

Vocabulary: What words should we teach?

Vocabulary is crucial for successful reading, but how should teachers support students who are behind their peers, and what words should they teach? **Andrew Biemiller** explains

SUCCESSFUL READING REQUIRES BOTH success at reading words *and* knowledge of the words read – a prerequisite to comprehending text. We now know that vocabulary is the best predictor of reading and language comprehension by the time children are halfway through elementary school. For example, kindergarten general vocabulary is the best predictor of grade 3 or 4 reading comprehension. Moreover, it has also been shown that grade 1 general vocabulary is a strong predictor of reading comprehension in grade 11. Researchers have shown that when specific vocabulary needed in particular texts is taught, comprehension of those texts is improved.

During the primary grades (kindergarten to grade 2), average children acquire 1,000 root word meanings per year. A word such as *rock* is a root word. Each root word meaning has many related meanings created with prefixes and suffixes (e.g., *rocks*, *rocky*). These are “derived” words. If we include all word meanings, children probably know three to five times more meanings than just the root meanings.

I estimate that the 25% of children with the lowest vocabularies acquire roughly 400 fewer root word meanings each year than their average peers, both before and during the primary grades. Thus, if adequate vocabulary is needed for grade-level reading comprehension, low vocabulary students need to add at least this many additional meanings each year if they are not to fall steadily further behind during elementary school. Can this actually be done? If children make average gains in vocabulary in the first few years, will they actually achieve grade-level reading comprehension by the end of grade 3 or 4? These questions remain to be answered.

Teaching vocabulary to primary-grade children

Lower-vocabulary primary-grade students need to acquire an additional 400 word meanings each year to avoid falling further behind in vocabulary. Available studies suggest that approximately 1,000 word meanings need to be taught each year for individual primary-grade

children to gain as much as 400 meanings, as some children will already know some of the meanings and some meanings will simply not be learned.

Teaching vocabulary to primary-grade children should not be tied closely to classroom reading, especially in kindergarten and first grade. Instead, early reading by children should be restricted mainly to vocabulary known by readers. Stories and

Grade 1 general vocabulary is a strong predictor of reading comprehension in grade 11

other readings containing many potentially unfamiliar words should be read to children, combined with discussion of word meanings. Most successful vocabulary teaching for primary-grade children has included several re-readings of the same book, combined with teaching some word meanings in conjunction with (or just after) reading a text. In my experience, such instruction is likely to take about half an hour daily.

What words should we teach?

There is good evidence that word meanings are acquired in a predictable sequence. Three children from the 2nd, 4th, and 6th grades, each with vocabularies of about 8,000 root word meanings, are likely to know mainly the same meanings. This robust sequence means that it should be possible to determine the meanings that are needed by primary-grade children. However, if teachers are going to do more to help students build their needed vocabulary, they need some basis for deciding what words to address. There are far too many possible words to teach all of them.

The frequency of words appearing in text is often used to decide which words to teach, but this can be a misleading guide. Print frequency refers to print form, not word meaning. More common words frequently have more than one meaning.

Words Worth Teaching

Word meaning knowledge is a better guide than print frequency in terms of deciding which words should be taught. In my research, *Words Worth Teaching*, I established high priority root word meanings for teaching in the primary grades by ranking words known by children at the end of grade 2 as follows:

- **Easy:** Meanings known by 80% or more of the children. Not requiring special attention.
- **High priority:** Meanings known by 40–79% of the children.
- **Difficult:** Meanings known by fewer than 40% of the children. Appropriate for attention in later years.

Using these criteria, I found some 1,600 high priority root meanings that should be addressed directly between kindergarten and grade 2. These should be addressed as they occur in meaningful texts. For primary-grade children, “addressing” usually means teaching meanings directly, as they are encountered in context. For upper-elementary children, in many cases it may be sufficient to make students responsible for learning meanings of priority words as they are encountered. Throughout elementary school, teachers should monitor learners’ acquisition of meanings as they are addressed. *Two-questions Vocabulary Assessment: Developing a New Method for Group Testing in Kindergarten Through Second Grade* provides a method for group testing children’s vocabulary in the first years of elementary school.

I also identified some 2,900 high priority meanings for attention between grade 3 and grade 6. These included the “Difficult” meanings that were tested or rated below 40% at the end of grade 2, or that were tested or rated between 40% and 79% at the end of grade 6.

Dale and O’Rourke’s *Living Word Vocabulary* also provides a useful guide on knowledge of word meanings at various ages, based on word meaning knowledge rather than print frequency, and was a cross-reference for *Words Worth Teaching*.

Beck, McKeown, & Kucan’s Tiers

Beck and her associates’ “Tier” categories (*Bringing Words to Life: Robust Vocabulary Instruction*) are similar to the easy, high priority, and difficult categories just described. However, they suggest that Tier One “basic



words” include most of the 8,000 root words (or word families) reported to be known by average children in grade 3. Unfortunately, by the end of grade 2 a lot of these word meanings are not known by many children. For these children, many of those 8,000 Tier One meanings will prove to be what I have called high priority meanings.

Beck and associates’ Tier Two words are “of high frequency for mature language users and are used across a variety of domains. Examples include *coincidence*, *absurd*, *industrious*, and *fortunate*.” Most of these and similar meanings will be useful for upper-elementary and middle school children. However, for primary-grade children, many words that lower-vocabulary children need would be omitted, while many of their Tier Two word meanings would rarely be needed.

Finally, their Tier Three words have low print frequencies, and are often limited to specific subjects. Examples are *isotope*, *lathe*, *peninsula*, and *refinery*. Such meanings are best taught when encountered in specific lessons. I agree with Beck and her co-authors about these more advanced meanings.

Conclusion

Vocabulary teaching is equally important for the comprehension of text as word

What we know

- Word meanings are acquired in a predictable sequence.
- Children with the lowest vocabularies know 2,000 fewer root words than their average peers by the end of grade 2.
- Vocabulary teaching programs can stimulate general vocabulary – not just those words that are taught.

recognition skills, and teachers should support primary-grade children who have fallen behind their peers in their knowledge of high priority root words. A number of researchers have even demonstrated that some vocabulary teaching programs have shown positive effects on general vocabulary – not just the vocabulary taught.

About the author

Andrew Biemiller is Professor Emeritus at the Institute of Child Study, University of Toronto. His work currently focuses on vocabulary and reading (language) comprehension. He is also a consultant for research groups, publishers, and U.S. federal and state agencies mainly on vocabulary development and teaching.

Further reading

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