The Power of Content-Rich Vocabulary Instruction

by Tanya S. Wright and Susan B. Neuman

Mrs. Hill (pseudonym) asks her kindergartners to observe the weather through the classroom window and then to draw a picture of their observations. All of the children look out the window. As Mrs. Hill walks around the classroom and looks at their drawings, she is surprised to see that many children are not completing the task as she had intended. There is snow on the ground outside, but it is not currently snowing. Yet, several children's pictures include snowflakes in the sky. It is a cloudy day and the sun is not visible, but some children are drawing suns in the upper corners of their pages. Often these suns include smiley faces and sunglasses! Some children have drawn a house or people in their pictures, but of course there are no houses or people on the playground outside the window.

This vignette is a true story from a real classroom. While these kindergartners knew that *observe* meant they should look out the window, they did not grasp the nuances of an observation in the context of a science lesson. This depicts one of many reasons that *vocabulary* (i.e., knowledge of words meanings) can seem daunting to address. There are tens of thousands of words to learn, and even when children have a general sense of what a word might mean, words often have shades of meaning or completely different meanings across contexts (Nagy & Anderson, 1984). Yet this occurrence also shows that, while a formidable task, it is absolutely imperative to focus on children's vocabulary development across all content areas and contexts starting in the early years. The ability to understand and use academic vocabulary is essential for all students' participation in the day-to-day business of school: engaging in lessons and activities, understanding and contributing to conversations, and, of course, comprehending texts. For children with dyslexia, strong vocabulary skills may help to compensate for difficulties with phonological processing as students learn to read (Snowling, Gallagher, & Frith, 2003).

For these reasons, over the past several years, we have been increasingly focused on supporting young children's vocabulary development across content areas using a set of instructional practices that we refer to as content-rich vocabulary instruction (Neuman & Wright, 2013; Wright, 2014). Research demonstrates that educators can and should provide vocabulary instruction for young children. This article begins with a review of that research followed by a more detailed description of high quality vocabulary instruction.

Why is vocabulary instruction important for young children?

Vocabulary matters for literacy and for school success. Countless studies over decades of research have demonstrated that young children with stronger *vocabulary knowledge* (i.e., knowledge of word meanings) become better at text comprehension and are more successful in school than their peers with weaker vocabulary knowledge (e.g., Cunningham & Stanovich, 1997). Even children who are fluent decoders will struggle with reading comprehension if they do not know the meanings of words in text (Chall & Jacobs, 2013). Recently, with the adoption of the Common Core State Standards (National Governor's Association, 2010) in most states, vocabulary demands for K–2 students have increased rapidly as young children are now required to read, and be read to, from informational texts.

How does this focus on informational text relate to vocabulary? While vocabulary knowledge is critical for comprehension more broadly (Nagy & Townsend, 2012), the vocabulary found in informational texts may create a particular set of challenges for young children compared to vocabulary found in fiction (Hiebert & Cervetti, 2012; Wright, 2014). Informational texts often include words with specialized meanings in particular subject areas that are different from the everyday meaning of the word (i.e., the meaning of *observation* in the science lesson above). Difficult vocabulary is repeated more often in informational text than in fiction (i.e., a book about plants may repeat the word *photosynthesis* many times), so a confusing word meaning can cause comprehension problems repeatedly within the same book. Most challenging is that new words in informational texts often represent new concepts for young children (i.e., understanding the word *citizen* in social studies requires learning new ideas about legal membership in a country) compared to fiction where vocabulary more often represents more sophisticated words for known concepts (i.e., *enormous* means very big). These new concept words can rarely be addressed with a brief explanation if we want children to fully grasp their meanings. Therefore, it is more critical than ever to support children in learning new words.

While vocabulary demands have increased, children arrive at school with vast differences in their vocabulary knowledge (Farkas & Beron, 2004; Biemiller & Slonim, 2001). Children growing up in poverty are likely to have less exposure to school vocabulary in their homes compared to their more advantaged peers (Hart & Risley, 1995). Vocabulary gaps by socio-economic status are evident as early as 18 months of age (Fernald, Marchman, & Weisleder, 2013), and they remain and continue to have an impact on learning throughout children's formal schooling (National Center for Education Statistics, 2012). Unfortunately, the evidence indicates that schooling currently does little to change these entrenched patterns or alter children's trajectories (Skibbe, Connor, Morrison & Jewkes, 2011). Therefore, improving vocabulary instruction with the goal of supporting all students in their vocabulary development is a pressing need.

Continued on page 26

Evidence from studies of vocabulary instruction is resoundingly clear: when vocabulary is taught to young children, children learn vocabulary (Marulis & Neuman, 2010). This holds true for all student populations including children with risk factors for struggling in school (i.e., low-income background, English language learners, children with language delays) (Marulis & Neuman, 2013). Combined findings from 75 studies show that young children benefit most when they are provided with both implicit and explicit vocabulary instruction. *Implicit instruction* is when the teacher creates a vocabulary-rich environment, where new words are used throughout the day during conversations and read-alouds. *Explicit instruction* is teaching the meanings of particular words.

These findings that both exposure and word teaching are important make good sense. Since young children cannot yet read independently, their primary source for exposure to new vocabulary is the oral language of adults in their environment, including their teachers (Dickinson & Porche, 2011). Young children gain initial information about new vocabulary as adults use new words during read-alouds or in their speech. Over time and with repeated exposure, children slowly learn new word meanings incidentally in this way (Nagy & Scott, 2000). Adding carefully planned instruction for a subset of new words can give a boost to this process by ensuring that children learn these words more quickly.

Unfortunately, children may be receiving very little systematic vocabulary instruction in their classrooms during the early years of schooling. In our observation of 660 hours in kindergarten classrooms, we found that teachers explained word meanings in teachable moments, but rarely addressed vocabulary in a more intentional and programmatic manner (Wright & Neuman, 2014). More troubling was the finding that teachers explained the fewest words and the least challenging words in classrooms serving the lowest income students. Our studies of vocabulary instruction in commonly-used PreK and kindergarten language arts curriculum materials, as well as of early childhood teacher education textbooks, show that these materials provide few supports for teachers in providing vocabulary instruction (Neuman & Dwyer, 2009; Wright & Neuman, 2013; Wright & Peltier, in press).

Together, this research points to several key ideas. First, with vocabulary gaps evident as early as toddlerhood and new national standards that increase vocabulary demands, it is more imperative than ever for teachers to support children's vocabulary development in the early years of school. Second, perhaps unsurprisingly, vocabulary instruction supports children's vocabulary development. Numerous studies show that good vocabulary teaching can make a difference. Third, in many early childhood classrooms, implementing evidence-based vocabulary instruction will mean some change. Teachers will need to focus on vocabulary in new and different ways.

What is content-rich vocabulary instruction?

Studies in early childhood classrooms have found that integrating vocabulary instruction and content area learning leads to improvement in young children's vocabulary development (French, 2004; Leung, 2008). This integrated vocabulary learning seems to be especially effective for English language learners (Pollard-Durodola, Gonzalez, Taylor, Soares, & Carvalho, 2012) and children from low-income backgrounds (Neuman, Newman & Dwyer, 2011), two populations that may arrive at school with more limited English vocabulary than their peers (Hart & Risley, 1995; Graves, August, & Mancilla-Martinez, 2013). This type of integrated learning helps children to build connections between words and ideas, which can accelerate children's vocabulary growth and their knowledge development.

When teachers engage in content-rich vocabulary instruction, they focus on the vocabulary that children need to understand texts, engage in discussions, and build their knowledge in the content areas that matter for school: literature, mathematics, science, social studies, and the arts. Content-rich vocabulary instruction is different from the vocabulary instruction that is recommended in commonly used language arts curricula for early childhood (Neuman & Dwyer, 2009; Wright & Neuman, 2013). These curricula typically mention a few disconnected words to teach each week (i.e., *menu*, *platypus*, and *environment*) and may ask children to learn these definitions with no real context. Instead, content-rich vocabulary instruction is vocabulary teaching that is integrated into the content that young children are learning in their classrooms, so that building vocabulary is an integral part of learning about the world. While children's vocabulary knowledge may range broadly, teachers support all children in the classroom to build the vocabulary they need to participate actively in learning experiences. Content-rich vocabulary instruction is programmatic and explicit because teachers plan words to teach across all content areas during the school day. Here is what content-rich vocabulary instruction is not: isolated vocabulary lessons, brief mentioning of word meanings, rote memorization of words, looking up lists of words in the dictionary, or vocabulary teaching that is relegated only to read-alouds.

What might this type of integration look like? In Jada's prekindergarten classroom the children are going to study the human body. Jada thinks about important concepts that she wants children to learn, such as human bodies grow and change throughout our lives, and human bodies have special parts for particular purposes. Jada goes to the local library to finds books about the human body to read aloud to the children in her class. She looks through the books to find words that four-year-old children may not know but will need to know to understand these ideas. These include words for body parts (*elbow*, *skeleton*, *eyebrows*, *organ*, and *abdomen*) but also words that relate to how human bodies work (*breathe*, *oxygen*, *senses*, *movement*, *growth*, *infant*, and *adult*). She will integrate these words throughout the students' instruction by teaching word meanings explicitly, but also by making sure that children have opportunities to use and practice these words during read-alouds, as they play in centers, and during other activities.

Overall, this type of instruction aligns with many ideas from research on children's word learning. Studies of word learning

show that children learn vocabulary incrementally, when a word is associated with its meaning repeatedly in multiple, meaningful contexts (Coyne, McCoach, & Kapp, 2007; Stahl, 2003). Therefore, effective vocabulary instruction requires more than a one-time explanation in a teachable moment or a brief explanation during a read-aloud. Rather, the idea is to structure opportunities for children to learn about and practice using words numerous times. When vocabulary instruction is integrated into content area learning, repetition occurs naturally. Children have opportunities to review and practice the same word many times as they encounter the same word in multiple books on a topic, or when they revisit these ideas during conversations, activities, or centers.

Words represent knowledge (Anderson & Freebody, 1981). Returning to our first example, a child who understands that during science lessons the word *observe* means *to pay attention to and record exact details* understands an important scientific practice. Substantial evidence indicates that both general knowledge and topic specific knowledge have an impact on comprehension (Cervetti & Hiebert, 2015; Kaefer, Neuman, & Pinkham, 2014). Think about how much easier it is to understand a newspaper article when you are familiar with the topic and the terminology compared to a topic that is completely new. Therefore, it makes sense to think of vocabulary and knowledge as working synergistically to support comprehension. Teachers can support these connections by linking new words to one another (e.g., *evergreen* and *deciduous* are two types of plants) and to key concepts to be learned (e.g., *evergreens* and *deciduous* plants survive in different habitats).

A practical benefit of this type of instruction is that vocabulary teaching and learning can be built across curricula that already exist in the classroom. Rather than creating a specific time of day for isolated vocabulary learning, children are actively learning about words during all parts of the day. While it would be impossible to teach every word explicitly, we select words that support the work that children are doing in school.

How to Provide Content-Rich Vocabulary Instruction

Teachers can get started by taking the following practical steps:

1. Create a rich oral language environment, including activities that promote vocabulary development such as reading aloud from informational text as well as fiction. Also, use "big" words and correct terminology during content area learning and conversations throughout the day (e.g., teach children *synonym* rather than *a word that has the same meaning*; teach children *quotation marks* rather than *talkie marks*) and encourage children to use the challenging vocabulary during discussions.

2. Each week select vocabulary to teach from read-alouds and content you are teaching. Choose sets of texts on a topic of study and look across these texts to find important words that come up again and again. Examine your science, social studies, and mathematics curricula for vocabulary to support learning in these content areas.

3. Introduce selected words to children. Explain word meanings to children using child-friendly definitions, but don't stop there (Beck & McKeown, 2007). Make sure that children say the new word aloud. This helps children to store the sound of the word in their memories. Also, help children make connections across words. Discuss the ways that new vocabulary words relate to one another in meaning (*sleet* and *hail* are two types of precipitation) and to children's existing knowledge (Is *sleet* a type of precipitation that happens when there are cold or warm temperatures?). Making these connections supports children's vocabulary development and builds their knowledge (Neuman, Newman, & Dwyer, 2011). Also, point out meaningful word parts (Can you hear *tri* at the beginning of *tripod*? *Tri* means three like in *tricycle* and *triangle*).

4. Create opportunities for children to review and practice using new vocabulary in meaningful contexts (e.g., during a science exploration or during discussion of a read-aloud). Children strengthen their knowledge each time a word and its meaning is encountered (Biemiller & Boote, 2006). Read the same book multiple times or read a set of books on the same topic to provide repeated opportunities for children to encounter new vocabulary. Interactive discussion during read-alouds, engaging activities, and socio-dramatic play all support vocabulary development by providing opportunities for children to practice using new words (Harris, Golinkoff, & Hirsh-Pasek, 2011; Mol, Bus, & de Jong, 2009).

5. Monitor children's progress. Watch and listen to see if children are able to use new words that have been taught. Like all learning, how quickly children pick up new words will vary. While all children need many repetitions to learn new words, some will need more than others (Loftus & Coyne, 2013). Track this learning and provide extra opportunities for children to practice (Neuman & Wright, 2013).

The Power of Content-Rich Vocabulary Instruction

Vocabulary and knowledge are powerful determinants of children's comprehension and success in school. Paying attention to vocabulary is important, but when curricula emphasize a few disconnected words each week or teachers mention word meanings in the teachable moment, it is not enough to support these critical domains of learning. Rather, content-rich vocabulary instruction focuses on building word knowledge during meaningful learning experiences. Not only are these instructional practices an effective way to build vocabulary, but this type of learning is engaging for young children. Moving toward thinking of vocabulary in this systematic way will require instructional change and professional development, but it is critical to teach children the words they need for learning and for school success.

Continued on page 28

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