

Helping Students Own Language Through Word Study, Vocabulary, and Grammar Instruction



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Introduction

The purpose of this white paper is to define current local and national instructional issues regarding word study, by sharing local survey results and summarizing key findings from the current evidence-based research. The paper also outlines in broad strokes the essential practices that move the needle on word study instruction, including practices named by the two key documents created by the Michigan Association of Intermediate School Administrators (MAISA) General Education Leadership Network, in its Early Literacy Task Force: *Essential Instructional Practices in Early Literacy Grades K to 3* (2016) and *Essential Instructional Practices in Early Literacy: Prekindergarten* (2016).

The purpose of these two documents is to increase Michigan's capacity to improve children's literacy, by identifying a small set of research-supported instructional practices that could be the focus of professional development throughout the state (Early Literacy Task Force, 2016). As such, relevant connections to these documents are made throughout this white paper. Many of the ten recommended instructional practices in each document encompass the skills students learn via effective word study, so early literacy educators should view those publications as a companion to this white paper.

What is the Problem?

Reading and writing are fundamental parts of engaging in the social, professional, community, and civic activities that make up our lives. Strong reading comprehension skills are central not only to academic and professional success, but also to a productive social and civic life. Similarly, writing is a valuable tool for communication, learning, and self-expression. Together, these literacy skills build the capacity to learn independently, to absorb information on a variety of topics, to experience literature more deeply, and to communicate effectively to a variety of audiences (Graham et al., 2012; Shanahan et al., 2010), all of which are vital to living productively in society. According to the Common Core State Standards, from the National Governors Association Center for Best Practices (2010), K-12 literacy instruction must be effective across all content areas so that students attain the literacy skills and concepts required for college and career readiness in multiple disciplines.

While most teachers acknowledge the importance of word-study instruction in building a solid foundation in reading and writing skills, word study is often neglected or sidelined in literacy instruction across the grade levels. A lack of background knowledge, resources, and time appears to keep word study from taking the foundational place it needs and deserves in local English Language Arts curriculums. In addition, the traditional ways that word study is taught (e.g., spelling lists, worksheets, drills, and quizzes) do not inspire student engagement in the study of language.

Teachers also report a lack of motivation to teach word study or to manage the differentiation that students require in this instructional area. Often, word study content that is potentially engaging to students and will increase their reading and writing skills is “reduced to rote drudgery” (Palmer & Invernizzi, 2014, p. viii). At the same time, because some teachers may perceive word study as either less exciting to teach (compared with comprehension strategies, for instance), there is less time devoted to instruction in this area. Sadly, students lacking word recognition skills are often referred for special education consideration for a specific learning disability, while they are, in fact, casualties of inadequate instruction, especially in the area of word study.

Recognizing this current problem, consultants at Oakland Schools Intermediate School District launched a survey to gather information about the current state of word study across Oakland County, Michigan. Over 1,131 educators participated in the survey and about 730 completed the survey. (Some respondents did not answer every question.) The findings of the 2014-15 survey are reflective of what the research says about the inadequacies of word study instruction:

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- There is no consensus on the definition of word study among educators. There is disagreement about what the components of word study are, and how the components change across grade-level bands, as students become readers and writers.
 - School districts lack curriculum expectations and resource materials to address word study.
 - Confusion in the field exists about effective practices with regard to the needed frequency and duration of word study instruction.
 - Students do not seem to transfer their word study learning to their reading and writing.
 - Word study is often taught out of context rather than as an integral part of reading and writing instruction, where transfer is more likely to happen.

What is Word Study?

According to the authors' research and responses from the Oakland County Word Study Work Group, word study is one component of English Language Arts instruction, and is included as part of a balanced approach to literacy instruction along with readers' workshops, writers' workshops, and read aloud with accountable talk in many of our schools. Other approaches to literacy instruction, such as a basal approach, also include time devoted to the study of how words are pronounced, decoded, encoded, and rearranged in sentences to impact a text's meaning.

Regardless of the approach or framework for literacy instruction used in a school, word study for grades K-12 encompasses the following elements:

- phonological awareness (noticing and being able to break apart, blend together, and manipulate the units of a spoken language, including words, syllables, and individual sounds),
- letter-sound knowledge (alphabetic principle),
- spelling (orthography, and regular and irregular patterns in words),
- vocabulary (words and meanings that make up our language, both literal and figurative),
- and grammar (how words and word parts are combined and ordered in language to convey meaning).

According to Isabel Beck, author of *Bringing Words to Life*, who is often referenced by other word study researchers, there are four key instructional principles of word study:

1. providing rich and varied language experiences,
2. teaching individual words and meanings, using the three tiers of vocabulary,
3. teaching word-learning strategies,
4. and fostering word consciousness.

The elements of and instructional approaches to word study indicate just how crucial word study is to students' ability to read and write effectively. The specific foci of word study teaching and learning shift across grade levels, as reflected in the research, as well as the Common Core State Standards. At the secondary level, vocabulary and grammar (the *what* and the *how* of language) serve as the main foci of word study instruction.

In attempting to further clarify the concept of word study, it is important to describe what is not meant by this concept. Word study is not:

- word work in the absence of sound segmenting, sound blending, and sound-letter relationship learning,
- decontextualized memorization of and drill with words,
- the study of words isolated from reading and writing,
- the study of letters and letter-sound relationships isolated from reading and writing,
- picture and sound sorts in the absence of meaning or extended practice in text, interactive writing, or critical thinking activities,
- weekly spelling tests designed to measure mastery of decontextualized patterns in words or words not tied directly to the students' reading and writing,
- grammar PowerPoints or presentations that communicate rules without application,
- or diagramming sentences and completing grammar worksheets.

This white paper also acknowledges the changing demographics and language-learning backgrounds of students in Oakland County schools. Currently, over 130 languages are reportedly spoken in the homes of students enrolled in Oakland County schools. The authors are aware of the empirical evidence suggesting that bilingualism in children is associated with increased metacognitive skills and overall language ability, as well as the evidence showing the importance of understanding linguistic and dialectal differences between the languages our English Learner students speak and Standard English, when providing effective grammar instruction. However, the focus of this white paper is the content and forms of Standard English used in academic writing in U.S. schools.

What Does the Research Say?

Early, effective, comprehensive word study is foundational to children becoming competent readers and writers. According to Gillon, research has repeatedly demonstrated that in the earliest grades, “Phoneme awareness performance is a strong predictor of long-term reading and spelling success and can predict literacy performance more accurately than variables such as intelligence, vocabulary knowledge, and socioeconomic status” (as cited in Honig, Diamond, & Gutlohn, 2012, p. 122). Stahl notes, “Early and systematic instruction in phonics seems to lead to better achievement in reading than later and less systematic instruction” (as cited in Neuman & Dickinson, p. 333). Adams points out that to learn to read, “all students must know the letters of the alphabet, understand their linguistic significance (phonemic awareness), and learn the logic and conventions governing their use (phonics); and . . . ensuring students’ grasp of these basics must be a serious goal of any responsible program of beginning reading instruction” (as cited in Neuman & Dickinson, p. 67).

Evidence indicates that children who get off to a slow start with word study rarely become strong readers (Juel, 1988; Stanovich, 1986). Further, Beck, McKeown, and Kucan point out in *Bringing Words to Life* (2015) that there are “profound differences in vocabulary knowledge among learners from different ability or socioeconomic groups from toddlers to adults” (p. 1). They cite Hart and Risley’s research, which shows that by age three, gaps in vocabulary knowledge are significant between children with high and low socioeconomic status. Furthermore, a recent study by Morgan, Farkas, Hillemeier, Hammer, and Maczuga (2015) found that two-year-olds with larger vocabularies may be better prepared than peers, both academically and behaviorally, when they enter kindergarten, confirming the importance of early vocabulary development for school outcomes.

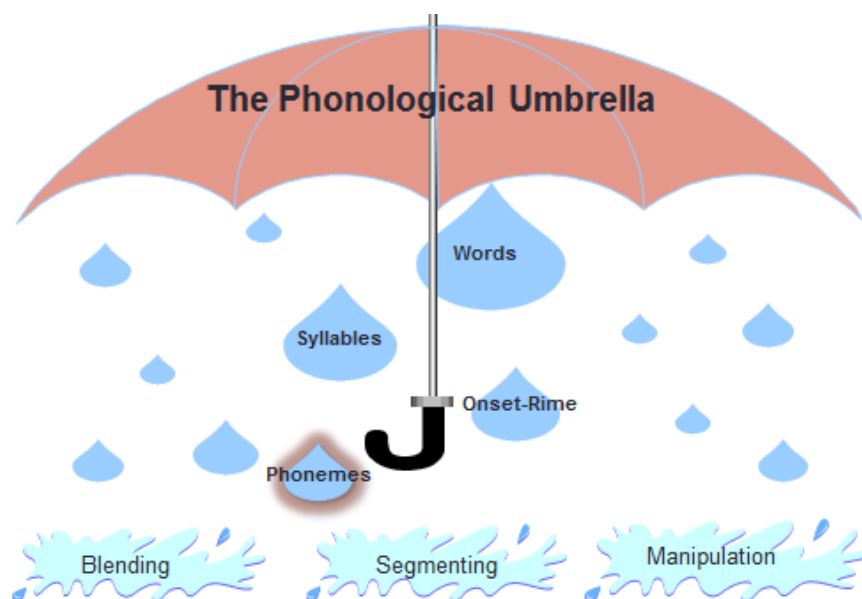
According to research, the average child learns roughly 3,000 words per year from third grade onward, which breaks down to ten words per day. But word learning can vary significantly depending on how high achieving (5,000 words annually) or low achieving (1,000 words annually) a child is (Texas Education Agency, 2000). Gaps in vocabulary and language knowledge often persist once children enroll in school, and these gaps may remain until they leave or graduate. Therefore, earliest instructional conditions should be given the greatest consideration in order to close existing vocabulary gaps and prevent future gaps from occurring in the first place.

Elements of Phonological Awareness Instruction

The *Essential Instructional Practices in Early Literacy Grades K-3* document recommends that teachers of grades K-1 (and as needed thereafter) promote phonemic-awareness development through “explicit explanation, demonstration, play with sounds in words, and engaged study of words.” Instructional Practice #4 involves engaging children in activities for blending sounds, sorting words by sound, segmenting sounds, and writing meaningful texts in which children represent the sounds they hear in words with letters and letter combinations (MAISA, 2016).

WHAT?

Phonological awareness is the understanding that spoken language can be broken down into smaller and smaller units, and that these units can be segmented (pulled apart), blended (put together), and manipulated (added, deleted, or substituted). This understanding typically progresses from an awareness of larger language units (sentences, then words, then syllables) to smaller units (onset-rime, then individual sounds). Phonemic awareness is the ultimate goal of phonological awareness instruction. It is the understanding that spoken language can be broken down into the smallest units of language, individual sounds (also called “phonemes”). For this reason, phonemic awareness is often represented visually as the smallest (and most advanced) level of awareness under the phonological awareness umbrella. See the Common Core State Standards’ ELA Appendix A for general progressions of phonological and phonemic awareness skills (National Governors’ Association Center for Best Practices).



WHY?

Phonemic (individual sound) awareness is the most advanced and essential level of phonological awareness, and it is a reliable predictor of later reading achievement in the early grade levels (Bishop 2003; Ehri et al., 2001). In fact, a child's level of phonemic awareness at school entry is widely considered the strongest single determinant of his or her later reading achievement (Adams, 1990). Phonemic awareness also lays the foundation for phonics instruction, because children ultimately learn that spoken words are comprised of separable units (individual sounds) that are represented consistently by symbols (letters and letter combinations). The understanding that speech sounds can be segmented and blended is necessary to make connections between spoken language and print. Therefore, these two elements of early word study instruction are reciprocal: phonemic awareness instruction improves phonics skills and phonics instruction improves phonemic awareness (Lane & Pullen, 2004). Further, students who develop strong phonemic awareness skills are likely to become strong readers, but students who do not possess these skills will likely not become strong readers and spellers.

HOW? - Instructional Practices

How do we design instruction that leads to mastery of phonological awareness and transfers to students' beginning reading and writing? Educators of young children need an understanding of the time typically required for children to master these skills, as well as the developmental window within which these skills predict later reading achievement. Research indicates that 20 hours of phonological awareness instruction, provided in small groups, by the end of kindergarten is typically sufficient for most children to master blending, segmenting, and manipulating all of the individual sounds in a three-to-five-sound word, which is necessary to move successfully along the literacy progression (National Reading Panel, 2000). Further, after students have mastered phonological awareness by the end of kindergarten or the beginning of first grade, additional instruction here does not yield additional reading gains. Across the grade levels, phonological awareness is a necessary but not sufficient skill for successful reading and writing; it is most predictive of later literacy achievement in kindergarten and first grade, and less predictive as students age. For upper elementary and adolescent students who struggle with reading, instruction in phonological awareness skills is often necessary; however, this instruction alone is not likely to mitigate the reading difficulties of older students.

What materials are most effective in helping students learn phonological and phonemic awareness? According to the National Reading Panel (2000), instruction is most effective when students are taught to use letters as they segment, blend, and manipulate phonemes. While instruction in both letter-sound relationships and phonemic (sound) awareness typically happens separately but in parallel at first, as soon as children begin to notice individual sounds in words (i.e., once a child can place a block for one of the sounds in a three-sound word on a table or visual organizer), phonological awareness activities should incorporate their knowledge of sound-symbol relationships (i.e., use letters). Utilizing letter tiles, or requiring children to write letters to represent sounds they hear, will facilitate growth in both phonological awareness and phonics, producing a synergistic effect on children's command of early decoding.

How do we know when students have mastered phonological and phonemic awareness? Students can demonstrate mastery via formal tasks as well as in authentic reading and writing experiences. For example, evidence of phonemic awareness mastery includes:

- Being able to decode consonant-vowel-consonant syllables and words in connected text without picture support.
- Demonstrating a one-to-one match between the sounds in words and the letters or letter combinations during interactive spelling or writing activities.
- Successfully writing all of the sounds in consonant-vowel-consonant words spoken, using letters. Spelling of these words may not match conventional spelling patterns because of the nature of our English orthography; however, students who can represent each spoken sound in a word, using a letter or letter combination, have likely mastered phonological awareness.
- Reaching mastery on the Michigan Literacy Progress Profile: Hearing and Recording Sounds in Words subtest.
- Segmenting (breaking apart) 35 sounds per minute on a curriculum-based measure, such as phoneme segmentation fluency, assuming the child is hearing all of the sounds in words and not just the initial and/or final sounds (Good & Kaminski, 2005).

Elements of Letter-Sound Instruction

The *Essential Instructional Practices in Early Literacy Grades K-3* document recommends that teachers of grades K-3 provide explicit instruction in letter-sound relationships and research-and-standards-aligned writing instruction. Instructional Practice #5 involves engaging children in instruction that focuses on letter names, the sound(s) associated with the letters, and how letters are shaped and formed, while then moving to more complex letter-sound relationships (digraphs, blends, diphthongs, common spelling patterns, and phonograms and patterns for high-frequency words). In addition, instruction in high-frequency words includes full analysis of the letter-sound relationships. Instructional Practice #6 relates to word study as explicit instruction in letter formation, spelling strategies, capitalization, punctuation, sentence construction, and keyboarding relate to developing skills in reading and writing (MAISA, 2016).

WHAT?

Phonics is an instructional strategy that teaches letter-sound relationships and their application through the spelling and reading of words (National Reading Panel, 2000). Explicit, systematic phonics instruction teaches beginning readers about the alphabetic principle; that is, that written letters or graphemes represent spoken sounds and that these sounds go together to make words (Honig et al., 2012). Phonics instruction is essential to, but not sufficient for, the development of fluent reading and writing. Both phonics and word recognition are components of the Common Core State Standards' Reading: Foundational Skills for grades K-5. These bedrock skills are essential for effective, comprehensive reading instruction, and thus, are not optional.

WHY?

There are 44 phonemes in English, represented by 26 letters and about 250 common spellings. Quite simply, we do not have enough letters to represent the sounds in our English language, so we have developed a more complex or deep orthography that allows us to record oral language. This means that learning the grapheme-sound relationships needs to be carefully orchestrated and intentionally taught. For more information, see Appendix A of the Common Core State Standards (National Governors Association Center for Best Practices, p. 17-18).

Systematic and explicit phonics instruction (National Reading Panel, 2000) has been shown to:

- significantly improve students' reading and spelling in kindergarten and grade one,
- significantly improve students' ability to comprehend what they read,
- be beneficial for all students, regardless of their socioeconomic status,
- be effective in preventing reading difficulties among students who are at risk,
- and be beneficial in helping students who are having difficulty learning to read.

Abundant research specifies the general sequence for teaching phonic elements based on utility, ease of learning, and frequency in the English language. While there are subtle differences among researchers, the box below outlines the generally accepted sequence, which moves from explicit instruction in letter-sound relationships of letter names and sounds; to more complex letter-sound relationships including digraphs, blends, and phonograms; through patterns in multisyllabic words. A key element to consider is that during lessons on letter-sound correspondence, students use blending and segmenting skills to read and spell words. Therefore, solid phonemic-awareness skills develop letter-sound relationships. Thus, instruction in phonics has a reciprocal relationship with the development of stronger phonemic-awareness skills.

General Sequence for Teaching Phonic Elements

1. Individual consonants—b,c,d...
2. Short vowels—a (cat)
3. Consonant blends—st (stop)
4. Consonant digraphs—ck (back)
5. Long vowels in CVCe words (cake)
6. Long vowels in CVVC words ai/ay (rain, may)
7. R-controlled vowels—ar (bar)
8. Diphthongs and other vowel patterns like vowel digraphs—oi/oy (joi, boy), oo (spoon)

(Beck & Beck, 2013, p. 40)

Phonics instruction has a controversial history mired in several issues, including debates over:

- explicit instruction of letter-sound relationships, as opposed to more implicit instruction,
- the use of decodable text, as opposed to authentic, rich text,
- the use of code-based word-solving strategies when encountering unknown words (letter-sound relationships), or the use of context, pictures, first letter, (meaning-based cues),
- phonics as a dominant feature of a comprehensive reading approach as opposed to a balanced approach to literacy,
- and worksheets and independent-center activities as instruction, versus interactive whole-group and small-group differentiated instruction.

These issues have sidetracked phonics instruction and derailed student progress. Students need systematic and explicit instruction in letter-sound relationships. They also need access to decodable texts that focus on newly learned letter-sound patterns, as well as authentic text aligned to a student's instructional level. Students should use their knowledge of the letter-sound relationships as a primary strategy with context, pictures, first letters, and familiar word parts as confirmatory strategies.

Phonics instruction is only one part of a comprehensive reading framework and should never be the sole or dominant element of instruction. Finally, the strategy of using worksheets as a means of instruction is not supported by research, nor does it lead to transfer. There are well-documented sequences for explicit-instruction phonics lessons, which move from sound work to word work. These provide teachers with a solid lesson plan to engage their students. (See the box below.)

HOW? - Instructional Practices

Explicit Phonics Lesson Sequence

1. Start with sound and develop phonemic awareness
2. Introduce sound and spelling
3. Blend words
4. Build automatic word recognition
5. Apply to decodable text
6. Do word work for decoding and encoding

Teaching students the letter-sound correspondence is essential because it prepares them for decoding words: the ability to convert a printed word to speech. About 50 percent of English words are completely regular (Hanna, 1966). Beginning readers must learn to blend together individual sounds in a word to come up with a reasonable approximation of a word. Students also need to be taught how to handle words that do not follow regular sound-symbol sequences, a process that includes “full analysis of letter-sound relationships within the words, even in those that are not spelled as would be expected” (MAISA, 2016, p. 3). Instruction should progress to include patterns in multisyllabic words and high frequency words. And finally, word work is a broad term for a range of activities (sound sorting, word sorting, Elkonin boxes with letters, word building, dictation, and interactive writing) that help students practice sound patterns and spelling patterns, and which should be incorporated into word-study lessons.

What to Do:

- Map sounds to letters based on a planned scope and sequence, one that aligns to the ease of learning the sounds and their use in meaningful words in a student's oral language (Beck & Beck, 2013)
- Engage students in discussion and active engagement in thinking about words.
- Use multiple modalities (oral, visual, and tactile) to help students learn associations.
- Use word hunts to build the connection between reading and spelling, from books and students' own written pieces. Word notebooks are critical aspects if using the *Words Their Way* materials (Invernizzi, Abouzeid & Gill, 1994, p. 49).
- Coach children to monitor for both meaning and the letter-sound relationships that they have been taught.
- Provide interactive writing experiences in kindergarten and first grade.
- Provide authentic reading opportunities to apply or practice word-study skills in real reading and writing.

What Not to Do:

- Teach the sound of letters in alphabetical order, as this limits when and how many real words can be generated.
- Use isolated word sorts.

Elements of Spelling Instruction

The *Essential Instructional Practices in Early Literacy Grades K-3* document recommends that grades K-3 teachers provide explicit instruction in letter-sound relationships and research- and standards-aligned writing instruction. Instructional Practice #5 involves engaging children in instruction that focuses on letter names, the sound(s) associated with the letters and how letters are shaped and formed moving to more complex letter-sound relationships (digraphs, blends, diphthongs, common spellings pattern and phonograms, and patterns for high frequency words). Instructional Practice #6 relates to word study as explicit instruction in letter formation, spelling strategies, capitalization, punctuation, sentence construction, and keyboarding relate to developing skills in reading and writing (MAISA, 2016).

WHAT?

The authors of *Words Their Way* explain that “becoming fully literate is absolutely dependent on fast, accurate recognition of words and their meanings in texts and fast, accurate production of words in writing so readers and writers can focus their attention on making meaning” (Bear, Invernizzi, Templeton, & Johnston, 2012, p. 3). Competence in spelling is crucial to this degree of literacy and is dependent upon children understanding how words work, the conventions that govern their structure, and how their structure signals sound and meaning. Spelling is knowing the correct sequences of letters in words. Learning to spell requires instruction and gradual integration of information about print, speech sounds, and meaning. These elements, in turn, support memory for whole words, which is used in both spelling and reading.

How Children Learn to Spell—Inventive Spelling

Charles Read studied the ways children first begin to spell. Through his observation of preschool and kindergarten children, he found that they all used what he termed “inventive spelling” (Read, 1971). Inventive spelling refers to children taking their best guess at the spelling of a word. These young spellers use single letters to represent an entire word, such as “U” for “you,” or they might leave out a letter, so “don’t” might become “DOT.”

Even though inventive spelling is not exact spelling, Read observed that by using it, most children demonstrated they were able to understand the phonetic features of words. Chomsky (1976) built on this research and conducted her own observations of young children’s spelling. She found that inventive spelling, in and of itself, was a normal part of the road to becoming a fluent speller. However, Chomsky noted that a crucial piece of becoming a fluent speller was having an adult guide the child to correct spelling along the way.

Stages of Spelling

As children proceed down the road to becoming fluent spellers, they progress through a series of developmental stages. According to Templeton and Morris (1999), spelling begins during emergent literacy when children learn about print. Children use their knowledge of the alphabet's letters and awareness of sounds within spoken words to invent the words they want to write.

In English, consonants typically emerge first, due to their salient sounds, and then vowels emerge later. Sounds within words are matched up with letters in a linear fashion, left to right. Morris (1993) refers to this as the alphabetic layer. The pattern layer is when children begin to understand that spelling does not always work in a linear fashion (alphabet layer) and begin to notice patterns, such as vowel-consonant-vowel, and use these patterns in their writing. Once children grasp letter patterns, they begin to understand syllable patterns, such as consonant doubling. Children begin to understand that groups or patterns of letters placed together can represent sounds. As children advance in the pattern layer, they begin to understand principles of word combination, compound words, and how base words and affixes combine. This understanding provides the basis of meaning, or the meaning layer of spelling.

Although the alphabetic layer, pattern layer, and meaning layer in the spelling system develop over time through experiences with meaningful reading and writing, the need for explicit instruction and exploration of words outside actual reading and writing are necessary. Spelling is supported through an instructional focus on the exploration of patterns, as opposed to focusing only on memorizing or learning to spell frequently occurring words; this exploration focuses on patterns that can be detected in the sound structure and meaning features of words (Templeton, 1991).

As a child advances through this sequence of the alphabetic, pattern, and meaning layers, identifiable stages can be observed. These stages have been described by several researchers, but all derived from the research of Charles Read (1971). Read's work unearthed that learning to spell is not a matter of memorizing letter sequences, but of developing and applying the knowledge of letter-sound relationships and vowel patterns to the sounds of our speech. Worthy spelling instruction includes building upon children's word knowledge and enabling them to move from one stage to the next.

Researchers see spelling development happening across five stages. The table below illustrates the stages of spelling development as defined by two different sets of researchers. These stages encompass students' grades from pre-kindergarten through college. These stages, which are similar to the stage-like progressions in reading and writing, are seen with students ranging from pre-emergent to highly skilled (Bear, Invernizzi, Templeton, & Johnston, 2012).

Examples of the Five Stages of Spelling Development:	
Gentry (1982)	Bear, Invernizzi, Templeton & Johnston (2012)
1. Pre-Communicative: Children use letters for writing words, but the letters are strung together randomly.	1. Emergent Stage: Pre-phonetic, and little, if any, direct relationship between the letter and the sound.
2. Semi-Phonetic: Children perceive and represent reliable sounds with letters in a type of telegraphic writing.	2. Letter Name (Alphabetic Stage): Encompasses early-middle and late periods of letter-name alphabets. Children move from matching an initial sound to a letter; to segmenting the sounds, and matching letters and letter pairs to those sequences.
3. Phonetic: Children perceive and represent all of the phonemes in a word, though spellings may be unconventional.	3. Within Word Pattern Stage: Children have mastered basic letter sound correspondences and are working on letter sequences that function as a unit.
4. Transitional: A visual memory of spelling patterns is apparent. Spellings exhibit conventions of English orthography like vowels in every syllable, e-marker and vowel digraph patterns, correctly spelled inflectional endings, and frequent English-letter sequences.	4. Syllables and Affixes Stage: Spelling changes that take place at the point of transition from one syllable to the next.
5. Correct: Children know the English orthographic system and its basic rules.	5. Derivational Relations Stage: Spellers learn about the derivational relationships in words.

As children move through each stage, their understanding is defined by three functional levels that guide teachers in knowing when and what to teach (Invernizzi et al. 1994). These functional levels are:

1. What students do correctly. This is an independent or easy level that does not require instruction.
2. What students use but confuse. In this level, instruction is most helpful.
3. What is absent in students' spelling. In this frustrating level, where spelling concepts are too difficult, instruction is also helpful.

High-Frequency Words

As Ehri notes, being able to read words from memory or by sight is valuable because it allows readers to focus their attention on constructing the meaning of the text while their eyes recognize individual words automatically (as cited in Gough, Ehri, & Treiman, 1992). When readers have to stop and actively think about and decode words, their reading slows and comprehension is compromised. The terms "sight words," "high-frequency words," "regular and decodable words," and "irregular and non-decodable words" are often confused by teachers. Sight words refer to words that students can read without having to think through or actively decode; students have had enough practice or experience with the word, word parts, or spelling patterns, and so they say them automatically as soon as they see the word.

Words that are “regular” or “decodable” contain letters and letter combinations that map to sounds based on predictable phonics rules. Words that are “irregular” or “non-decodable” contain letters and letter combinations that do not map to sounds in predictable ways. Both sets become sight words for a student when the student can see and say the word automatically.

High-frequency words are the most commonly occurring words for reading and writing at a specific reading level or grade level. The Dolch (1948) word list, for example, is a list of 220 words compiled by E.W. Dolch, and generally makes up 50 to 75 percent of the reading material encountered by students at each of the following levels: pre-primer, primer, grade one, grade two, and grade three. High-frequency words may be regular, decodable, irregular, and non-decodable. Therefore, high-frequency words should be taught via a full phonological analysis of a word or the letter-sound relationships within words, including those words that are not spelled as expected (MAISA, 2016, p. 3). High-frequency words become sight words for a student when the student can see and say the words automatically.

Which high-frequency words should teachers teach? Two lists of high-frequency words are typically used: the Dolch list or the Fry list (Fry, 1980). The lists differ significantly in terms of the word types they contain (nouns, verbs, prepositions, adjectives, adverbs), and neither is considered better than the other. Both lists are important and contain words by the frequency with which they are found in texts at different grade levels.

WHY?

Does spelling matter? Yes! Proficiency in spelling supports reading and writing (Moats, 2005/2006). Accurate spelling reflects more advanced linguistic knowledge because it requires the integration of phonological, orthographic, and morphological knowledge (Ehri, 2000). The process of writing words and the process of reading words draw on the same base of word knowledge. The more students understand the structure or orthography of words, the more efficient and fluent their reading and writing becomes. Snow, Burns, & Griffin (1998) recommend that effective reading instruction include components of spelling, such as spelling-sound relationships, the orthographic system, and the morphological components of words.

HOW? - Instructional Practices

When it comes to teaching spelling, many educators believe that rote memorization is the only way. This is whole-word instruction, or as some call it, “drill and kill.” According to research, “while memory does play an important role in learning to spell,” other strategies are employed in the process (Templeton & Morris, 1999, p. 102). Instructional theories and methods have evolved, and researchers suggest that examining words is necessary and that accurate, automatized knowledge of spelling patterns is at the heart of skilled reading and writing (Adams, 1990).

Research suggests that a blend of teaching approaches can be effective. Integrating approaches addresses different aspects of English spelling. Henry (1988) recommends that instruction be organized to introduce letter-sound correspondences, syllable patterns, morpheme patterns, and strategies for long, unfamiliar words. The organizational layers of spelling instruction correspond to the elements of reading instruction; therefore, spelling can be used to leverage reading curriculum (Weiser & Mathes, 2011). Perhaps more important than the technique used is that dedicated, systematic spelling instruction be employed as part of solid reading instruction.

Elements of Vocabulary Instruction

The *Essential Instructional Practices in Early Literacy Grades K-3* document recommends, per Practice #7, that teachers make “intentional and ambitious efforts to build vocabulary and content knowledge.” This involves careful selection of appropriate and relevant words, and explicit instruction in the context of reading, reflecting on and using those words in discussion, and teaching morphology (MAISA, 2016).

WHY?

As noted in the “What Does the Research Say?” section of this white paper, early vocabulary acquisition is a key determiner of literacy success throughout school. For that reason, focusing on vocabulary acquisition as soon as children enter school is a critical part of literacy instruction. This work involves the expanding of existing word knowledge and filling in of deficiency gaps for students whose vocabularies are smaller. Given the strong correlation between vocabulary and reading comprehension, instructional support to guarantee the yearly acquisition of at least 3,000 words is critical to students’ success as literate citizens.

But just what is the relationship between a person’s vocabulary and his or her reading comprehension? There is a long history of research dating back to 1944 that establishes the direct correlation between vocabulary knowledge and reading comprehension. And more recently, research has shown that a first grader’s vocabulary is predictive of his or her reading comprehension level in high school (Beck et al., 2008, p. 2). As researcher John Laflamme summarizes regarding the link between vocabulary and reading, vocabulary knowledge is the single most important factor in reading comprehension (as cited in Brynildssen, 2000).

Given the relationship between vocabulary knowledge and reading comprehension, it follows that vocabulary knowledge is a critical factor in the quality of a student’s writing. As Brynildssen (2000) notes, “If the writing process is inextricably linked to the reading process, and the reading process is heavily dependent upon vocabulary, it naturally follows that the writing process is likewise dependent” (p. 1). Yet a key difference between the role vocabulary plays in reading versus writing is that when reading, a student can use context to more deeply understand a word’s meaning; this is receptive vocabulary. But when writing, he or she is creating the context in which words are used; this is expressive vocabulary. Therefore, the writer must have a pre-existing deep understanding of the words s/he uses. Thus, the depth and breadth of his or her vocabulary directly affects the quality of the writing produced (Brynildssen, 2000).

WHAT?

Vocabulary is the knowledge of words and word meanings, encompassing literal as well as figurative meanings. Vocabulary knowledge is different from the other word study elements described up to this point, in that vocabulary is not something that is ever mastered; vocabulary knowledge expands and deepens over the course of a lifetime (Honig et al., 2012).

Given the clear connection between vocabulary knowledge and reading comprehension and writing, every teacher must be a deliberate teacher of language. Regardless of the subject they teach, teachers must teach the language of their discipline to ensure students' learning. Baily shows that, by providing this language, a teacher gives her students the keys to accessing the important ideas and concepts of the discipline (as cited in Templeton et al., 2015). As Nagy observed, it "is more than teaching words, it is teaching about words; how they are put together; how they are learned; and how they are used" (as cited in Templeton et. al, 2015, p. 71) Or as Steve Stahl (2005) explains it, "Vocabulary knowledge is knowledge; the knowledge of a word not only implies a definition, but also implies how that word fits into the world" (p. 95).

Too often, the teaching of vocabulary happens out of context, using word lists with definitions to memorize, rather than deeply integrating this learning into the teaching of reading and writing, or while doing reading and writing within a particular discipline. This out-of-context approach results in a lack of transfer because a deep, contextualized understanding of each word is not acquired. Thus, as Stahl (2005) explains, "vocabulary instruction should be part of the fabric of the classroom—an integral part of all instruction" because it is part of the knowledge curriculum (p. 99).

What exactly should be taught during vocabulary instruction? In 1987, Beck, McKeown, and Omanson established the three tiers of vocabulary as a means of delineating the kinds of words students most need instruction in (as cited in Beck et al. 2013, p. 9). It is now commonly accepted that vocabulary instruction in the ELA classroom should focus on Tier-2 words, keeping in mind that the study of literature and language involves Tier-3 words as well. In addition, content area teachers should provide instruction in relevant Tier-2 words, as well as their domain-specific Tier-3 vocabulary. The table on the next page defines and provides examples of the three tiers of vocabulary.

Three Tiers of Vocabulary	
Tier 1 Conversational Vocabulary	<ul style="list-style-type: none"> Words used in everyday conversation that do not require explicit instruction; part of students' common expressive vocabulary
Tier 2 General Academic Vocabulary	<ul style="list-style-type: none"> High-impact, general academic words that students may or may not use in spoken language but which they will come across in academic texts. These words occur across content areas, though it is often up to the ELA teacher to teach them. <ul style="list-style-type: none"> Examples: transmit, abundant, paradox Signal words: signal relationships between words and ideas <ul style="list-style-type: none"> Examples: therefore, consequently, analyze, summarize May be part of a student's existing receptive vocabulary—they understand the word when reading it but do not use it when speaking or writing
Tier 3 Domain Specific Vocabulary	<ul style="list-style-type: none"> Domain/discipline specific: words that are used mainly in a specific content area <ul style="list-style-type: none"> Examples: characterization, civil liberties, photosynthesis, quadratic equation, mercantilism Topic specific: words necessary to understand in order to communicate about a specific topic within a domain or discipline. <ul style="list-style-type: none"> Examples: Holocaust—extermination, persecution, genocide; photosynthesis—chlorophyll, endothermic, exothermic; poetry—sonnet, haiku, villanelle, ghazi, assonance, meter, hyperbole Passage critical: words important to understand in order to grasp the meaning of a paragraph or entire text <ul style="list-style-type: none"> Examples: an article about bats—echolocation, homing, wingspan <p style="text-align: right;">(Allen, 2014)</p>

What Does It Mean to Know a Word?

Researchers and practitioners alike seek to identify, clarify, and understand what it means for students “to know what a word means.” Vocabulary acquisition is complex, as evidenced by reviewing critical components, such as receptive vocabulary versus productive vocabulary, oral vocabulary versus print vocabulary, and breadth of vocabulary versus depth of vocabulary (Hiebert & Kamil, 2005); this sheer complexity raises questions worthy of further research.

Truly understanding a word has multiple dimensions. In *Bringing Words to Life*, Beck, McKeown, and Kucan (2013) outline the levels of knowing a word (p. 11). These details are listed in the table that follows.

Levels of Knowing a Word	
Level 1	No knowledge
Level 2	General sense of meaning or can recognize it as a word but cannot tell what it means
Level 3	Recognition of the word in context; narrow, context-bound knowledge; not able to recall the word readily enough to use in an appropriate situation
Level 4	Rich, decontextualized knowledge of a word's meaning, its relationship to other words, and its extension to metaphorical uses

In addition to these levels of knowing, in *Vocabulary Their Way*, Templeton et al. cite research that defines five types of knowledge that underpin each word we know. These five knowledge types intersect with the ideas in Beck et al.'s levels of word knowledge.

Five Types of Word Knowledge	
Range of meanings	Understanding both the literal and figurative meanings of a given word
Situational and contextual	Knowledge about the situations and contexts in which the word is commonly used
Grammatical forms	Understanding how the grammatical form of a word affects its meaning; i.e., the difference in meaning from the noun to the verb to the adjectival form of a word
Word friends	Other words that are likely to occur with this word
Close encounters	A person's probability of encountering this word

So to return to the relationship between vocabulary and reading comprehension, as Steven Stahl (2005) explains in the chapter "Four Problems with Teaching Word Meanings," from the book *Teaching and Learning Vocabulary*, a person's vocabulary is part of an integrated network of knowledge. "Vocabulary knowledge is knowledge" (p. 95). Stahl (1998) goes on to assert in a different collection of work on vocabulary instruction that "teaching word meanings does improve reading comprehension, but only if it is done in a way that incorporates both definitional and contextual information, engages the student actively in learning, and involves multiple exposures to meaningful information about each word" (p. 90). This integrated approach is critical due to the contextual rather than fixed meanings of words.

HOW? - Instructional Practices

How do teachers go about helping students acquire deep word knowledge so they can recall vocabulary for use in receptive (reading and listening) and expressive (writing and speaking) ways, and at a rate of upwards of 3,000 words a year? Kamil points out that “while wide reading helps students develop their vocabulary, additional explicit instructional support needs to be provided as part of the curriculum to ensure that all students acquire the necessary print vocabulary for academic success” (p. 11). Students can learn 300-400 words a year via direct instruction (Stahl, 1998). That works out to about ten words per week if vocabulary is being taught in only one class.

However, to facilitate deep word knowledge, direct vocabulary instruction is not enough. Direct vocabulary instruction as the sole means of vocabulary development is not effective because of the limited number of words that can be taught, retained, and transferred. In addition teachers must provide students with multiple ways of learning new words, including by:

1. providing rich and varied language experiences,
2. promoting word consciousness,
3. developing a sense of curiosity about word meanings,
4. building independence in word analysis, including teaching word-learning strategies,
5. and supporting wide, regular reading.

(Anderson & Nagy, 1993)

This section touches on direct vocabulary instruction, as well as the multiple ways of learning new words.

Explicit Instruction: Direct Instruction of Specific Words

Two different meta-analyses from the 1980s discovered that vocabulary instruction that affects reading comprehension must:

- involve more than several exposures to the word,
- provide both definitional and contextual information,
- and engage students in active or deep processing. (Beck et al., 2008, p. 4)

Stahl (1998) defines this deep processing as “generative processing” in which a student uses new information about a word to create a new product, like writing or orally producing a sentence that correctly uses the word in the proper context, or creating a definition in one’s own words. Beck and her colleagues go further and assert the importance of students’ making connections between new words and their own prior knowledge of words, as well as connections with life experiences and situations. *Bringing Words to Life* and *Creating Robust Vocabulary* both include a wealth of activities that scaffold students into this generative processing and are broken out into activities for early grades and later grades.

Before Reading

Beck et al. (2008) recommend that, before students read, teachers introduce words that could impede students' comprehension. But this introduction should be brief because the more complex goal of vocabulary enhancement requires significant elaboration and should happen post-reading (p. 17). The words to pre-teach are Tier-2 or -3 words that are important to know, in order to understand the plot of a narrative or the key ideas in an argument or informational text (p. 19).

After Reading

The teacher may choose to supply further instruction about some or all of the words that were pre-taught. Or s/he may decide that other unfamiliar Tier-2 and -3 words in the text that enhance the writing are more worthy of attention. This post-reading instruction should accomplish the following, according to Beck et al. (2008, p. 23-29):

- **Contextualize words** using the reading from which the words come.
- **Provide friendly explanations** that use everyday language, full sentences (unlike the fragments of many dictionary definitions), and words like *if*, *someone*, *something*, and *you* to set up examples.
- **Provide an additional context for the word** so that students do not associate a word with only one context and can generalize across contexts about a word. Students with high vocabulary knowledge have a more generalized understanding of words, whereas low vocabulary students typically link the meaning of a word to a single context.
- **Have students actively process word meanings**, which means having students combine new information with known information, including previously understood words and situations to which they can connect these new words.
- **Provide high-frequency encounters over time** with the initial words that have been taught in a variety of contexts and situations. Beck et al. suggest a five-day cycle for teaching words, which is outlined in *Bringing Words to Life*.

Which Words?

Knowing which words to teach, especially if a teacher is limited to ten per week, can be tough. Research indicates that word learning is not developmental; it does not happen in specific sequenced stages. Rather, word learning “resides in children’s environments and experiences: what they hear, see, are told, read, and the like” (Beck et al. 2013, p. 21). For this reason, Beck, McKeown, and Kucan do not recommend relying on frequency lists, but instead considering the role and utility of a word in comprehension and composition. This means the words chosen for instruction will likely be more abstract and less likely to be learned through everyday language. These tend to be Tier-2 words (Beck et al., 2013, p. 24).

Bringing Words to Life outlines three principles to consider when selecting words for direct instruction:

1. How useful is the word for students? Is it one they will run across in other texts or contexts? Might students use this word when characterizing their own experiences?
2. How does this word relate to the other words students have been learning in this class and other classes? Will it add dimension to previous learning?
3. What does this word contribute to the text? What role does the word play in communicating the meaning of the context in which it is used? (Beck et al., 2013, p. 38)

An additional consideration when planning vocabulary instruction concerns semantic grouping. Selecting words that already have relationships to one another—words chosen around a theme or concept—can assist with students generating new understandings of and between these words as they are taught. Stahl (2005) cites Collins and Loftus who discovered that words are stored in long-term semantic memory in networks connected by nodes determined by, among other things, logical relations. So the word “shark” can be connected to the words fish, hammerhead, Jaws, surfing, and so on (p. 88). Because words are stored in categories in our brains, it makes sense to teach them that way.

Beyond Direct Vocabulary Instruction

How can teachers support students in acquiring new vocabulary beyond direct instruction? This section briefly introduces the five ways students learn the majority of new words during their school years.

Providing Rich and Varied Language Experiences

To increase the number of words students know, they must be exposed to more and varied kinds of texts. This belief is generally held across the research on vocabulary acquisition. Janet Allen (2014) points out that 25 minutes of reading a day over 200 days translates roughly to encountering 15,000 - 30,000 unfamiliar words, which can result in acquiring 750 - 1,500 new words.

In addition, to know and use the “insider language” of a discipline, students must have rich and varied language experiences within the discipline in question. These experiences can and should extend beyond reading into discussion, writing, and multimedia creation. They can include:

- increasing the volume and diversity of reading by students, including during read-alouds and shared, guided, and independent reading,
- providing a plethora of opportunities to discuss reading and writing with others, effectively creating a “sea of talk” in the classroom,
- and offering opportunities for students to express ideas in both print and non-print media. (Allen, 2014)

Promoting Word Consciousness

According to Beck et al. (2008) in *Creating Robust Vocabulary*, word consciousness involves “intensive instruction on specific words combined with attention to word choices in literacy and encouragement of students to use richer vocabulary in the own writing” (p. 6). Janet Allen (2014) explicitly names the characteristics of students who have high word consciousness. They are:

- finding words interesting,
- enjoying wordplay,
- taking risks with words by using words they haven’t heard spoken before and integrating new words into their conversations,
- always learning new words,
- and inventing language as needed.

These specifics are helpful as teachers consider the kinds of activities they will incorporate into their lessons to promote word consciousness. In a study of three comparable classrooms, in the classroom focused on word consciousness, Scott, Jamieson-Noel, and Asselin noted that students “used significantly more rare words in their posttest writing samples” (as cited in Beck et al., 2008, p. 6).

Developing a Sense of Curiosity about Word Meanings

Graves says that when students possess an “awareness of and interest in words and their meanings,” they are more likely to pause and investigate unfamiliar words they come across (as cited in Allen, 2014). Fostering this kind of curiosity by promoting word consciousness coupled with teaching the word-learning strategies discussed below can significantly bolster students’ ability to acquire new words.

Building Independence in Word Analysis and Teaching Word-Learning Strategies

According to Nagy and Anderson, over 60 percent of the words students will encounter have recognizable word parts; many of them are derivatives of Latin and Greek roots (as cited in Templeton et al., 2015, p. 10). School texts have a vast number of words with Latin and Greek roots. So it follows that teaching students Latin and Greek roots and affixes will assist with comprehension and vocabulary acquisition. Stahl and Nagy assert that “word parts are too valuable to ignore,” but they also caution that this learning must be used “strategically, cautiously, and thoughtfully” (as cited in Beck et al., 2008, p. 45). The trick is also making sure that transfer happens—from the teaching of affixes and roots to students’ applying that learning when they run across an unfamiliar word.

Beck, McKeown, and Kucan (2008) make these recommendations with regard to teaching morphemes:

- Only teach the most frequent prefixes and suffixes—there are 20.
- Deal with roots and etymology to develop students' awareness and appreciation of language and its components.
- Point out word relationships once students have become familiar with a target word rather than during initial robust instruction. Morphological information should be doled out sparingly, not for every word taught. (p. 45)

Supporting Wide, Regular Reading

Anderson and Nagy (1992) contend that “the best way to foster vocabulary growth is to promote wide reading. Time spent in reading will lead to gains in fluency, in knowledge, in familiarity with written language, and in appreciation of literary genres, as well as vocabulary growth” (p. 11). Another study determined that even a moderate amount of reading can lead to “substantial vocabulary gains” (Nagy, Herman, & Anderson, 1985, p. 252). Anderson and Nagy’s (1992) study determined that even reading very little—just ten minutes a day outside of school—provides students with “substantially higher rates of vocabulary growth between second and fifth grades than children who do little or no reading” (p. 9). This research underscores the importance of independent reading programs at all grade levels. Fostering a love of reading in children seems to make the largest difference in their vocabulary acquisition.

However, as Beck et al. (2013) point out in *Bringing Words to Life*, two things have to happen:

1. Students have to read so widely that they run across a substantial number of words they do not know.
2. They must read texts that are difficult enough to include unfamiliar words.

The reality is that students who are in the most need of developing their vocabulary are less likely to choose books that challenge their vocabulary knowledge. They are also less likely to be able to determine meaning from context. So the benefits of independent reading for these students are not as great in terms of language acquisition (Beck et al., 2013, p. 5).

Elements of Grammar Instruction

The *Essential Instructional Practices in Early Literacy Grades K-3* document recommends in Practice #6 that “research and standards-aligned writing instruction” include explicit instruction in a variety of elements, including sentence construction. This involves teaching learners how to use language to craft words, phrases, sentences, paragraphs, transitions, and written discourse that enhances the correctness, conventions, cohesiveness, meaning, purpose, and style of a student’s writing (MAISA, 2016).

WHAT?

Grammar is “the organization and structure of language that enables people to communicate with each other” (Brown, 2009 p. xv). Weaver and Bush (2008) expand this idea: “The grammar of a language is its structure, which enables us to communicate whether or not we or anybody else consciously understands its structure” (p. 1). So, grammar involves using knowledge of morphology (the smallest units of language) and syntax together to understand and create meaning through oral and written language. Syntax represents the “constraints which control acceptable word order within a sentence, or dominance relations (like head noun + relative clause)” (p. 42, Andrews et al. 2006).

Given grammar’s current position in ELA curriculum—often an afterthought or something squeezed in when possible—it is interesting to note that in the Middle Ages, grammar was considered the foundation of all knowledge, a prerequisite for understanding philosophy, theology, and literature. But also important, this instruction completely divorced grammar from writing, a tradition that has continued into present time. (Weaver & Bush, 2008, p. 18).

These days, traditional grammar instruction involves mastering a collection of rules that govern how words and word parts go together, are ordered, and are represented by punctuation in writing. The focus is on knowledge about syntax, sentence structure, and sentence parts. This kind of instruction is also typically analytical, rather than practical and focused on producing writing. In other words, students are asked to identify parts of speech and various constructions in sentences, and then complete exercises in which they use these same parts of speech or constructions. The opportunity for transfer in this instructional scenario is zero, a fact borne out by the research.

In their meta-analysis of research studies since 1900 on the teaching of grammar, Andrews et al. (2006) discovered “that the teaching of grammar using a range of models has negligible positive effects on improving secondary pupils’ writing” (p. 40). A specific study they cited by Perera “noted that decontextualized grammar teaching that was unrelated to pupils’ other language work was

likely to do more harm than good. She also noted that technical terms in grammar seemed to confuse rather than enlighten young people” (Andrews et al., 2006, p. 40). In addition, *Writing Next* (2007), a report to the Carnegie Corporation and a seminal document that summarizes meta-analyses of writing research, explains that the negative effect of traditional grammar instruction with writers across all ability levels “was small, but it was statistically significant, indicating that traditional grammar instruction is unlikely to help improve the quality of students’ writing” (p. 21). And yet, despite this widely known research, the 100-year-old tradition of using grammar worksheets, teaching sentence diagramming, and marking all errors in students’ essays persists in classrooms across America.

It is clear that using traditional grammar instruction methods “does not help students become more expressive, creative, or precise in their language choices” (de Oliveira & Schleppegrell, 2015, p. 10). So what’s the alternative? An approach that focuses on writing production, helping students craft more clear and compelling sentences and paragraphs that convey the writer’s intended meaning for a specific audience and purpose. In their research, de Oliveira and Schleppegrell (2015) point out that “students need to focus on how language expresses the meanings that it does and to explore the ways those meanings are presented in language as they engage in meaningful tasks” (p. 10). If the goal is to expand students’ abilities to make meaning with language, then we must expand their “linguistic repertoires” (de Oliveira and Schleppegrell, 2015, p. 11).

In their article in *Voices from the Middle*, “To Grammar or Not to Grammar, that is NOT the Question!” Weaver, McNally, and Moerman (2001) address the issue even more specifically, as they assert that educators need to be asking: “What aspects of grammar can we teach to enhance and improve students’ writing, and when and how can we best teach them?” (p. 19). Weaver and other researchers and practitioners, like Jeff Anderson and Deborah Dean, recommend a modified sentence-combining approach that focuses on teaching students about grammatical options for constructing their own sentences and paragraphs. Andrews et al. (2006) define sentence-combining as “teaching techniques for splicing together simple sentences to make compound or complex ones. It can also cover sentence-embedding and other techniques for expanding and complicating the structure of sentences” (p. 42).

This approach takes place within the context of the writing process and includes rich models and significant amounts of practice. The meta-analysis by Andrews et al. (2006) supports the effectiveness of such an approach: “An overall synthesis of the results from the 18 studies examined in the in-depth review comes to a clear conclusion: that sentence-combining is an effective means of improving syntactic maturity in students in English between the ages of 5 and 16” (p. 51). In addition, the *Writing Next* report (2007) indicates that the effect sizes for studies of sentence-combining instruction, as compared to traditional grammar instruction, were “consistently positive and moderate in strength” (p. 18).

WHY?

The “why” for grammar instruction might seem obvious. Teachers of writing want students to be more effective communicators in written and spoken formats, and students usually share this goal. Weaver and Bush’s (2008) “positive, productive, and practical” approach to grammar instruction strives to help students “add detail, enhance style, and produce rhetorical effects,” thereby making their writing products more convincing and/or persuasive (p. 25). And perhaps even more significant, this approach empowers students to experiment with new constructions and grammatical strategies. Thus, the onus is on the student to determine what s/he wants to say, and to figure out how best to say it through a gradual-release model of instruction. Students are empowered to own language and their writing, rather than the teacher acting as the grammar police, red pen in hand.

Just as grammar instruction can improve student writing, so can it improve reading comprehension. Williams notes that, at the elementary level, for example, students can use knowledge of verbs to help them understand the plot and characters in a text (As cited in National Governors Association, 2010, Appendix A, p. 29). And at the secondary level, “learning the grammatical structures of nonstandard dialects can help students understand how accomplished writers such as Harper Lee, Langston Hughes, and Mark Twain use various dialects of English to great advantage and effect, and can help students analyze setting, character, and author’s craft in great works of literature” (National Governors Association, 2010, Appendix A, p. 29).

An additional consideration for the importance of grammar instruction concerns linguistic register. As noted in Appendix A of the ELA Common Core State Standards (2010), while “students must have a strong command of the grammar and usage of spoken and written standard English to succeed academically and professionally . . . there is great variety in the language and grammar features of spoken and written standard English, of academic and everyday standard English, and of the language of different disciplines” (p. 29). This variety of linguistic registers that Appendix A references should be made explicit to and explored by students.

To be clear, a register is “a collection of linguistic features customarily used for a particular rhetorical practice” (Brown, 2009, p. XIX). That is, we communicate in different ways depending on our purpose and audience, and we vary our vocabulary, sentence structure, verb types, and syntax accordingly. If we explore various registers that students use, and point out that the registers used in academic writing and specific disciplines are complex, just like the registers they use with their friends and families, students are more likely to feel empowered as users of the academic register and make more “purposeful language choices in their writing and speaking” (National Governors Association, 2010, Appendix A, p. 29).

HOW? - Instructional Strategies

The research base supporting what works in grammar instruction is summarized in twelve principles published by Constance Weaver and Jonathan Bush in *Grammar to Enrich & Enhance Writing* (2008):

What Works in Teaching Grammar to Enrich and Enhance Writing 12 Principles

1. Teaching grammar divorced from writing doesn't strengthen writing and therefore wastes time.
2. Few grammatical terms are actually needed to discuss writing.
3. Sophisticated grammar is fostered in literacy-rich and language-rich environments.
4. Grammar instruction for writing should build on students' developmental readiness.
5. Grammar options are best expanded through reading and in conjunction with writing.
6. Grammar conventions taught in isolation seldom transfer to writing.
7. Marking "corrections" on students' papers does little good.
8. Grammar conventions are applied most readily when taught in conjunction with editing.
9. Instruction in conventional editing skills is important for all students but must honor their home language or dialect.
10. Progress may involve new kinds of errors as students try to apply new writing skills.
11. Grammar instruction should be included during various phases of writing.
12. More research is needed on effective ways of teaching grammar to strengthen writing.

(from inside the front cover of the book)

These principles might stand in for a scope and sequence, because none of the researchers we interviewed advocate using a scope and sequence for grammar or vocabulary instruction. They insisted that instruction needs to be responsive to students' needs, rather than following a predetermined path.

The problem with creating a coherent scope and sequence for grammar instruction is also evident from the Progressive Skills Chart on the Common Core State Standards website ("English Language Arts Standards," 2010). This chart indicates that students should learn and re-learn grammatical concepts across grades in increasingly complex ways; listing a grammatical concept or construction at a single grade level and expecting mastery is unrealistic and fails to acknowledge how complex the acquisition of grammatical knowledge for writing production is.

However, without a specific scope and sequence to follow, how do teachers know where to begin when it comes to grammar instruction? Weaver's resounding answer is to begin by looking at your current students' writing. Weaver's "non-rubric" on pages 204-205 of *Grammar to Enrich & Enhance Writing* (2008) provides a framework for examining student writing to determine the most useful construction or skill to teach next, based on what students are currently able to do. The "non-rubric"

is flexible enough that it can be used by elementary and secondary teachers, because it divides competencies into “highly effective, competent, and basic” (p. 204). We recommend collecting a diagnostic writing sample at the beginning of the year and using the “non-rubric” to unearth grammatical patterns in a class’s writing. This process will help determine what whole-class and/or small-group lessons and practice need to occur. However, Anderson and Dean’s and Weaver and Bush’s work stress the importance of focusing on just one or two constructions or skills during a writing project. An inch-wide, mile-deep approach ensures a greater level of mastery for students.

Weaver and Bush (2008) emphasize the importance of teaching grammar not just in the context of writing, but also in conjunction with writing—the distinction being that the lessons are directly connected to the writing that is currently happening in the classroom, rather than just happening in parallel (p. 6).

The effect of teaching grammar in context and in conjunction with writing is multi-layered. This approach:

- enhances sentence sense, variety, and syntactic fluency,
- promotes the use of appropriate conventions,
- develops rich content by developing details about abstract ideas, via grammatical constructions,
- improves organization through a focus on transitions and connectors,
- and enriches voice and style “appropriate to purpose, content, and audience” (Weaver & Bush, 2008, p. 202)

The importance of using the sentence-combining approach in conjunction with writing is clearly supported as evidenced in O’Hare’s 1973 study:

However, the results are clear: sentence-combining instruction . . . ‘has a positive impact on writing quality, not only in first versions of writing but also in subsequent revisions’. . . . The writers conclude that ‘findings from the current study replicate and extend previous research by showing that a peer-assisted, sentence-combining treatment can improve the sentence construction skills of more and less skilled writers . . and that such instruction can promote young students’ use of sentence-combining skills as they revise.’

(Andrews et al., 2006, p. 49)

Indeed, eighth-grade students were writing at the same syntactic maturity level as twelfth graders by the end of this study. (Andrews et al., 2006, p. 49)

So if sentence combining is so wildly effective, why don’t more teachers use this approach? Anderson and Dean (2014) address the past failure of sentence combining in their book *Revision Decisions*. They attribute its demise to ineffective teaching practices: “misinterpretations caused by lack of teacher scaffolding, questionable implementation with missing connections, even

overscaffolding” (p. 5). They assert, just as Weaver does in all her publications about grammar instruction, that sentence combining must be grounded in the writing process, and should also be accompanied by reflection in the form of “evaluative talk” as well as application to current writing projects (p. 6). To that end, Anderson and Dean refer to their approach as teaching “revision decisions,” not just sentence combining. They stress the importance of helping students think through the moves they can make in their own writing, “to be flexible in their thinking and resilient in considering options” (Anderson & Dean, 2014, p. 6).

In *Revision Decisions*, Anderson and Dean lay out a sensible lesson progression for the modified sentence-combining approach:

1. The Context—understanding the need for the skill; where and how the skill fits within the meaning-making process
 2. The Points of Emphasis—naming the grammar structures likely to be encountered
 3. The Demonstration—modeling revisions with this skill and decisions that will need to be made
 4. The Practice—structuring revision experimentation with the skill
 5. The Collaboration—students collaboratively talk through solutions to sentence problems that employ the skill
 6. The Application—students use the skill of focus in a piece of their own writing
- (2014, p. 42)

(A link to supporting materials for this lesson progression are included in the Additional Resources on page 43.)

Using Anderson and Dean’s lessons (or ones like them that you construct) across the writing process will allow students to learn, practice, practice again, and apply a construction, skill, or grammatical concept to their own writing. Another important piece in this progression is the student collaboration and emphasis on “talking out” sentence revisions. This verbal collaboration encourages playfulness, exploration, and experimentation all while engaging speaking and listening skills.

Weaver’s approach, which Anderson and Dean draw on, is similar. She refers to her approach as providing students with grammatical options to help them make their writing more effective. Grammatical options might include revising a sentence with supporting details using an appositive, a participial phrase, or an absolute; or teaching transitions, connectors, or other cohesive devices that influence the flow and organization of a piece (Weaver et al., 2001, p. 17). When coupled with work on sentence variety and sentence structure, grammatical options can help students develop a distinct voice and style (Weaver et al., 2001, p.18).

Weaver and her 2001 co-authors suggest that the most effective grammar instruction happens at two points during the recursive writing process: as a prelude to writing and during revision. At these points, language arts teachers can model grammatical options and syntactic effectiveness,

and students can then apply those concepts as they draft and revise. Teachers can also tackle conventions during the editing phase, using mini lessons and individual conferences, which Weaver and her co-authors highly recommend (2001, p.18).

Weaver and Bush's book *Grammar to Enrich and Enhance Writing* sets forth a ten-step model to teach grammatical options throughout the writing process (see the box below).

Framework for Teaching Grammar Throughout the Writing Process

1. Share a model of a grammatical construction (from literature or teacher created).
2. Create another model for the same grammatical construction (teacher & students together).
3. In groups or pairs: students compose sentences using the grammatical construction.
4. Solo: students compose sentences using the construction, a formative assessment.
5. Solo: students apply the concept to their own writing for their current writing project.
6. Teacher assesses work and provides feedback, determining what revision strategies need to be taught.
7. Mini-lesson: teach revision strategies about the grammatical construction using student papers.
8. Provide a checklist to students that includes the grammatical construction taught.
9. Students prep the final draft; teacher conferences with individuals and suggest strategies for engaging the grammatical construction taught.
10. Repeat the process as needed and continue to emphasize this grammatical construction.

(Weaver and Bush, 2008, p. 63)

There is considerable overlap between Weaver and Bush's ten-step framework and Anderson and Dean's lesson progression; however, the ten-step framework emphasizes working within a larger writing process and project.

At this point, you might be wondering how Weaver and Bush's principle #2 ("Few grammatical terms are actually needed to discuss writing") is possible when teaching complex grammatical constructions like present participials or adjectival modifiers. Through her years of experience with this approach, Weaver says with confidence: "a little grammar goes a long way when it comes to helping students edit for the use of standard conventions in their writing, and the concepts can be taught as we discuss literature and the students' own writing" (Weaver et al., 2001, p. 17). Weaver and Bush (2008) go on to explain that "detailed categorizing and subcategorizing of words is not necessary for writers to use the language effectively and appropriately . . . Better to teach the conventional forms as the need arises, using examples and practical strategies rather than terms and rules" (p. 27). This notion takes us back to where we started in this section on grammar instruction: the needed pedagogical shift is from an analytical approach to a practical and productive one.

Conclusion: A Call to Action

Given the research overview provided in the previous pages, what initial steps can schools and districts take to shift instructional practices around word study, vocabulary, and grammar? Many potential first steps that support capacity building are discussed below. Most important is that initial steps *are* taken and that they lead to the development of a comprehensive plan for the teaching of word study, vocabulary, and grammar as part of core English Language Arts instruction for all students.

This endeavor can prove challenging given some of the assertions made in the previous sections of this paper. Given that experts do not advocate a scope and sequence for vocabulary and grammar instruction, how does a school or district document the teaching that is expected in these areas? We suggest that curriculum documents focus more on pedagogical approaches and strategies, as well as defining what start-of-year, mid-year, and end-of-year assessments for word study, vocabulary, and grammar look like and how they track student growth. Also extremely useful would be a collection of effective lessons for particular grade bands that address specific skills, grammatical constructions, and word concepts.

In addition, the amount of time and materials used for teaching word study, vocabulary, and grammar are an important consideration for schools and districts. We strongly suggest reviewing the current state of instruction, curriculum, and resources in order to make intentional decisions about the integration of word study, vocabulary, and grammar throughout the school day. It is unlikely that the same instructional materials would meet the needs of every student across Oakland County due to differences in students' prior knowledge, language-learning history, and teacher knowledge. Student performance data should be used to guide the discussion of student needs and to identify word study, vocabulary, and grammar instructional priorities. Districts should map their proposed curriculum and materials by grade level, coupled with their current student performance data and teacher knowledge, to prioritize needs and create action plans.

But first things first—how to get started?

Ideas for Professional Learning and Building Capacity

- *Reflection on Current Practice:* As content-area departments, PLCs, or grade-level groups, have teachers reflect on their current practice in teaching word study, vocabulary, and grammar over the course of several weeks. Engage in dialogue driven by questions, such as:
 - How are we teaching this content?
 - What led us to teach this way?
 - What learning outcomes are we getting from students?
 - What about this approach is working with students and showing real growth?
 - What seems to have little effect?
 - How are we measuring this growth?
 - How are word study, vocabulary, and grammar integrated into the teaching of reading and writing?
 - How are word study, vocabulary, and grammar integrated into the teaching of science, social studies, and mathematics?
 - Given the current state, are we getting the results that we desire?

Critical to this reflective practice is creating a non-judgmental space in which teachers can talk about their teaching. They must feel safe and supported in acknowledging what is not working. They must also feel free to experiment with approaches that might be quite new to them or feel quite foreign. Ideally, teachers will share approaches that have worked, both in the research base and in their own experience, and they will support each other in attempting these practices. In addition to learning about instruction in individual classrooms, this ongoing study can help determine where teachers are and are not aligned in their instruction across a grade level or levels, and where teacher knowledge is strongest.

- *Book Study:* Taking on changes to word study, vocabulary, and grammar instruction all at once can be overwhelming. The results can be ineffective if the efforts are not focused. Starting with a book study in one of the three areas can be a small but useful way to begin to shift instruction, especially if teachers commit to trying some of the strategies that they read about. Titles we recommend as starting points:

Word Study

- *Teaching Reading Sourcebook*, by Honig, Diamond, and Gutlohn (2012)
Sample chapters are available online at:
<http://www.sourcebookcompanion.com/content/SB2-Sampler.pdf>
- Foundational Skills to Support Reading for Understanding in Kindergarten through 3rd Grade—What Works Clearinghouse Practice Guide:
<http://ies.ed.gov/ncee/wwc/PracticeGuide/21>

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- Improving Reading Comprehension in Kindergarten Through 3rd Grade—What Works Clearinghouse Practice Guide:
<http://ies.ed.gov/ncee/wwc/PracticeGuide/14>
 - Teaching Elementary Students to be Effective Writers—What Works Clearinghouse Practice Guide:
<http://ies.ed.gov/ncee/wwc/PracticeGuide/17>

Vocabulary

- *Bringing Words to Life, second edition: Robust Vocabulary Instruction*, by Beck, McKeown, and Kucan
- Improving Adolescent Literacy: Effective Classroom and Intervention Practices—What Works Clearinghouse Practice Guide:
<http://ies.ed.gov/ncee/wwc/PracticeGuide/8>

Grammar

- *Grammar to Enrich & Enhance Writing*, by Constance Weaver and Jonathan Bush (grades 3-12)
- *Revision Decisions: Talking Through Sentences and Beyond*, by Jeff Anderson and Deborah Dean

As an alternative, consider having teachers read the introductory pages of this whitepaper along with a particular section that addresses the research on word study, vocabulary, or grammar instruction. For a more general overview, have teachers read and discuss the Executive Summary.

- *Teacher-to-Teacher Visits & Lab Classrooms*: Teachers are so busy in their own classrooms that they rarely get to see colleagues teach. Setting up teacher-to-teacher visits that are preceded and followed by framing and debrief conversations can have powerful effects. In addition, lab classroom days that follow similar protocols can open up transformative conversations about teaching. For suggestions on protocols, see the documents linked below.
 - This teacher-created resource on lab classrooms can be helpful in getting them up and running and in establishing effective protocols:
https://issuu.com/communicationsos/docs/jobembeddedproflearning_2_14_14_e2bd61c28fed17
 - This template for hosting and facilitating a classroom lab articulates how to set up the classroom visit:
<https://drive.google.com/file/d/0B64Cp2tsK0y-VmdLdVltWC1mQUk/view>

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- This example of an explicit vocabulary lesson design from Anita Archer illustrates how fidelity checklists may be created and used to explore aspects of lessons that teachers observe during classroom labs:
<https://drive.google.com/file/d/0B64Cp2tsK0y-dW5WVmhhhdC1maFk/view>
 - *Oakland Schools Literacy Webinar Series 2016—Word Study, Vocabulary, and Grammar: the Toughest Nuts to Crack*: This series of eight webinars across the year features many of the scholars we read and interviewed to write this white paper. Registration is free. For more information about the live webinars in 2016-17 or the archived webinars post 2016-17 visit: <http://www.oaklandschoolsliteracy.org>
 - *Reading Strategies for Special Educators Online Course*: This free, self-paced, online course is open for registration all year on the Oakland Schools website:
<https://oakland.k12.mi.us/professional-learning/professional-development/Pages/default.aspx>

Course Description: Do you need the flexibility to learn in your own space, in your own time, and at your own rate? This highly independent, web-based course provides introductory knowledge of the foundational skills for reading, including phonological awareness, phonics, fluency, vocabulary and comprehension. We will learn the research behind each big idea, the scope and sequence of instruction for each big idea, and reflect on content, videos, and application in our own settings. This course uses the Teaching Sourcebook (CORE) and Assessing Reading: Multiple Measures texts. Upon completion of the web-based course, participants are invited to register for one of the Reading Strategies Learning Labs.

Using any or a combination of the above suggestions can launch a school or districts' exploration into transforming instruction. During the first year, we also recommend developing a long-range plan for steps to take in years two, three, four, and five. Follow-through, focused efforts, and constant re-evaluation are critical to shifting instruction that has lasting and significant effects on student learning.

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Additional Resources

Academic Word Finder

<http://achievethecore.org/page/1027/academic-word-finder>

Alphadictionary (to foster word consciousness)

<http://www.alphadictionary.com/index.shtml>

Common Core State Standards Appendix A

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

Grammar Fundamentals

<http://www.leadersproject.org/2014/09/02/playlist-grammar-fundamentals-for-a-pluralistic-society/>

Rewordify

<https://rewordify.com/>

Revision Decisions supporting materials, for a sentence-combining approach to grammar

<https://www.stenhouse.com/sites/default/files/public/legacy/pdfs/revisiondecisions-app.pdf>

Teaching Channel video with Sarah Brown Wessling

<https://www.teachingchannel.org/videos/build-student-vocabulary>

Ted Ed Lesson - Does Grammar Matter? (lesson can be customized)

<http://ed.ted.com/lessons/does-grammar-matter-andreea-s-calude>



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