based techniques that can be used with all texts, but especially the complex texts called for by the CCSS.

## The Relationship between Text Complexity and Vocabulary in the CCSS

In order to understand the central role of vocabulary in the CCSS, it is important to examine the relationship between vocabulary and text complexity. Anchor reading standard 10 of the CCSS explicitly calls for students in grades 2-12 to be able to read grade-level complex text “independently and proficiently.” This standard, like reading standard 1, “cite specific textual evidence” impacts the ability of teachers and students to meet all the other anchor standards in reading: students cannot meet standards 2-9 unless they are reading text of grade-level complexity. This standard is a direct response to a body of research, showing the relationship between text complexity and proficient reading (see ACT 2006). Students in grade 12 are now asked to read texts that are approximately four years behind the complexity levels of average work manuals and first-year college texts (see CCSS Appendix A, 2010). Yet a 2006 ACT report[[6]](#footnote-6) identified text complexity as the most important variable impacting whether students met the performance benchmark on the ACT for college readiness, more so than any factor related to question-type or student background (ACT 2006).

While many factors influence the complexity of a text,[[7]](#footnote-7) research indicates that vocabulary is very likely the number one most important (Nelson et al 2012, Perfetti 2007, NCES 2012). Consequently, the CCSS place special emphasis on vocabulary. The CCSS acknowledge the relationship between engaging with complex text and vocabulary acquisition: an 8th grader might expand his vocabulary somewhat from reading a 5th grade text, but more growth would likely occur with texts written at an 8th grade level. Meeting the levels of text complexity required by the CCSS demands significant attention to vocabulary acquisition. Likewise, vocabulary acquisition is aided by students engaging regularly with complex, grade-level text in addition to engaging in a volume of reading of texts they can read independently[[8]](#footnote-8). In this way, the different standards work together towards the goal of college-and-career readiness for all students.

For additional information about text complexity and the CCSS, as well as the relationship between vocabulary and text complexity, here are some additional resources:

**Appendix A to the ELA/Literacy CCSS**

<http://www.corestandards.org/assets/Appendix_A.pdf>

An appendix that outlines the research base of the CCSS for ELA/Literacy.

**Supplement to Appendix A**

<http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf>

A document that provides new research on text complexity to support the implementation of the CCSS.

**Measures of Text Difficulty** (Perfetti et al)

<http://achievethecore.org/page/321/measures-of-text-difficulty>

A research study of text analysis tools that measure text complexity quantitatively.

**Why Complex Text Matters** (David Liben)

<http://achievethecore.org/page/62/why-complex-text-matters>

Essay on ACT research finding that the ability to read and understand complex text is the best way to distinguish students who are college and career ready from those who are not.

**Navigating Text Complexity**

<http://www.ccsso.org/Navigating_Text_Complexity.html>

Website created by ELA State Collaborative on Assessment and Student Standards that includes resources for evaluating text complexity, model text roadmaps (comprehensive text complexity analyses), and model text sets (backbones for units of instruction).

## Instructional Implications

So how do we teach the volume of words necessary for students to read grade-level text independently and proficiently?

Until relatively recently, debates about how to teach vocabulary centered on direct instruction versus learning from context through wide reading. Advocates for the context approach pointed to the number of words students need to learn as being impossible to teach directly within the school day, week, or year. Thus, emphasis needed to be placed on wide reading. This was the origin of the “25 books a year programs” prominent in the mid 1990’s and still present in some states’ standards. Direct instruction advocates argued that a focus on growing “word awareness” through instruction was essential.

The debate has been settled with a body of work showing that not all words are created equal (Nagy et al 1985, Cunningham and Stanovich 1988, Baker et al 1995, Beck et al 2002, Biemiller 2004, Moats 2005). Some words and classes of words appear far more frequently in texts students read. Learning these particular words makes students more likely to learn other words independently from context; this effect is strengthened if instructional methods are research-based (Nagy and Hiebert 2007, Moats 2005, Beck et al 2002, Snow 2007). Thus, teaching words directly enhances student capacity for learning from context: the more words a student knows, the more likely she is to be gathering new meanings from context. This is even more likely with words that appear in a wide range of text types and are expected to be seen frequently by the student reader. Thus, both methods—direct instruction and learning vocabulary in context—are necessary components of vocabulary instruction.

The true challenge comes in choosing exactly which words to teach, how to teach them, and how long to spend on them. Hiebert (2009) describes three general criteria for determining which words to choose for intensive teaching:

1) words needed to fully comprehend the text,

2) words likely to appear in future texts from any discipline, and

3) words that are part of a word family or semantic network.

These criteria serve as useful guideposts, but truly knowing when to stop and teach in context, when to prepare students in advance, and when to teach words more intensively, is challenging for even the most seasoned educators. In preparing a text for instruction, teachers frequently find themselves asking, “Which words do I teach, and how much time do I give to them?”

Words that can be quickly explained should be explained in the moment of encounter. This often includes:

1. concrete words,
2. words with single meanings, and
3. words reflecting meaning or shades of meaning that are likely already part of the students’ experiences.

The explanation will enhance and not impede comprehension because it will be swift and unobtrusive (Biemiller 2010).

Words that need more explanation will ideally be taught in context, and then reinforced after, as these explanations will be more elaborate and time-consuming (Beck, McKeown and Kucan 2007, Biemiller 2007). This includes

1. words that are abstract,
2. words with multiple related meanings, and
3. words reflecting meanings or shades of meaning that are likely not part of the students’ experiences.

Understanding how words are classified into tiers can help educators plan effective vocabulary instruction. Text can be broken down into three tiers of words (Beck and McKeown 2002), each with its own implications for instruction:

**Tier one words** are the words of everyday speech usually learned in the early grades or at home, though not at the same rate by all children (Biemiller 2007). These words are extremely important to early learning since teachers tend to use these very words to define more unusual words. Because they are learned largely through conversation, and are not often considered challenging beyond the early grades, students who don’t in fact know them can easily be left behind. Biemiller’s work shows that though many students learn these words in the elementary years, lower income students tend to learn them later. This delays these students’ vocabulary growth and makes catching up to their more affluent peers extremely difficult if teachers are not alert to this phenomenon.

**Tier two words** are “words that characterize written and especially academic text—but are not so common in everyday conversation” (Beck, McKeown, and Kucan 2008). Tier two words appear in all sorts of texts: academic texts (*relative, vary, formulate, specify, accumulate*), technical writing (*calibrate, itemize, structure*), and literary texts (*misfortune, dignified, faltered, unabashedly*). Tier two words are far more likely to appear in writing than in speech. The Standards refer to tier two words as ***academic vocabulary.***

These words require particular instructional attention. They are often vital to comprehension, will reappear in many texts, and are frequently part of word families or semantic networks. The challenge to teachers is to be alert to the presence of tier two words, determine which ones need to be taught, and which words deserve more time and attention for richer understanding. Tier two words can carry disproportionate weight in conveying the meaning of a text, and a reader who doesn’t understand even a single such weighty word might have his or her comprehension thrown off track. This is equally true of informational and literary texts. It is for these reasons that the Common Core State Standards for ELA / Literacy demand significant instructional attention to these words.

Instruction of tier two words might begin with careful examination of the key role these words play in the text, followed by examining the variety and shades of meaning each of these words possesses. This, in turn, would be followed by careful attention to the spelling and pronunciation, as well as any prefixes, suffixes and roots, i.e. the morphology or structure of the word. This focus on precise meanings in varied contexts combined with morphology will also provide some of the repetitions necessary for learning the word. Encounters with a word spread out over time will further increase the likelihood of retention.

**Tier three words** are far more common in informational passages than in literature. They are specific to a domain or field of study (*lava, fuel injection, legislature, circumference, aorta*) and key to understanding a new concept within the text. Because of their specificity, tier three words are often explicitly defined by the text and repeatedly used. Thus, the author takes care to have the text itself provide much support in the learning of tier three words. In addition, as they are the words that contain the ideas necessary to a new topic, teachers often define and reinforce tier three words prior to and after students encounter them in a text. Therefore, students’ acquisition of tier three words is generally taken good care of by teachers as they know that the student has likely not encountered these terms before.

Now that we’ve examined tier two and three vocabulary, let’s take a look at how we identify these words within a text passage. Immediately following the works cited of this paper is a vocabulary exercise that asks you to practice identifying tier two and three words in passages from Appendix B of the CCSS. The exercise includes both an informational passage and a literary passage for each of the following grade bands: 4-5, 6-8, 9-10, and 11-12. There are clean copies of each passage included so that this activity can be used for professional learning if desired. The model responses provide discussion around which words I selected and why, as well as how much time one might spend on instruction of different words. These examples may serve to make the ideas discussed in this paper more concrete.

It is important to note the very high number of words recommended for instruction in these passages, more than many of us have been used to teaching. This reflects the importance of vocabulary to comprehending complex text as called for by the CCSS. Students who are behind need to learn more words. This can only happen if we all make vocabulary and word study a priority in our materials and instruction. This means we must become comfortable with teaching word meanings efficiently; devoting more time and attention to those words that merit it, and less to those that can be learned with less time and attention[[9]](#footnote-9).

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1. The most succinct summary of this research comes from the National Reading Panel’s review of hundreds of studies: “Vocabulary instruction leads to gains in comprehension” (NRP 2000); see also *Reading Next* (Snow 2002). [↑](#footnote-ref-1)
2. Reading Anchor Standard 4: CCRA.R.4 Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. [↑](#footnote-ref-2)
3. CCRA.L.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate. [↑](#footnote-ref-3)
4. CCRA.L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. [↑](#footnote-ref-4)
5. CCRA.L.6 Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression. [↑](#footnote-ref-5)
6. *Reading Between the Line: What the ACT Reveals About College Readiness in Reading* (ACT 2006). [↑](#footnote-ref-6)
7. Some other features of complex text: 1) subtle and/or frequent transitions, 2) multiple and/or subtle themes and purposes, 3) density of information, 4) less common settings, topics or events, 5) lack of repetition, overlap or similarity in words and sentences, 6) complex sentences, 7) lack of words, sentences or paragraphs that review or pull things together for the student, 8) longer paragraphs, 9) any text structure which is less narrative and/or mixes structures, 10) use of passive voice. This list is by no means complete, but intends to provide a sense of the range of these features. [↑](#footnote-ref-7)
8. Keep in mind that students can read more complex text independently if it is connected to the topics that they are studying in school. [↑](#footnote-ref-8)
9. Though essential to vocabulary development, this in itself is not sufficient. Students need to engage in a volume of wide-ranging reading of texts they can read independently. Nothing here should be construed as lessening the essential importance of a volume of reading to vocabulary acquisition. [↑](#footnote-ref-9)