

A Comprehensive Approach to Vocabulary Instruction

In 2000, the National Reading Panel published a landmark review of the research on reading entitled *The Report of the National Reading Panel* (National Institute of Child Health and Human Development, 2000). This report identified five elements as focus areas for reading instruction: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Of these, vocabulary was singled out. As reported by Kamil and Hiebert, “Vocabulary holds a special place among these components” (2005, p. 2).

The importance of vocabulary development and, consequently, vocabulary instruction was recognized long before the National Reading Panel report. Numerous studies have documented its critical role relative to learning in general and reading in particular. For example, as early as 1941, researchers estimated that there was about a 6000-word gap between students at the 25th and 50th percentiles in both fourth and twelfth grades (Nagy & Herman, 1984). In 1984, Nagy and Herman estimated the difference to be between 4,500 and 5,400 words for low- versus high-achieving students.

What Vocabulary Should Be Taught?

While the importance of vocabulary knowledge to all students is almost self-evident, the specific vocabulary words students should be taught are not. Indeed, Nagy and Anderson (1984) esti-

imated that 88,500 unique terms can be found in reading material encountered by students in grades 3 through 9 alone—far too many to be considered viable for direct instruction. But Beck, McKeown, and Omanson (1987) offered a useful perspective on the numbers of terms students encounter and the number of terms they should be taught. They noted that of those 88,500 terms, about half would be encountered only once in the lifetime of an avid reader. In other words, they highlighted the fact that not all terms in the English language should receive equal consideration from an instructional perspective, since a large proportion of terms are not very frequently encountered in typical reading.

For the purposes of instruction, Beck and McKeown (1985) suggested that vocabulary terms be categorized into three tiers. Later, Beck, McKeown, and Kucan (2002) described the first tier as those terms that are basic to the English language because of their high frequency in oral and written language use—terms such as *big*, *clock*, *walk*, *baby*, and so on. They noted that “Words in this tier rarely require instructional attention to their meanings in school” (2002, p. 8).

Tier 2 terms are those that appear infrequently enough that they will probably not be learned incidentally by students. Such terms might include *nimble*, *feeble*, *vigor*, and so on. They are good candidates for direct vocabulary instruction.

Tier 3 terms are subject-specific terms that, although not frequently found in the course of general speaking or reading, are important to general literacy in specific subject areas. For example, the term *cellular response* might not be

frequently encountered in general speaking or reading, but it is important to science at the high school level. Subject-specific tier 3 terms are also good candidates for direct instruction. Additionally, tier 3 terms include terms in the general vocabulary that are so infrequent as to be unlikely candidates for direct instruction—terms like *besmirch*, *chattel*, and *begone*.

In short, Beck and her colleagues provided a template for identifying terms that are important for student success in their K–12 academic experiences: tier 1 terms that are so frequent they probably do not require direct instruction, tier 2 terms from the general vocabulary that should receive direct instruction due to their importance and lack of frequency, and the subject-specific terms from tier 3. Unfortunately, the terms in these tiers were not explicitly identified—at least, not until recently.

Organizing the basic terms into clusters provides teachers with a scaffold infrastructure that can be used in instruction.

What Are the Tier 1, 2, and 3 Terms?

While the specific terms in tiers 1, 2, and 3 have historically been discussed in an abstract manner only, progress has been made recently in identifying this corpus.

Tier 1 Terms

As described above, Beck and her colleagues made a case that tier 1 terms do not have to be taught since they are quite frequent in the English language and will typically be understood by most students upon entrance to Kindergarten or first grade. However, this generalization is not true for all students. Indeed, there is considerable evidence that vocabulary knowledge is highly correlated with family income and socioeconomic status (SES) (Nagy & Herman, 1984; Graves & Slater, 1987). For example, Hart and Risley (1995) estimated that 36-month-old children from welfare families have only 45 percent of the vocabulary of children from professional

families and the gap between the groups widens over time. There is also evidence that direct instruction in tier 1 terms is important for English language learners (Calderón et al., 2005; Biemiller & Slonim, 2001; McLaughlin et al., 2000).

In the book *Teaching Basic and Advanced Vocabulary* (Marzano, 2010), I identified 2,845 tier 1 terms that I refer to as “basic terms.” Those words are organized into 420 semantic clusters that are themselves rank-ordered in terms of how basic their constituent words are. To illustrate, cluster 102 (of the 420) entitled Bodies of Water includes the following basic terms: *lake*, *ocean*, *puddle*, *river*, *sea*, *stream*, *bay*, *creek*, and *pond*. In contrast, cluster 10 entitled “Cause/Effect Relationship Markers” includes the following basic terms: *because*, *by*, *for*, *from*, *if*, *since*, *so*, *then*, *to*, and *because of*. While cluster 102 contains 9 basic terms and cluster 10 contains 10 basic terms, the difference in their rank (i.e., rank 10 versus 102) is primarily because the basic terms in cluster 10 are more frequent in the English language than the basic terms in cluster 102.

Organizing the basic terms into clusters provides teachers with a scaffold infrastructure that can be used in instruction. Specifically, more than one basic word can be addressed at a time, particularly if a student is already familiar with one or more of the basic terms in a given cluster. For example, if a student is already familiar with the terms *lake*, *puddle*, and *stream* from cluster 102, this knowledge can be used as a starting point for introducing any unfamiliar terms in the cluster.

The 420 clusters of basic terms are also organized into larger groups, referred to as super-clusters. Super-clusters are topical categories that include two or more clusters. For example, one of the 60 super-clusters into which the basic terms have been organized is entitled Animals. It includes the following clusters: Birds, Baby Animals, Cats/Dogs, Land Animals, Sea Animals, Reptiles and Mythical Animals, Insects, Actions Related to Animals, Parts of Animals, Rodents, Dwellings for Animals, General Names for Animals, Shellfish, Equipment Used with Animals, and Primates. This super-cluster contains 131

basic terms and is designed to be used in whole-group instruction when a teacher is addressing content that relates to the general topic of animals. For example, if a teacher were planning a unit of instruction that directly or indirectly addressed animals, terms could be selected from this super-cluster to augment the teacher's vocabulary instruction, particularly for students who do not come to school with a working knowledge of tier 1 terms.

Tier 2 Terms

As described above, tier 2 terms are important to a general understanding of the English language but are not used frequently enough that teachers can assume they are known to most students from English-speaking homes. *Teaching Basic and Advanced Vocabulary* (Marzano, 2010) identifies 5,162 such terms, referred to as "advanced" terms. Each is associated with a cluster of basic terms. For example, consider the aforementioned cluster 102 entitled Bodies of Water. In addition to the nine basic terms, it contains 25 tier 2 terms, such as *brook*, *gulf*, *inlet*, *strait*, *lagoon*, and *tributary* (to name a few). Similarly, in addition to the 10 basic terms in cluster 10 entitled Cause/Effect Relationship Markers, there are 31 tier 2 terms, such as *if only*, *now that*, *therefore*, *whereas*, *accordingly*, and *hence*.

Tier 3 Terms

Of course, tier 3 terms contain every word in the English language that does not belong to tier 1 or tier 2. As discussed above, the vast majority of such terms are too infrequent to justify direct instruction in their meaning. However, tier 3 also includes terms that are specific to academic content, terms that, although not used frequently in everyday language, are critical to understanding their respective subject areas. In the book *Building Background Knowledge for Academic Achievement* (Marzano, 2004), I identified 7,923 such terms across the following subject areas: mathematics, science, English language arts, general history, US history, world history, geography, civics, economics, health, physical education, the

arts (general), dance, music, theatre, visual arts, and technology. Since the publication of that book, a few states (e.g., Tennessee and Oklahoma) have developed state-level lists that are specific to their state standards. Similar efforts have been made by a host of districts across the country.

Considering Tier 1, 2, and 3 Terms as a Whole

If one combines the lists of tier 1, tier 2, and tier 3 terms described above, their total number is 15,930. However, about 900 of the terms on the subject-specific lists are also found on the tier 1 or tier 2 lists. For example, the terms *computer* and *letter* are on subject-specific lists and on the tier 1 list. In all, then, there are about 15,000 unique terms that constitute tier 1, tier 2, and tier 3—terms that appear critical to a student's understanding of general English vocabulary and the vocabulary necessary for basic literacy in the major K–12 subject areas.

The identification of 15,000 terms is a far cry from the 88,500 terms alluded to by Nagy and Anderson in grades 3–9 alone, and considerably shrinks the scope of the task if a school district were to set as a goal that all students would leave their K–12 experience with a basic understanding of the tier 1, tier 2, and subject-specific tier 3 terms. This is not to say that all 15,000 terms should be taught directly. Indeed, a school or district should have a well-crafted, efficient, and comprehensive plan for instruction regarding these 15,000 terms.

A Comprehensive Plan for Vocabulary Instruction

A comprehensive plan for vocabulary instruction would include the identification of those students

There are about 15,000 unique terms . . . that appear critical to a student's understanding of general English vocabulary and the vocabulary necessary for basic literacy in the major K–12 subject areas.

who would benefit greatly from direct instruction in the tier 1 terms. These students would receive highly focused instruction outside of their regular classes in order to provide them with a working knowledge of as many of the 2,845 basic terms in as short a time as possible. The cluster and super-cluster framework would be used to help students link known words with unknown words, thus avoiding the trap of teaching words in isolation.

Tier 2 terms would be taught as needed as a function of regular classroom instruction. Again,

When a school or district ensures that tier 1 and tier 2 terms are addressed elsewhere, the vocabulary instruction load on subject matter teachers is lessened considerably.

not all of the 5,162 tier terms would or should be taught directly or in isolation. As tier 2 terms naturally occurred in the context of classroom instruction, they would be introduced to students and then deepened over time through repeated use and examination. tier 3 academic terms would be taught in the context of their respective subject areas. It should be relatively easy to ensure that these terms receive adequate attention as their numbers are not that great. For example, I identified only 201 mathematics-specific terms in grades 6–8, and 214 mathematics-specific terms in grades 9–12. Similarly, there are only 225 science-specific terms in grades 6–8 and 282 in grades 9–12. These numbers might seem inordinately small, but when a school or district ensures that tier 1 and tier 2 terms are addressed elsewhere, the vocabulary instruction load on subject matter teachers is lessened considerably. Stated differently, most subject matter teachers currently have the burden of teaching not only the terms important to their subject areas but also the tier 1 and tier 2 terms students have not learned as a part of their general education.

Vocabulary notebooks can play a critical role in a comprehensive approach to vocabulary instruction. Students at all levels can keep notebooks in which they record their tier 2 and

subject-specific tier 3 terms. After words are initially recorded in these notebooks, they would be revisited and revised by students as their knowledge of the terms deepens, misconceptions are corrected, and new information is added.

An Idea Whose Time Has Come

When the view of vocabulary was that students must learn over 88,000 terms in grades 3–9 alone, the viability of direct vocabulary instruction appeared severely limited. Indeed, by simple extrapolation, it appeared as though a comprehensive program of direct vocabulary instruction would involve over 100,000 terms across grades K–12. Of course, such an effort would be impossible to execute.

However, the insights by Beck and her colleagues provided a vision of a more focused approach, and the recent listings of tier 1, tier 2, and subject-specific tier 3 terms described above has provided a new, more feasible vision that can be carried out across a K–12 continuum. Given this new vision and accompanying lists of pertinent terms, I see no reason why any student should leave grade 12 without a firm grounding in the terms across tiers 1, 2, and 3. All that is required is for schools and districts to accept the challenge of implementing a comprehensive approach to vocabulary instruction.

References

- Beck, I., & McKeown, M. (1985). Teaching vocabulary: Making the instructions fit the goal. *Educational Perspectives*, 23(1), 11–15.
- Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York, NY: Guilford Press.
- Beck, I. L., McKeown, M. G., & Omanson, R. (1987). The effects and uses of diverse vocabulary instructional techniques. In M. G. McKeown & M. E. Curtis (Eds.), *The nature of vocabulary acquisition* (pp. 147–163). Mahwah, NJ: Erlbaum.
- Beimiller, A., & Slonim, N. (2001). Estimating root word vocabulary growth in normative and advantaged populations: Evidence for a common sequence of vocabulary acquisition. *Journal of Educational Psychology*, 93, 498–520.

- Calderón, M., August, D., Slavin, R., Duran, D., Maden, N., & Cheung, A. (2005). Bringing words to life in classrooms with English-language learners. In E. F. Hiebert & M. L. Kamil (Eds.), *Teaching and learning vocabulary: Bringing research to practice* (pp. 115–136). Mahwah, NJ: Erlbaum.
- Graves, M. F., & Slater, W. H. (1987, April). *The development of reading vocabularies in rural disadvantaged students, inner-city disadvantaged students, and middle-class suburban students*. Paper presented at the meeting of the American Educational Research Association, Washington, DC.
- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Paul H. Brookes.
- Kamil, M. L., & Hiebert, E. F. (2005). Teaching and learning vocabulary: Perspectives and persistent issues. In E. F. Hiebert & M. L. Kamil (Eds.), *Teaching and learning vocabulary: Bringing research to practice* (pp. 1–23). Mahwah, NJ: Erlbaum.
- Marzano, R. J. (2004). *Building background knowledge for academic achievement: Research on what works in schools*. Alexandria, VA: ASCD.
- Marzano, R. J. (2010). *Teaching basic and advanced vocabulary: A framework for direct vocabulary instruction*. Boston, MA: Heinle.
- McLaughlin, B., August, D., Snow, C., Carlo, M., Dressler, C., White, C., Lively, T., & Lippman, D. (2000, April). *Vocabulary improvement and reading in English language learners: An intervention study*. Paper presented at the Research Symposium on High Standards in Reading for Students from Diverse Language Groups: Research, Practice, & Policy, Washington, DC (US Department of Education, Office of Bilingual Education and Minority Languages Affairs [OBEMLA]).
- Nagy, W. E., & Anderson, R. C. (1984). How many words are there in printed school English? *Reading Research Quarterly*, 19, 304–330.
- Nagy, W. E., & Herman, P. A. (1984). *Limitations of vocabulary instruction* (Tech Report No. 326). Urbana, IL: University of Illinois, Center for the Study of Reading (ERIC Document Reproduction Service No. ED248498).
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups*. Washington, DC: Author.

Robert J. Marzano is C.E.O. of Marzano Research Laboratory and Executive Director of REL Central. He can be reached at Robert.Marzano@marzanoresearch.com

2012 NCTE Election Results

In NCTE's 2012 elections, Elementary Section member **Kathy Short**, University of Arizona, Tucson, was chosen vice president. Short will take office during the NCTE Annual Convention in November.

The Middle Level Section also elected new members. Elected to a four-year term on the Steering Committee were **Matthew Skillen**, Elizabethtown College, Pennsylvania, and **Shelbie Witte**, Florida State University, Tallahassee. Elected to the 2012–2013 Nominating Committee were **Zanetta Robinson**, Thurgood Marshall Fundamental Middle School, St. Petersburg, Florida, chair; **Mollie Blackburn**, Ohio State University, Columbus; and **Katrina Gonzales**, Eldorado Middle School, Texas.

On the NCTE website, see additional 2012 election results and details on submitting nominations for the 2013 elections (<http://www.ncte.org/volunteer/elections>).
