Vocabulary: The Missing Link Between Reading and Literacy

By Andrew Biemiller, Ph.D.

> "**I**t's exactly where a thought is lacking.
> That, just in time, a word shows up instead."
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> – _Johann Wolfgang von Goethe, Faust (1808)_

Successful reading requires being able to identify written words and understand what those words mean. Unfortunately, children who succeed in learning to read in Grade 1 or 2 might not be able to understand books they must read in Grade 3 or 4. The main reason for this is lack of adequate vocabulary (Spira, Bracken, and Fischel, 2005; Becker, 1977; Chall, Jacobs, and Baldwin, 1990; Chall and Conard, 1991; Scarborough, 2001; Storch and Whitehouse, 2002).

That is why vocabulary is often described as the "missing link" between reading mechanics and reading comprehension.

Students with inadequate vocabularies rarely achieve well in school – high school, community college, or university (Hazenberg and Hulstijn, 1995; Cunningham and Stanovich, 1997). In addition, those with relatively small vocabularies comprehend even less. Because they comprehend less, they don't often choose to read as much. Students who read less have smaller vocabularies and comprehend less in later years (Stanovich, 1986). Indeed, they continue to lag behind students with larger vocabularies.

Narrowing the large vocabulary gap that occurs by the end of Grade 2 would help reduce the academic disadvantage now experienced by low-vocabulary children. Continuing vocabulary instruction in the upper elementary grades should further reduce the vocabulary gap. Teaching vocabulary will not guarantee success in reading, just as learning to identify printed words will not guarantee success in reading. _However, lacking adequate word identification skills or adequate vocabulary will ensure failure._

How Vocabulary Should Be Taught

Acquiring vocabulary is in some ways like acquiring word-identification skills, or number and computational skills.

We progress best if we systematically build upon earlier skills and word knowledge. Because word meanings are learned in a rough sequence, we can determine words that low-vocabulary children are likely not to know but high-vocabulary children will know. If the sequence is really important – as I believe it is – then offering effective education must include ensuring that all children have had a reasonable opportunity to acquire the word meanings known or acquired by average or above-average children. In many cases, acquiring such a vocabulary requires direct instruction, not simply hoping for children to infer word meanings they need.

Therefore, in the primary grades, children need to acquire 10 to 12 word meanings per week. To reach these gains, teachers need to directly teach 20 or more meanings per week. Much of this should be done with repeated orally presented texts and explanations of word meanings in context. In the upper elementary grades, children can take more responsibility for acquiring general vocabulary. However, appropriate words encountered during a week's reading should be noted and new vocabulary tested. In addition, text-critical meanings should be taught directly as well as interpretations of prefixed, suffixed, and compound words.

Research indicates students who receive additional oral reading demonstrate large gains in language and reading comprehension compared to similar students who did not receive this repeated reading with word explanations (Feitelson et al, 1986; 1991).

What Vocabulary Should Be Taught

Two kinds of word meanings should be taught:

- **General Vocabulary** – word meanings that are statistically appropriate for the primary or upper elementary grades. General vocabulary should be taught while reading or after reading – not before the story is read.

- **Text Critical Vocabulary** – word meanings that are necessary to comprehend a specific narrative or expository text. Two or three text-critical meanings could be taught before reading a text.

General vocabulary word meanings are the meanings normally acquired by students making good progress in elementary school. The failure to build general vocabulary is the main source of vocabulary difficulty, not the lack of specific technical terms. These general vocabulary meanings should be taught as they occur in meaningful contexts.

One approach for selecting general vocabulary word meanings is a variation of Beck, McKeown, and Kucan's "Tiers" approach (*Bringing Words to Life, 2002*). They describe three "Tiers" of vocabulary for the elementary grades.

- **Tier I:** basic words known without school instruction (such as *clock, baby, happy*)
- **Tier II:** words worth teaching (such as *coincidence, absurd*)
- **Tier III:** words to be learned in a content area (such as *isotope, lathe, peninsula*)

Sources of vocabulary include both general reading books, which are read to students, and reading program books, which are read by students (e.g., *Imagine It!*). General reading books (including both narrative and expository content) are much more likely to provide opportunities for explaining meanings students need to learn than are primary reading program books. However, it is important to monitor vocabulary in reading program books to note words worth teaching.

With both general reading books and reading program books, selecting words for attention is similar.

- Read through a story or text and underline words you think students may not know. Double-underline text-critical words that may not be known.
- If possible, check the level of your underlined words. It is easy to eliminate words not necessary to teach. Beyond that criterion, teachers must use their judgment. Select 6–10 meanings for instruction during one reading of a text.
- Keep track of word meanings taught. This makes later review easier and is helpful when a meaning is encountered in a new context. By the end of a school year, you might have taught 800–1,000 word meanings.
- When taught meanings are encountered later, the meaning does not need to be taught again, but might be pointed out as one that has been learned.

When Vocabulary Should Be Taught

If low-vocabulary children are to make good academic progress, time must be devoted to vocabulary development, just as we devote time to reading and spelling skills, strategies for writing, and skills and strategies for mathematics.

In the primary grades, at least 30 minutes per day are needed if children are to gain 10-12 word meanings per week. This level of vocabulary acquisition is definitely needed by low-vocabulary children if they are not to fall further behind in the primary period. Building vocabulary includes direct instruction (teacher reading orally and explaining meanings) plus student follow-up activities.

In the upper elementary period, direct instruction of text-critical vocabulary and skills for interpreting affixed and compound words continue to be necessary. Furthermore, students must have time to identify and learn general vocabulary meanings encountered during classroom reading. In addition, children should be increasing their ability to find other word meanings they need. This vocabulary-related instruction and assignments requires at least 30 minutes per day in the upper elementary grades. Some assessment of vocabulary progress should also be made.

Elements of a Quality Program

Teachers should focus on a research-based reading program that will strengthen student vocabulary and provide additional practice. The activities should allow specific practice with Tier II words – those words that mature language users will encounter frequently but for which meanings need to be explained. Learning the meaning of these words will help students with reading comprehension across the curriculum.

Imagine It! is a complete elementary basal reading program for Grades Pre-K–6. It maintains strong instruction in the areas of decoding (learning how to read), comprehension (understanding what you read), inquiry and investigation (learning how to apply what you have read), and writing (how to communicate with others in print). It also focuses on applications for teaching vocabulary, spelling, grammar, usage, mechanics, penmanship, listening, speaking, and viewing.

Imagine It! is designed so no assumptions are made about students' prior knowledge. Each skill is systematically and explicitly taught in a logical progression to enable understanding and mastery. Part 1 of each unit, *Preparing to Read,* focuses on the foundations: phonemic awareness, sounds and letters, phonics, fluency, and word knowledge.

Part 2, *Reading and Responding,* emphasizes reading for understanding with: literature, comprehension, inquiry and investigation, and practical reading applications. *Imagine It!* includes expanded instruction of word meanings encountered in texts. Part 3 is *Language Arts,* and it focuses on communication skills: spelling, vocabulary, writing process strategies, writer's craft, and English-language conventions, such as: grammar, mechanics, listening, speaking, viewing, and penmanship.

Features:

- A well-defined plan of systematic, explicit instruction for teaching the strategies and skills of reading
- A literature-rich environment to instill a passion for lifelong reading and a love of literature and the written word
- Balance of instruction and practice activities sufficient to build strong word reading skills as well as the ability to construct meaning from text
- Materials for meeting special needs, including reteach, challenge, intervention, and English Language Development

All of us, parents and teachers, want our children to be literate – to understand and comprehend written language on any subject. Adequate vocabulary is prerequisite to successful school progress. Vocabulary is the missing link between reading and literacy.

Andrew Biemiller is a retired professor from the Institute of Child Study at the University of Toronto. He spent 36 years teaching, helped as an author of Imagine It! *He now serves as an educational consultant. He graduated from Harvard College (B.A.) and Cornell University (M.Sc., Ph.D.), where he focused on child development, classroom instruction, and educational program design. Much of Dr. Biemiller's research has involved reading, including children's miscues as they learn to read, the development of reading speed, effects of reading practice, and development and acquisition of vocabulary. His recent research examines how word meanings are acquired, the order of meanings acquired, effective methods of teaching word meanings, and identifying word meanings that are particularly useful for instruction at the primary and upper-elementary levels.*

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Known by most in Grade 2 – Don't need to teach

fish	A water animal
flood	Unusual flow of water
spread	To distribute over a surface (e.g., buttering)
throat	Passage from stomach to mouth
near	Close
shot	Injection
café	Eating place
stab	Stick knife into
subtract	Take number from another
loop	A circled string
done	Finished doing
drop	Fall
fuss	Cry and scream
math	School subject
listen	To try to hear
match	Thing to light fire

Known by some in Grade 2 – Teach in primary grades

space	Room
buckle	To fasten
fresh	New, not spoiled
secure	Free from fear
justice	Fair dealing
tally	Count through from start to end
blab	Tell secret
litter	Disorder
stock	Supply, provide
possum	Animal
react	Act back
peeve	Annoy
straight	Direct
parcel	Package
haul	Distance traveled
fresh	New, not spoiled
sliver	Tiny piece of wood[1]

1 Less important
2 Less important
3 UNLESS needed for text/lesson

Known by some in Grade 6 – Teach in upper elementary grades

shimmer	Faint gleam
induct	To bring in
former	First of two
guard	A defense
know	Recognize
victim	Injured person
because	For the reason that
lash	Fasten with rope
astronomy	About stars
period	A time in history
envelop	Surround
garble	To mix up
duplex	Two homes in one
narrow	Lacking a broad view
tree	Rack for shoes, hats
thigh	Upper part of leg[2]
distant	Long ago

Known by few in Grade 6 – Don't teach in elementary grades[3]

ominous	Threatening
alias	False name
curious	Odd, strange
lust	Desire
character	Nature of
delinquent	Junction
sequence	Connect in series
jurisdiction	Authority
vain	Conceited
perpendicular	Upright position
inquisitive	Curious
popular	Representing the people
question	Problem
etch	Engrave with acid
valor	Courage
Reformation	Protestant era