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SRA FLEX LITERACY™

Vocabulary and Background Knowledge: Important Factors in Reading Comprehension

Vocabulary and background knowledge are widely discussed as critical factors in learning (Fisher & Frey, 2009; Kamil et al., 2008). Vocabulary is one indicator of a learner's background knowledge. If a learner understands a word, he or she probably has an understanding of the concepts related to the word. A study of reading comprehension found that background knowledge and vocabulary were the strongest predictors of comprehension and indirectly influenced whether a student would apply problem-solving strategies when meaning breaks down (Cromley & Azevedo, 2007). In other words, vocabulary and background knowledge do not simply sit dormant until needed; they mediate the extent to which other reading comprehension behaviors are utilized. Instruction of comprehension strategies is likely to be less effective when background knowledge is overlooked.

The demand placed on vocabulary and background knowledge accelerates as students get older. Students are required to activate and apply previously learned concepts in new ways. The discipline-specific literacy required increases as well, as students encounter teachers and texts using unfamiliar academic language and structures (Shanahan & Shanahan, 2008). Students must read, discuss, and write about subjects that are conceptually more difficult, often drawing from background knowledge learned in other subject areas.

The Common Core State Standards are likely to challenge students further as science and history/social studies teachers join English teachers in preparing college- and career-ready students to comprehend informational texts. The CCSS place an emphasis on the use of complex texts that require students to read closely in order to discuss concepts, provide evidence, and support claims. The ability to do so depends in large part on the vocabulary and background knowledge readers bring to the text.

Vocabulary Defined

The vocabulary demands in schools are intense. Students are expected to learn thousands of words per year in multiple content areas. Researchers have found that vocabulary knowledge is an important factor in the learning process of successful students (Martino & Hoffman, 2002). For example, Espin and Foegen (1996) found vocabulary knowledge to be a significant predictor of content area performance, and Farley and Elmore (1992) found vocabulary knowledge to be a stronger predictor of reading comprehension than most other variables, including cognitive ability.

Students need to learn three types of vocabulary (Vacca & Vacca, 1999):

- Generalized—commonly used terms, often with widely agreed upon definitions such as *deny, allow,* and *fight*. In some classification systems, these are known as Tier 1 words.

- Specialized—interdisciplinary terms with specific, often subtle, meanings and multiple-meaning words such as *loom, advance,* and *rivet*. In some classification systems, these are known as Tier 2 words. These are referred to as general academic terms in the Common Core State Standards.

- Technical—discipline-specific terms such as *senate, Bill of Rights,* and *equator*. In some classification systems, these are referred to as Tier 3 words. These are known as domain-specific terms in the Common Core State Standards.

Most content area teachers are very comfortable teaching the technical terms in their discipline. Unfortunately, this is insufficient, because texts use all three types of vocabulary and students require instruction in each to fully comprehend the content (Flood, Lapp, & Fisher, 2003). Teachers must develop students' vocabulary to enable students to discuss various academic disciplines, as well as convey their thinking about the subjects they study. *SRA FLEX Literacy* instructs students in all three types of vocabulary in each experience, ensuring that students gain valuable vocabulary and background knowledge in various disciplines.

The Relationship between Vocabulary and Background Knowledge

Vocabulary is the means by which learning is articulated. In both writing and discussion, the ability to use vocabulary accurately and incisively is a marker of one's command of the topic. In fact, vocabulary is often used as a proxy to measure how learned a person is. Hart and Risley's (1995) landmark study of vocabulary knowledge at school entry age showed that the level of vocabulary comprehension predicts later achievement. Similarly, Stahl and Fairbanks (1986) found that vocabulary knowledge correlated to grades and standardized test scores.

Deep vocabulary meaning is built through a growing bank of background knowledge that is continually reorganized and expanded. This deep bank is known as schema, a network of related knowledge that forms a mental structure to understand complex systems. As new knowledge is learned, the schema for the vocabulary becomes more sophisticated. For example, a learner's understanding of the term *revolution* could move from the definition of a single event to being applied to detect the commonalities between the Glorious, American, and French Revolutions. Background knowledge about these events leads to a deeper understanding of a new event.

Throughout *SRA FLEX Literacy's* digital experience, students engage in activities that focus on general academic words with repeated exposure in various contexts to ensure deep learning. Each lesson introduces three vocabulary words, which are used and reviewed throughout the lesson and reviewed again in a later lesson. This exposes the students to each vocabulary word several times, reinforcing the students' general comprehension of each word and how each word can be utilized within various academic disciplines.

The Impact on Reading Comprehension

Perhaps the most well-known effect of vocabulary and background knowledge is their ability to directly influence reading comprehension (e.g., Stahl, Hare, Sinatra, & Gregory, 1991). For instance, when reading an abstract of a scientific article, considered to be the most difficult kind of text, educators are more likely to understand one from the *American Educational Research Journal* than from the *American Journal of Nursing*, because most of these educators don't have the vocabulary and background knowledge to understand advanced medical terminology. The more extensive a reader's vocabulary and background knowledge are, the easier it is to acquire new information offered by a text (Alfassi, 2004). It is therefore important that students' vocabulary and background knowledge are developed as they get older and rely more heavily on discipline-specific texts.

Vocabulary and background knowledge also indirectly affect reading comprehension. Fluency, an important contributor to overall reading comprehension, is heavily impacted by word knowledge and the level of background knowledge a learner possesses about the topic (Klauda & Guthrie, 2008). The ability to infer meaning in text is positively influenced by the level of vocabulary and background knowledge the learner has (Tarchi, 2009). These are especially important considerations for middle school learners, as some of the highly supportive organizing structures of elementary reading give way to more complex materials associated with older students.

In *SRA FLEX Literacy*, deep vocabulary learning is accomplished as students engage in projects that allow them an opportunity to learn eight domain-specific words through repeated use. For example, the Elementary System project called "What's the Weather?" features these eight domain-specific words: *climate, data, forecast, humidity, precipitation, season, temperature,* and *weather*. This allows students to develop both the vocabulary and background knowledge to better comprehend discipline-specific texts.

As an example of the impact that vocabulary has on content area learning, Tarchi's (2009) study of seventh-grade students found that those who possessed a greater bank of topical knowledge about history performed better on measures of reading comprehension of history texts. The author speculated that this was due in part to the discipline-specific need to form causal relationships between events in order to understand their significance, stating "the more facts the reader knows about a topic, the better he/she will understand a text concerning that topic" (p. 419). The background knowledge about an era serves to ground the new learning that will occur in the lesson. In *SRA FLEX Literacy*, students also engage in project-based learning activities that facilitate connections between ideas and words to help them process word meanings.
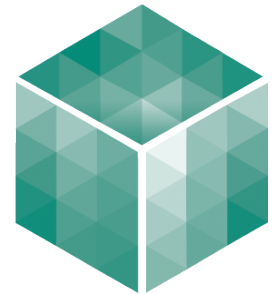
Conclusion

Vocabulary and background knowledge have a profound influence on the ability to comprehend what is read. Their effect can be direct, such as knowledge of the topic, as well as indirect, such as the ability to resolve problems when meaning is lost. Evidence of one's background knowledge can also be seen in the vocabulary used in oral and written language, and the ability to acquire new vocabulary is linked to background knowledge. In the rush to teach new information, it can be tempting to overlook vocabulary and background knowledge instruction. But to do so is to build upon an unstable foundation and rob students of important tools for successful comprehension.

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