

How Do I Teach Linguistic Knowledge?

Linguistic knowledge refers to one's understanding phonology, syntax, and grammar. It is a critical element in learning to read. Here are some ways to assess a student's linguistic knowledge (SEDL, 2001):

- *Phonology.* To assess phonological skill, play the “same or different” game by generating pairs of words that either are identical or differ in some subtle way. Say them aloud and ask if they are the same or different. Most children should not miss hearing the different ones. Sometimes children can hear the differences between similar-sounding words, such as *glow* and *grow*, but have difficulty articulating that difference in their own speech. Difficulty with articulation does not mean difficulty with perception. When a child mispronounces a word, say the mispronounced word back to the child as a question. The child with normal phonologic skills will repeat the statement, trying to make you understand the meanings.
- *Syntax.* The rules of English prohibit the haphazard arrangement of words in a sentence. Poor syntax can make meaning ambiguous (see Chapter 2). One way to assess syntactic skill is to give the children sentences with a key word missing. Ask them to supply the word that would correctly fill the blank. Remember that a child's answer may not make sense, yet still be syntactically correct. Develop syntactic skills by helping children build more complex sentences. For example, after showing a short video, ask students to describe something they saw or heard (“I saw a tree” or “I heard a bird”). Then ask them to build their sentences (“I saw a tree and heard the bird singing”).
- *Semantics.* Semantics describes meaning. One way to assess semantics is to create sentences and stories that have logical inconsistencies and see if the children can detect them (“Mary went to the store because she enjoys staying home”). Instructional activities that develop semantics include asking children to substitute words (synonyms) that would have the same meaning in context, and suggesting that they use context to guess the meaning of unknown words.

Text Comprehension

As we mentioned earlier, just because readers are able to sound out words does not guarantee that they will comprehend what they read. Many reading teachers have witnessed group reading sessions where students could sound out a story with great effort but really had little understanding of what had been read. Children who are first learning to sound out words are using substantial mental effort, so fewer cerebral resources remain for the cognitive operations needed to comprehend the words being read aloud. It is critical for children to develop fluency in word recognition. When they are fluent, word recognition requires far less mental effort, freeing up the child's cognitive capacity for understanding what is read. Thus, explicit instruction in word recognition to the point of fluency is a vital component for text comprehension.

Tan and Nicholson (1997) conducted a study that showed the importance of word-recognition instruction to the point of fluency. Struggling primary-level readers who were taught new words with instruction that emphasized word recognition to the point of fluency (i.e., they practiced reading the individual words until they could recognize them automatically) answered more comprehension questions correctly than did

students who experienced instruction emphasizing individual word meanings (i.e., instruction involving mostly student-teacher discussions about word meanings). Having a student-teacher discussion about the reading passage topic, prior to actually reading it, improves comprehension, even in poor readers. Prior knowledge of the passage topic was found in one study to significantly increase fluency and reduce reading errors in poor readers (Priebe, Keenan, & Miller, 2012). Possessing prior knowledge of the reading topic could be stimulating neural networks and visual processing sites, thus making word recognition less challenging.

Text comprehension occurs when readers derive meaning as a result of intentionally interacting with the text. Such comprehension is enhanced when readers actively relate the ideas represented in print to their own knowledge and experiences and can construct mental representations in their memory. Hence, good readers are both purposeful and active. Purposeful means they may read to find out how to use a computer, read a magazine for entertainment, read a classic novel for enjoyment, read a guidebook to gather information about a tourist spot, or read a textbook needed for a course. Good readers are active in that they get the most out of their reading by using their experiences and knowledge about the world, their understanding of vocabulary and language structure, and their knowledge of reading strategies. When problems with reading occur, they know how to solve them.

The scientific research on text comprehension reveals the following:

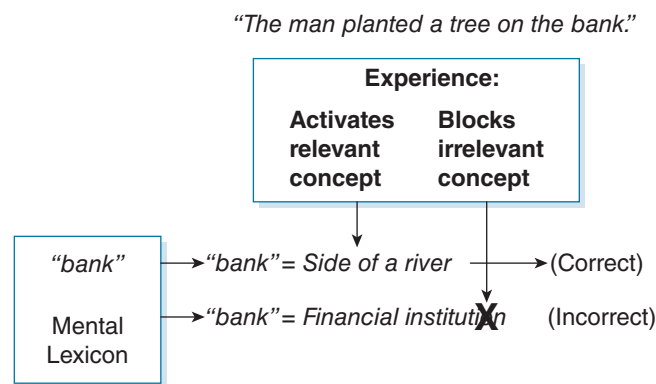
- Comprehension is a complex interactive process that begins with identifying words by using knowledge outside the text, accessing word meaning in context, recognizing grammatical structures, drawing inferences, and self-monitoring to ensure that the text is making sense. When confronted with several meanings for a word in a sentence, the brain needs to select the one that makes sense in context. How this happens is the subject of much research. One possible mechanism, called the *structure-building framework* (Gernsbacher, Robertson, Palladino, & Werner, 2004), suggests that readers construct meaning by activating mental representations of concepts that are relevant to the text and blocking those that are irrelevant. Figure 4.1 illustrates the cognitive mechanism, using the example of a reader encountering the sentence “The man planted a tree on the bank.” *Bank* has two common meanings, but only one fits the context of this sentence. The mental lexicon may activate both at first, but skilled readers quickly suppress the irrelevant meaning. Less skilled readers, however, spend more time considering alternative meanings and may not make the correct selection in the end. Many English words have dozens of meanings, depending on their context. Thus, developing the ability to quickly block irrelevant meanings becomes a necessity for reading fluency and comprehension. (This process is similar to the syntactic blocking described in Chapter 1, whereby syntactic rules are blocked for the formation of irregular verbs.)
- Text comprehension is improved by direct, explicit instruction that helps readers use specific strategies to make sense of the passage. These strategies represent the purposeful steps that enable readers to reason strategically whenever they encounter barriers to understanding what they are reading. Comprehension strategies include self-monitoring, graphic and semantic organizers, answering questions, generating questions, recognizing story structure, and summarizing.

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- Teaching comprehension strategies in the context of specific academic areas can be effective at all grade levels. Cooperative learning is a particularly useful technique for helping students to understand content-area texts (see Chapter 7).

Figure 4.1 This diagram illustrates how the brain deals with multiple meanings of a word. Spoken language experience activates the relevant meaning while blocking the irrelevant meaning.



How Do I Teach for Text Comprehension?

Text comprehension occurs when the brain’s frontal lobe is able to derive meaning by processing the visual and auditory input that result from reading with the reader’s prior knowledge. Teachers should emphasize text comprehension as early as the primary grades, rather than waiting until children have mastered reading basics. The basics of decoding can be learned in a few years, but reading to learn subject matter does not occur automatically and requires constructing meaning at all grade levels.

Start Teaching Comprehension Strategies Early. At what grade level can teachers begin to include instruction in comprehension strategies? Tradition curricula have favored honing word-recognition skills in the primary grades while developing comprehension skills in the later grades. Research studies suggest, however, that instruction aimed at improving comprehension (i.e., instruction beyond word-recognition) does make a significant impact on literacy during the primary years (NRP, 2000; Stahl, 2004). Student reading achievement in the primary grades improved when decoding and word recognition were taught systematically with comprehension strategies. This approach was particularly effective in raising reading achievement for children in high-poverty schools (Taylor, Pearson, Clark, & Walpole, 2000).

The instructional approaches that have received the strongest support from scientific research are the following (NIFL, 2001; Stahl, 2004):

- *Comprehension monitoring.* This is a self-monitoring strategy to help students recognize when they understand what they are reading and when they do not. They also learn appropriate strategies for resolving problems in comprehension. Metacognition (thinking about our own thinking) is an effective means of monitoring comprehension. Before reading, simply ask your students to clarify their purpose for reading this text and preview the text with them. As part of the preview, ask the students what they already know about the content of the selection. During reading, they should monitor their