# EBP Edge—Word Work: Words Matter

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Words matter. From a child's first word to a politician's address, the words we choose are important. Words are the building blocks of language. Our ability to manipulate and learn new words opens doors to new knowledge and makes the world accessible. With words, we can create complex sentences, tell elaborate stories, write interesting essays, and think great thoughts.


Speech-language pathologists (SLPs) have a special interest in the acquisition of words. Words are a visible aspect of language acquisition and strongly predict future success in reading (Biemiller, 2003; Proctor et al., 2012). For preschoolers, vocabulary development and word knowledge are critical to classroom and social participation (Paul, Norbury & Gosse, 2018) and are closely tied to comprehension, syntactic development, and overall intellectual ability (Miller, 1991). By the time preschoolers are in first grade, their vocabulary will grow to around 6,000 words and will increase by as many as 4,000 words annually through early elementary (Miller & Gildea, 1987). Children with smaller vocabularies have more difficulty learning to read. Vocabulary experts estimate that children need to know at least 90 percent of the words in a text before they are able to understand it (Hirsch, 2003). If they have trouble with reading comprehension, they miss the opportunity to learn new words from written contexts; over time, poor readers fall behind their peers with well-developed vocabularies (Biemiller, 2003; Wise, et al., 2007).

**Risk Factors for Word and Reading Struggles**

While vocabulary growth comes naturally for the majority of children, for others to be successful in an academic setting, learning words can be a challenge. Students living in poverty, those from culturally or linguistically diverse (CLD) backgrounds, and those with language-learning disabilities are the most impacted. They are at a higher risk for struggles with word learning and literacy skills in school (Sedita, 2005; Montgomery, 2015).

*Socioeconomic Status*

Research tells us that "being poor does not cause language… impairments" (Nelson, 2010). However, children living in poverty often lack the stimulation that their more affluent peers experience. It is not unusual for families from low socioeconomic (SES) backgrounds to face daily challenges of meeting basic needs. The difficulties associated with the hardships of poverty impact levels of linguistic and cognitive stimulation (Christensen, et. al., 2016). Numerous studies have found that children from low SES homes hear fewer words and word types, are exposed to less syntactically complex sentences, and aren't engaging in dialogue with adults in the same ways as children in middle- to upper-income homes (Hoff, 2003; Hammer & Weiss, 1999; Pan, et. al. 2005). It should not be surprising that there is often a substantial gap in the vocabulary knowledge of children from low SES homes compared to their more affluent peers (Lee & Burkman, 2002). Children living in poverty may enter school with delayed language abilities due to limited input and experiences, putting them at risk for lower achievement scores, dropping out of school, and developmental language-learning disabilities (Hindman & Wasik, 2006).

*Cultural and Linguistic Diversity*

Children from CLD homes are also at risk for academic word struggles. One in 10 students are English-language-learners (ELLs) and comprise the fastest growing demographic in the United

States (American Speech-Language-Hearing Association, 2014). By 2030, some demographers anticipate that as much as 40% of school enrollment will be comprised of ELLs (Roseberry-McKibbin & Brice, 2013). Texas, California, and Florida boast a higher percentage at greater than 55% today (U.S. Department of Education, 2014). With the fast growth of this population, it is imperative that speech-language pathologists understand the potential impact of encountering these children in schools. ELLs can struggle with words, in part, because many begin learning English in elementary school, where the academic language register differs greatly from that of home (Sedita, 2005). Like their low SES peers, CLD children may lack the foundational background knowledge critical to building a strong oral vocabulary and making academic learning accessible. Furthermore, if a child enters school with a lower vocabulary in their first language, acquiring vocabulary in the second language is more difficult (Sweeny & Mason, 2011). ELLs may struggle to learn academic vocabulary at the same time they are learning to read. Literate English differs from spoken English (Sedita, 2005). It boasts a large number of synonyms, irregular verb conjugations, and words derived from other languages (Rudebusch & Rojas, 2016). It lacks a one-to-one sound-symbol correspondence, and dialectical differences in English pronunciation can influence phonemic awareness and early word-reading abilities for young children (Sweeny & Mason, 2011). As children make the shift from learning-to-read to reading-to-learn, this increasingly impacts success with words.

*Language-Learning Disabilities*

Reading and vocabulary difficulties among children with language-learning disabilities have been widely documented. Children with learning challenges have less practice assimilating words into their vocabularies because they often engage in fewer conversations and use fewer words in general (Montgomery, 2015). A low vocabulary compounded with difficulties with phonics and word analysis prevent many of these children from becoming independent readers (Sedita, 2005). Because they are often not reading on their own, they miss the exposure to literate English and the academic vocabulary contained in grade-level texts (Montgomery, 2015; Sedita, 2005).

For each of these groups, high-level vocabulary instruction becomes paramount. Insufficient vocabulary is enough to ensure each group's failure at reading and, in turn, failure in school (Biemiller, 2003). While a first appropriate step can be Tier 2 intervention in a Response to Intervention (RtI) model, many students often need more intensive vocabulary intervention. Early and consistent intervention in vocabulary learning can help prevent students who are already struggling from falling further and further behind their peers (Sweeny & Mason, 2011).

**Research/Evidence Base for Effective Vocabulary Intervention**

Vocabulary learning is dynamic and can be daunting. Society not only develops new words daily but also assigns new meanings for old words like "*tweet*" (e.g., birds "tweet" to communicate, and people can "tweet" on the social media platform Twitter). Students are expected to learn about 4,000 words per year in early elementary, but only about 400 words per year are directly taught by teachers (Frey & Fisher, 2007; Miller & Gildea, 1987). Conversation is not enough to make up the difference between the 5,000 to 7,000 words of everyday speech and what students must learn to meet academic demands (Frey & Fisher, 2007). How, then, do we effectively teach vocabulary so that our low-performing students can not only learn what they lack but keep up with future demands?

There is no one best method for vocabulary instruction (National Reading Panel, 2000). Research shows there is success with a variety of vocabulary practices, from providing kid-friendly definitions to acting out words to morphemic analysis (Sweeny & Mason, 2011). Most vocabulary is learned indirectly, but some must be taught directly. Likewise, vocabulary learning strategies also should include both indirect and direct teaching. Equally important, it should be intentional and tailored to the age and ability level of the child, focusing on the four areas of vocabulary development: listening, speaking, reading, and writing (Elleman, et.al., 2019; National Reading Panel, 2000; Sedita, 2005; Montgomery, 2015).

*Indirect Teaching*

Indirect teaching involves exposing children to a wide variety of words. Students don't learn vocabulary based on their age but on their experiences (Beck, et.al., 2013). Creating carefully crafted language-rich environments in which reading and conversations are frequent occurrences can foster vocabulary growth.

Studies have shown that the volume of reading is important for long-term vocabulary development; however, to learn new words from texts, children need more than just listening to read-alouds (Cunningham & Stanovich, 1998; Hindeman & Wasik, 2006). Words are learned incrementally over time through repeated exposures in a variety of contexts (Hirsh, 2003; Hindeman & Wasik, 2006; Stahl, 2005). Multiple readings of books can establish familiar background knowledge that provides a stable framework in which new words can be learned (Stahl, 2005; Hirsh, 2003). Authors Hindman and Wasik (2006) also suggest providing props that represent new words. Props can be used both during read-alouds and extension activities, enabling children to examine the objects and develop a "deep sense" of the words and their meanings (Hindman & Wasik, 2006).

Older children who are able to read can benefit from frequent independent reading (Montgomery, 2015; Cunningham & Stanovich, 1998). According to the Texas Reading Initiative (2002), "…the single most important thing you can do to improve students' vocabulary is to get them to read more." Challenging texts have a greater likelihood to contain unfamiliar words; however, texts with too many unknown words can make decoding new words difficult as vocabulary learning is, in part, dependent on words a child already knows (Sedita, 2015; Hoover, et. al., 2010). In a 2005 article, literacy consultant Joan Sedita recommends that children read both challenging texts for novel word exposure and easy texts for enjoyment.

Adults also can facilitate conversations and design activities related to texts. Word knowledge gained through reading is boosted when SLPs and teachers connect new words to the things children already know and then provide opportunities to practice using the new words meaningfully and accurately (Hindeman & Wasik, 2006; Nagy & Scott, 2000). Discussions during and following readings allow children to hear novel vocabulary modeled by adults in different ways and provide occasions for students to use those words in a supportive setting.

*Direct Teaching*

In contrast to indirectly teaching vocabulary through repeated exposures, direct teaching requires explicit instruction of target words. Explicit instruction can consist of pre-teaching vocabulary words prior to reading a book or engaging in an activity or redefining words in simpler terms. Studies have shown a large advantage in vocabulary learning during read-alouds when children were taught target words in advance compared to when stories were read with no explanation of targets (Johnson & Yeates, 2006). Additionally, substituting simpler words for more difficult words has shown to help lower-achieving students (National Reading Panel, 2000).

Other direct word-learning strategies have been proven successful as well. Teaching specific strategies such as word parts (suffixes, affixes, root words) and word structures (morphemes) can help students determine the meanings of words (Fisher & Frey, 2008; Sedita, 2005). For example, a student can conclude that an unknown word ending in "*-ing*" is very likely a verb or that the word "*disagreeable"* means "*not agreeable*" because the student has learned that the prefix "*dis-"*means "*not*." When choosing affixes to target, it is helpful to consider which are the most commonly used to give students the most power from their learning (e.g., prefixes such as un-, re-, in-, im-, ir-, il-, dis-, etc.) (Graves, 2016).

Using antonyms is helpful in establishing the extremes of a word's meaning for students; defining what a word is *not* can help to clarify what a word *is* (Powell, 1986). The Frayer model is a successful tool that encourages students to apply their prior knowledge of concepts, including antonyms, to learn a new word (Ilter, 2015). With this model, students create a graphic organizer of

a target vocabulary word by including their own definition, specific characteristics, examples, and antonyms or non-examples of the target.

Encouraging children to be “word conscious” is yet another direct strategy. According to the Texas Reading Initiative (2002), students who are word conscious enjoy learning and playing with words. Word consciousness is “having an interest and awareness of words” and learning how literate language is different from everyday conversation (Sedita, 2005). Literacy consultant Joan Sedita suggests asking students to find exciting uses of words when they read in order to share with other students and teachers. She asserts that using words to write poems, play games, and write stories can help students develop an awareness of the interplay between word structure, word order, and word parts.

Researcher and author Judy K. Montgomery (2015) identifies her recommendation for the top five vocabulary strategies in a recent presentation. She highlights a mixture of both indirect and direct strategies: engage students frequently with a wide range of books, enjoy word games and word play, teach word-learning strategies, be explicit, and be redundant. Regardless of the strategies recommended by experts, the common themes for successful direct and indirect teaching are high numbers of target repetitions and active engagement in learning (Butler, et.al., 2010; Stahl, 2005; Stahl, 1999).

*Repetition*

How much repetition is necessary to teach vocabulary? There is varying research regarding how many times a child must be exposed to words before a word is learned. Typical children may experience a “word spurt” around 18 months and lasting into early elementary when their vocabularies grow rapidly (Ganger & Brent, 2004). Toddlers exemplify this vocabulary growth during a period called “fast mapping” when words are learned with as little as one casual exposure (Heibeck & Markman, 1987; Dollaghan, 1985). Other literature suggests that typically developing children need to encounter a word anywhere from six to 30 times before word learning occurs (Teng, 2016; McCormick, 1999). For children at risk for word struggles, numerous findings, including those of the National Reading Panel (2000), reiterate that repeated exposure of words in various contexts increases vocabulary development (Stahl, 2005; Sweeny et.al., 2011; McGregor et.al., 2007). Children benefit from constant reinforcement of words and multiple ways to practice them. Background knowledge of contextual material has a significant impact on the speed of learning (Hirsh, 2003, McGregor et.al., 2007). The number of times a child needs exposure to a word often depends on how well the student knows existing words and how they relate to the new word.

*Engagement and Learning*

With repetitive tasks come the challenge of consistently engaging children in learning. Research has shown that children learn more when they are active learners as opposed to passive participants (Sweeny & Mason, 2011; Montgomery, 2015). So, how do we entice children to want to engage in word learning activities when literacy tasks are inherently difficult? The simple answer is by making learning vocabulary meaningful and relevant; create personal interest in word knowledge, and give students a reason to buy into their own learning (Sweeny & Mason, 2011).

For younger students, engagement strategies can include facilitated discussions during read-alouds (Hindman & Wasik, 2006). Several studies have shown that children learn more new words when adults ask questions that encourage children to think about the book’s information than they do when adults only use labels (Ewers & Brownson, 1999). Questions presented during readings can provide children with opportunities to not only use the target vocabulary but also to gain deeper understanding of words by relating content to real life (Hindman & Wasik, 2006). Incorporating props and materials related to story-vocabulary targets also can enhance interest in words. Manipulatives are often highly motivating to younger students and can help facilitate better understanding of words because they are concrete representations of the target language. As an extension, allowing children to use the same props during free play provides an avenue in which they can use and experience target vocabulary in a different context (Hindman & Wasik, 2006).

Engaging older students in vocabulary learning should include involving them in the process of their own learning (Pierce & Fontaine, 2009). Encourage students to be involved in the metacognitive and metalinguistic tasks of both thinking about their thinking and thinking about words: What do I know about this word? What do I think this word means? Spend time making lists of words together, predict meanings together, and act out words to facilitate new learning (Fry, 2004; Spencer & Guillaume, 2006). Engage groups of students by rating and discussing their and others' use of words. Further increase personal interest by encouraging students to write their own definitions and original sentences with target words. All of these tools can help create a motivating language environment critical for learning academic vocabulary (Elleman, et.al., 2019).

**Choosing Targets**

One of the most challenging aspects of vocabulary intervention is choosing target vocabulary. How do we know which words are the right words to choose?

*Vocabulary Tiers*

For children who are nonverbal or low verbal, a core vocabulary approach is often the best place to start as development of core vocabulary promotes generative language (Cannon & Edmond, 2009). Intervention should focus on functional, high-frequency words of various types (Paul, et al., 2018). Words may be related to the curriculum or student interests, but the targets should be individualized and agreed upon by the team working with the student.

For children with a stronger vocabulary base, choosing targets becomes a bit more difficult. Roth and Troia (2005) recommend that instructors know what is important to students. In their book, *Bringing Words to Life*, Beck and colleagues (2013) share their Three-Tiers Framework that describes the substance of a mature vocabulary: Tier 1 consists of common words that rarely require instruction (e.g., bird, house) while Tier 3 words occur infrequently and are usually related to a specific topic (e.g., diadochokinetic, epidermis). Tier 2 is where we find words that can have the biggest impact when targeted. Accord to Beck, et.al. (2013), Tier 2 words are those that are found infrequently in conversation but often appear in written text (e.g., circumstance, predict). These words are not necessarily explicitly taught but are expected to be part of a student's vocabulary because of their inclusion across multiple subject areas. Tier 2 vocabulary words can have a powerful impact on a child's vocabulary and make a good starting place for selecting targets.

Another consideration for the school-based SLP when selecting targets is matching target vocabulary to grade-level expectations. For some students, this means reviewing content standards in all areas for their enrolled grade; for others, it means reviewing standards for previous grades to identify content they should have already mastered. It is important to understand the communication expectations subsumed in the standard and their implications on potential targets. For example, standards for kindergarteners in the state of Texas include retelling stories and parts of stories. Given this expectation, it could be important to consider targeting vocabulary important to this skill, such as "*after"* and "*before*."

*Teacher Input*

Teachers can play a critical role in target selection. Current research shows that collaborative classroom-based vocabulary instruction is more effective than both pullout instruction or classroom-based instruction with no teacher collaboration (Throneburg, et al., 2000). There are greater gains in all aspects of vocabulary learning (listening, speaking, reading, and writing) in classroom-based collaborative services (Bland & Prelock, 1995; Farber & Klein, 1999). When selecting targets, collaborate with the student's classroom teachers. Ask them for their vocabulary word-lists and lesson plans. Look for vocabulary words that will support content knowledge across subject areas, and ask teachers what they expect their children to know. What words will help your student be the most successful in the classroom? Encourage teachers to indirectly and/or directly facilitate the target words during classroom activities to further promote learning and generalization.

*Curriculum*
Words from reading passages also may be appropriate targets. Books related to the current curriculum content of classrooms often provide excellent choices. Collaborating with teachers to choose content will not only ensure relevance when selecting vocabulary words but also will improve the likelihood of learning because the content and context will provide a more familiar framework for word learning. When choosing targets from reading selections for older students, pre-read the material and choose no more than five words that will be helpful across content areas (Tier 2 words). Teachers also can provide relevant reading material. It is often helpful to reteach or pre-teach classroom content for children struggling with vocabulary. Ask teachers for copies of textbooks or reading passages typically used in their classrooms.

*Student Choice*
Involve your students in choosing target vocabulary. Research suggests that using materials of interest fosters a deeper understanding of content by facilitating emotional connections to personal and relevant experiences (Tobias, 1994). Let students collaborate with you to choose appropriate word targets. Then teach them to identify their own level of understanding by rating what they know about individual words: (1) I've never seen it; (2) I've heard of it, but I don't know it; (3) I think it has something to do with…; or (4) I know it (Dale & O'Rourke, 1986). By encouraging this reflection, students improve their word consciousness, become more aware of new words when they encounter them (Sedita, 2005), and can add the words they don't recognize to their list of vocabulary targets.

**Defining "Knowing"**
When we choose target vocabulary words, we think critically about the level of mastery we expect our students to attain and how we will define "knowing." Word knowledge is a continuum of knowing that develops over time (Butler, et.al., 2010). Our goal as school-based SLPs is for children to develop a strong enough grasp of vocabulary that they can understand and use words effectively in the classroom. Stahl & Kapinus (2001) state that children "know" a word when they "know the word's definition and its logical relationship with other words… [in addition to] how the word functions in different contexts." The reality is, however, that an understanding this deep may be several stepping stones away for many of our students. In the interim, knowledge may be defined as accurately choosing a synonym from a list, using the word correctly in a sentence, providing an explicit definition, and/or providing multiple meanings for a word, etc. What we choose will be based on student need and will shape the next-step decisions for our students.

**Final Words**
Word learning is a complex, multidimensional process critical to academic success. When students struggle to acquire words, the impact on learning can be profound. Children with poor vocabularies have a harder time learning to read; children who struggle with reading read less; children who read less lose out on opportunities to learn new words; children who learn fewer words take longer to understand new ideas and concepts; and they will continue to fall behind stronger readers in school (Sedita, 2015; Johnson and Yeates, 2006; Biemiller, 2003; Wise, et al., 2007). SLPs play a critical role in mitigating this breakdown by strategically creating an atmosphere that supports and develops word-conscious students. After all, words are important. They have the power to bring a scene from our imagination to life and enable us to share our deepest thoughts and feelings. When using words is difficult, we intervene. Teaching vocabulary is a journey, and through it, we strive to design language-rich environments that celebrate words and create memorable vocabulary moments.

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