Series 1 | 1.4

Paper 4 in the series
*Understanding the reading
process* expands on research
around *Vocabulary* as one
component of 'The Big Six'
that supports learning to read.

*The size of vocabulary, that is,
the number and variety of words
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and initial years of schooling, is
a significant predictor of reading
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vocational success.*

Vocabulary

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*"Perhaps the greatest tools we can give students for succeeding, not
only in their education but more generally in life, is a large, rich
vocabulary and the skills for using those words."*

(Pikulski & Templeton, 2004, p. 1)

Introduction

We now know that vocabulary is critical to success in reading and in broader academic achievement. The size of vocabulary, that is, the number and variety of words that children know in the preschool and initial years of schooling, is a significant predictor of reading comprehension in the middle and secondary years of schooling, and of broader academic and vocational success (Biemiller, 1999; NICHD, 2000; Scarborough, 2001).

Almost all children are experienced users of language when they begin school, but reading requires more complex, and often more abstract vocabulary than that used in everyday interactions. Children who have had many stories read to them during their preschool years will have been exposed to a much broader and richer vocabulary than that contained in everyday conversations – and will arrive at school prepared for the language they will meet as they continue their literacy journey. Many of the differences in vocabulary among preschoolers reflect differences in children's home language backgrounds, not learning problems or deficits, but children without the kind of vocabulary knowledge valued by traditional educational settings will begin school at a disadvantage, and that disadvantage will result in poorer long-term progress in literacy achievement (Hart & Risley, 1995; NELP, 2008).

For this reason, teachers need to understand the importance of the role of vocabulary, and to directly support its development. This paper provides some key messages about this critical element of reading, and how teachers can support the growth of a rich store of words in all children.

Vocabulary knowledge is complex

What it means to "know" a word is not a simple notion. Word learning is *incremental*, that is, understanding a word is usually partial at first, and grows with repeated exposures. Dale & O'Rourke (1986) conceptualised word learning as being along a continuum, ranging from never having seen or heard the word before, to having a deep knowledge of the word and its different meanings, and the ability to use the word confidently and accurately in speaking and writing contexts.

Words themselves differ on many dimensions. They vary according to syntax – knowing what part of speech a particular word is can greatly assist reading. Words vary according to the size of their "families" – knowing one of a family of words will help the reader determine a number of others. Some words are *polysemous*; that is, they can have multiple meanings. Consider some of the different meanings of the word *scale* – to climb,

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a feature of a fish; a plant disease, a measuring instrument, the ratio of distance on a map to that on the ground – and there are many more. Students who know multiple meanings of words are more prepared to read widely and across multiple contexts. Thus, "vocabulary" is not a simple construct.

Vocabulary supports both learning to read and reading to learn

Vocabulary supports reading development in a number of ways. At the word recognition level, a student is more likely to be able to read a word that is within their oral vocabulary, and to read related words.

For example, if a child knows the meaning of the word *satisfy*, and knows the single letter-sounds, this word will be easily decoded and understood when encountered in text, where the context will also help the child make the connections. The words *satisfied* and *satisfaction* are also more likely to be read and understood. With only a few exposures, these words will be familiar enough to be recognised on sight and so the reading vocabulary builds. Children who acquire reading skills early and engage in reading regularly, will continue to add to their vocabularies exponentially, which will further advantage them.

Consider the student who does not know the meaning of the word *satisfy*. He will struggle over that and related words in connected text, even if he can decode them, as transforming letters into words is of no use if those words do not have meaning. Repeated frustrating experiences will result in the student avoiding reading, and denying himself the opportunity to build vocabulary, fluency and world knowledge. Children who do not acquire these skills easily will experience increasing disadvantage as yet another avenue of building vocabulary and knowledge is closed to them.

Words provide the labels and the tools whereby increasingly sophisticated concepts can be explored. It is vocabulary that helps build comprehension and is thus a key component of reading for meaning (Manzo, Manzo, & Thomas, 2006). Children who lack vocabulary and background knowledge will have difficulty understanding the books they encounter in school, especially as the books they are required to read become more difficult in the middle primary and secondary years.

Explicit teaching of vocabulary is effective – and necessary

While children will acquire some new vocabulary in the school setting, not enough will be learned incidentally to help close the gap between different groups of children. If vocabulary learning is to be accelerated, word meanings need to be taught directly. There is now convincing evidence that explicit instruction is effective for vocabulary learning (Beck & McKeown, 2007; Rinaldi, Sells & McLaughlin, 1997), and that it can add substantially to the vocabulary growth of all children (Beck, McKeown & Kucan, 2008). Explicit instruction in vocabulary assists students to grow as readers and thinkers in both fiction and non-fiction, develops a deeper understanding of the words and concepts students are partially aware of, nurtures understanding of new concepts, increases reading comprehension and enhances both oral and written communication skills (Allen, 1999).

How can teachers stimulate vocabulary growth?

There are different views regarding the best ways to achieve significant and sustainable growth in children's vocabularies. Beck and McKeown (2007) are proponents of the "rich and robust" approach, which focuses on selecting particular "quality" words that appear in age-level text material but which are also useful across contexts, and teaching these words in great depth. In contrast to this approach, Biemiller (2010) advocates teaching as many new words as possible, albeit in less depth, in order to maximise the chances of increasing the rate of vocabulary growth. Pressley et al (2007) recommend "flooding" classrooms with a range of long-term vocabulary interventions in an attempt to raise the vocabulary levels of students.

Each of these approaches has been shown to have some impact and research is continuing to ascertain if one promotes more sustainable and long-term growth than others. This paper includes guidelines and strategies from each of these "schools of thought".

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Guidelines and Strategies for Vocabulary Development

Word lists, the use of dictionaries and putting words into sentences are traditional ways of teaching vocabulary, but are not sufficient for students who need to build vocabulary quickly. This section looks at ways in which teachers can:

1. build vocabulary instruction into everyday routines.
2. select the best words to teach.
3. explicitly teach new words.
4. teach students to use contextual strategies.
5. teach the use of graphic organisers.

1. Build vocabulary instruction into everyday routines

Model high quality language

Reading aloud quality children's literature will build word knowledge because print vocabulary is more extensive and varied than oral language. Reading a book several times to younger students provides the repeated exposure of new vocabulary that is usually necessary for word knowledge to become secure. Telling stories that use elaborate language, making audio books available for students to use independently and always modelling good language are also ways in which teachers can support the vocabulary development of all students.

Incorporate vocabulary building into directions and teaching

When more sophisticated vocabulary is used, definitions can be added; for example,

> *"Don't procrastinate on your project – that means don't keep putting it off."*

Parallel language is another way to "fast track" vocabulary development. Examples are:

> *"Please refrain from running in the hallways – please don't run."*
> *"Rivers have their genesis…their beginning…in mountain streams."*

Organise frequent small group interactions to build oral language

Small group interactions, particularly one-to-one conversations with a good language user modelling for the less able user, are highly effective ways to build vocabulary. Pair activities increase the opportunities for practice. Parents, other classroom volunteers and older students from a buddy class who meet with the students regularly to talk about books, recent experiences, or a topic being studied in the class, can boost both general and content-specific vocabulary.

Preteach critical vocabulary

Discussion of important vocabulary before reading a story aloud, or before students read new text is particularly important because it at least ensures that the vocabulary items are in the reader's oral vocabulary, and that there will be fewer unfamiliar concepts.

2. Select the best words to teach

How can teachers decide which words to teach from the vast treasury of words available in the English language? Words for explicit instruction can arise incidentally, or be drawn from the fiction and non-fiction books the students are reading – but there are so many words from which to choose! Some questions teachers can ask to help them decide what words to teach include:

- Which words are most important to understanding the situation or the text?
- Which words will help build important concept knowledge?
- Which words will be encountered frequently outside this particular context? (Time spent teaching these words is well invested.)

Reading aloud quality children's literature will build word knowledge because print vocabulary is more extensive and varied than oral language.

- Which words have multiple meanings? (Knowing multiple meanings helps students read across contexts.)
- Which words can be figured out from the context? (These will provide opportunities to demonstrate how to use context to work out word meanings.)

Isobel Beck and her colleagues (2002) devised a three-tiered system to help teachers decide which words to teach.

Tier 1 words are basic and high frequency words such as *mother*, *said* and *house* – words used in everyday conversation. Most children will learn these words relatively quickly through frequent exposure, and because they are usually taught as part of sight word instruction, there is usually little point in targeting these for explicit instruction.

Tier 2 words are those used by mature users of a particular age group so will differ depending on the age of the children. These words appear more frequently in text than in oral language, thus children are less likely to learn them without assistance. For middle primary students, words such as *persistent* and *frail* might be Tier 2 words. They are words that can be used across contexts to add clarity and/or descriptive power.

Tier 3 words are those that relate to specific fields of knowledge, such as the sciences. Words such as *mesa*, *xylem* and *annulus* would be classified as Tier 3 words. These words should be taught as part of content–area literacy when required.

Beck recommends that *Tier 2 words should be the focus of direct vocabulary instruction* as these are the words that will be most useful across multiple contexts and that children are less likely to learn without assistance. A maximum of 7–10 Tier Two words from any one book or piece of text is usually enough to teach in primary grades – any more than that, and the text is probably too difficult. Understanding these words will boost both reading and listening comprehension.

3. Explicitly teach word meanings

Some words benefit from rich instruction. An example of an explicit teaching sequence, drawn from the work of Isobel Beck and her colleagues, follows. The focus word would normally be one that students had encountered in material being read in class.

i. Read aloud the sentence or mention where the students first met the word. Show students the word and ask them to say it aloud.

> *rudimentary*

ii. Ask students to repeat it several times. Brainstorm possible meanings with the group. Point out any parts of the word that might help with meaning; for example, a prefix or Greek or Latin root. Reread the sentence or refer again to the situation in which it was used, to see if there are any contextual cues.

iii. Explain the meaning explicitly through a student-friendly definition and use of synonyms.

> *Rudimentary means simple or very basic.*

iv. Provide examples, emphasising the target word.

> *Ben found the test easy because all the questions were quite* **rudimentary**.
> *Bella speaks* **rudimentary** *German because she has only been learning it for three months.*
> *The pilot's final test was not* **rudimentary** *because it covered everything he had learned in three years of training.*

v. Ask questions to determine if students understand the word.

> *Would a doctor have a* **rudimentary** *understanding of the human body? Why or why not?*
> *Would a primary school student have a* **rudimentary** *understanding of the human body? Why or why not?*

vi. Provide sentences that students can judge as being true or false.

> *The high court judge had a* **rudimentary** *knowledge of the law. True or False?*
> *The first year apprentice had a* **rudimentary** *knowledge of how to build a house. True or false?*

vii. Students then write their own sentences to be judged as true or false by other students.

viii. Consciously use the word throughout the following days to reinforce the meaning and different ways in which it can be used.

Tier 2 words should be the focus of direct vocabulary instruction as these are the words that will be most useful across multiple contexts and that children are less likely to learn without assistance.

The teaching sequence described above provides multiple exposures, and many opportunities for students to hear, use and develop a deeper knowledge of the word. This is quite an intense procedure but one which need not take long in its initial phase as long as the teacher has prepared the example sentences (they are hard to think of on the spot!). Regular use of the word throughout the following days will increase the students' capacity to use the word accurately and across contexts. Being enthusiastic about the words and having fun (students love ridiculous examples) are important for motivation and engagement.

4. Teach students to use contextual strategies

Contextual strategies use clues embedded in the text to help the reader understand a particular word. Directly teaching students how to use specific contextual clues has promising results (Baumann & Kame'enui, 1991).

Words written in italics or bold face type usually indicate important or new terms. These will often be explained in a glossary, and some students will need to be explicitly directed to this. Context clues, and sometimes definitions, can be signalled by a dash: *Sophie was bewildered – she didn't understand what was happening*; or parentheses: *Lions are carnivores (they eat meat)*. While many students do pick up these cues intuitively, others need guidance in recognising and using them.

5. Teach students to use graphic organisers to explain word meanings

Graphic organisers for vocabulary can deepen understanding and retention of words by showing relationships between words. Concept maps, word trees, word maps and Y charts are all different ways of explaining word meanings in detail. Examples of each are readily available on the Internet. Providing examples helps students to develop a clear and accurate concept of the word.

As with all the strategies mentioned in this document, the use of graphic organisers must be *taught* – the students who need these strategies will not become efficient users of them after seeing the teacher use them once or twice. The strategies need to be modelled, with each step explained, and the students' initial attempts to use them must occur with clear teacher guidance and feedback.

Conclusion

Vocabulary building supports "word consciousness" – knowledge of and interest in words. Students who are word conscious enjoy learning new words and using them in different ways. Teachers who themselves show an appreciation and enjoyment of words, and who understand the power and value of a rich vocabulary can do much to pass on to their students that enthusiasm and knowledge – and the benefits they bring in both academic and broader domains.

Teachers who themselves show an appreciation and enjoyment of words, and who understand the power and value of a rich vocabulary can do much to pass on to their students that enthusiasm and knowledge – and the benefits they bring in both academic and broader domains.

References

Allen, J. (1999). *Words, words, words: Teaching vocabulary in grades 4–12*. Portland, OR: Stenhouse Publishers.

Baumann, J.F., & Kame'enui, E.J. (1991). Research on vocabulary instruction: Ode to Voltaire. In J. Flood, D. Lapp, & J.R. Squire (Eds.), *Handbook of research on teaching the English language arts* (pp. 57–62). New York: MacMillan.

Beck, I.L., & McKeown, M.G. (2007). Increasing young low-income children's oral vocabulary repertoires through rich and focused instruction. *The Elementary School Journal*, 107, 251–271.

Beck, I.L., McKeown, M.G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: Guilford Press.

Beck, I., McKeown, M.G., & Kucan, L. (2008). *Creating robust vocabulary: Frequently asked questions and extended examples*. New York: Guilford Press.

Biemiller, A. (1999). *Language and reading success*. Cambridge, MA: Brookline Books.

Biemiller, A. (2010). *Words worth teaching: Closing the vocabulary gap*. Columbus, OH: McGraw-Hill.

Dale, E. & O'Rourke, J. (1986). *Vocabulary building*. Columbus, OH: Zaner-Bloser.

Hart, B., & Risley, R. T. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Paul H. Brookes.

National Early Literacy Panel, (2008). *Developing early literacy: A scientific synthesis of early literacy development and implications for intervention*. Jessup, MA: National Institute for Literacy.

National Institute of Child Health and Development (NICHD) (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* (NIH Publication No. 00–4769). Washington, DC: U.S. Government Printing Office. Available from http://www.nichd.nih.gov/publications/nrp/smallbook.cfm

Manzo, A., Manzo, U., & Thomas, M. (2006). Rationale for systematic vocabulary development: antidote for state mandates, *Journal of Adolescent and Adult Literacy*, 46(7), 610–619.

Pikulski, J.J., & Templeton, S. (2004). *Teaching and developing vocabulary: Key to long-term reading success*. Boston, MA: Houghton & Mifflin.

Pressley, M., Mohan, I., Raphael, L.M., & Fingeret, L. (2007). How does Bennet Woods Elementary School produce such high reading and writing achievement? *Journal of Educational Psychology*, 99(2), 221–240.

Rinaldi, L., Sells, D., & McLaughlin, T.F. (1997). The effects of reading racetracks on sight word acquisition of elementary students. *Journal of Behavioral Education*, 7, 219–234.

Scarborough, H. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S.B. Neuman & D.K Dickinson (Eds.), *Handbook of early literacy research* (pp. 97–110). New York: Guilford Press.

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