

Building the Foundations of Literacy: The Importance of Vocabulary and Spelling Development

by Shane Templeton and John J. Pikulski

(This is an excerpt of the above article. The rest can be found at <http://www.eduplace.com/rdg/hmsv/expert/research.html>.)

Spelling Development

Just as we saw with vocabulary development, reading and writing are a critical foundation for spelling development as well, but they are not sufficient. More systematic exploration of the spelling of words is necessary for most students (Invernizzi, Abouzeid, and Gill, 1994).

Effective spelling instruction, therefore, addresses three objectives:

- Students learn the major **principles** and **patterns** of English spelling.
- Students learn reliable spelling **strategies** that they can apply to both familiar and unfamiliar words.
- Students become aware of the rich network of **spelling-meaning relationships** that can significantly extend their vocabulary.

Research has also demonstrated that learning to spell involves **generalizing** principles from specific words, rather than simply memorizing every word as an individual unit (Read & Hodges, 1982). Because emphasis is placed on learning principles and patterns rather than on simply learning individual words, it is important that words be grouped together according to a common feature such as **sound**, **spelling pattern**, **syllable pattern**, or **word part** (base, prefix, suffix). High-frequency words that do not follow predictable principles but that are important for writing should be included as well, though they should not be the sole focus of spelling instruction (Zutell, 1994).

The Nature of the Spelling System

Although English spelling is based on an alphabetic principle, it also works on other levels. There are three basic **layers** of information that spelling can represent: In addition to the **alphabetic** layer, there is a **pattern** layer and a **meaning** layer (Henderson & Templeton, 1986; Ehri, 1993):

- The **alphabetic** layer matches letters and sounds in a left-to-right fashion. For example, in the word **mat**, the letter-sound matchup is obvious: **m** = /m/, **a** = /æ/, **t** = /t/.
- The **pattern** layer provides information about sounds that a **group** of letters, or pattern, represents. For example, long vowels are usually represented by more than one letter — silent letters are involved — as in the **vowel-consonant-silent e** pattern in words like **rake** and **time**, and **vowel digraphs** as in **train** in which the second, silent vowel letter signals the pronunciation of the vowel.

In contrast to the alphabetic layer, the pattern layer is more conceptually advanced because learners come to understand that spelling does not always work in a strictly left-to-right fashion. In order to understand how the "silent e" works in words such as **make**, for example, learners must skip to the end of the word and think in a right-to-left sequence.

When letter patterns within single syllables are understood, learners come to understand **syllable** patterns. The two most common syllable patterns are the **vowel/consonant/consonant/vowel** (VCCV) pattern, as in **kitten** and **helmet**, and the **vowel/consonant/vowel** (VCV) pattern, as in **pilot** and **hotel**: The doubling of consonants at the juncture of syllables usually depends on the preceding vowel pattern — if it's short, then double; if it's long, do not double.

- The **meaning** layer reflects the consistent spelling of meaning elements, or **morphemes**, within words, despite sound change. For example, the spelling of the base in the following pairs of words is spelled consistently even though the sounds that the letters represent change: **define/definition**; **local/locality**; **sign/signature**. The spelling of word roots from Greek and Latin is also fairly consistent: Note the spelling **dict** ("speak") in **dictate** and **contradict** ("speak against"); **fract** ("break") in **fracture** (a break) and **infraction** (a "breaking into").

Developmental Levels of Spelling

Studies of students' writing and word knowledge reveal that learning to spell is a **developmental** process (Henderson, 1985; Templeton and Bear, 1992) and that students' understanding of how the spelling system works follows the alphabet-pattern-meaning sequence just described. Because students can learn the regularities of English spelling if instruction is paced to their development, we should help them move from what they know to what they are developmentally ready to learn. Understanding this developmental sequence enables us to provide appropriate, enjoyable, and systematic instruction. The table below provides an overview of the sequence of spelling instruction as a function of developmental level.

What Students Need to Explore at Each Developmental Phase

Letter Name

- Single Consonants
- Consonant digraphs and clusters
- Short vowel patterns

Syllables & Affixes

- Less-frequent vowel patterns
- Sound and meaning of common prefixes and suffixes
- Common syllable patterns examined
- More complex prefixes and suffixes

Within-Word Pattern

- Common long vowel patterns

- **r-** and **l-** influenced vowels
- Common spelling for diphthongs /**ow**/, /**oi**/
- Compound words
- Homophones
- Common inflections

Derivational Patterns

- Spelling-meaning connection in base words and derived words
- Greek and Latin word roots
- "Absorbed" prefixes

Teaching Spelling

Recent research suggests that students should actively explore words, comparing and contrasting them in order to discover patterns and principles, and that teachers should play an important role in this exploration (Henderson, 1985; Templeton, 1991; Zutell, 1994). This is in contrast to the perception that formal spelling instruction is a process of drudgery and brute memorization, involving low-level, rather dull exercises (Templeton, 1992) — a perception based on some of the poorly organized spelling programs of the past.

A well-constructed spelling program should provide for the following:

- Developmentally appropriate list words that the students are familiar with through their reading and need to use in their writing; at the intermediate grade levels, some new words should be included that are related in spelling and in meaning to these known words.
- Instructionally sound activities that do not emphasize rote memorization but that involve students in examining words from a variety of perspectives:
 1. Students should **compare**, **contrast**, **sort**, and **classify** the words.
 2. The activities should lead to generalizations about spelling patterns that apply to many other words, not just those in the list.
 3. Students should be encouraged to use the words in their writing.
 4. Game-like formats such as board games and card games are very effective in reinforcing memory for words and spelling patterns.
- Teach strategies for applying spelling knowledge and for extending word knowledge — how to think about spelling during drafting and editing in writing and during reading when figuring out an unfamiliar word.

Teaching About the Spelling-Meaning Connection

Spelling-meaning relationships among words become more extensive at the intermediate grades. We can state the **spelling-meaning connection** this way: Words that are related in meaning are often related in spelling, **despite changes in sound**.

Understanding this spelling-meaning phenomenon is a powerful aid for spelling as well as for vocabulary development. To get a sense of how this connection works, examine the following words that are related in terms of spelling and meaning: bomb/bombard; muscle/muscular; compete/competition. Because the words in each pair are related in meaning, the spelling of these sounds remains constant. Because of this phenomenon, we teach students the following strategy: If you're unsure how to spell a particular word, try to think of a word that is related in spelling and meaning; this will very often provide the clue.

Once students understand the spelling/meaning relationships among words, they can learn how the spelling or structure of familiar words can be clues to the spelling and the meaning of unknown words. For example, a student who spells **condemn** as CONDEM in her spontaneous writing may be shown the word **condemnation**: This not only explains the so-called "silent" **n** in condemn but expands the student's vocabulary at the same time.

Conclusions

Word knowledge is multifaceted. It includes both vocabulary and spelling. This is a new way of thinking about how vocabulary and spelling are learned and taught. We know that children do not learn words as discrete, unrelated items. Like the concepts for which they stand, words are understood in relation to one another. This is as true for the structure of words, their spelling, as it is for the concepts that underlie them. Research that has investigated the learning and teaching of vocabulary and spelling suggests that we should think about **vocabulary** development as a process of elaborating and expanding these underlying concepts and the words that represent them. We should think about **spelling** development as a process of elaborating an understanding of how words are represented visually, in turn developing and reinforcing underlying concepts.

Regarding vocabulary instruction specifically, we know that growth throughout the elementary school years and beyond is a continuing process of conceptual development. Students develop and expand underlying concepts as they acquire new vocabulary that represents these concepts. Students' independent learning as they read, write, and explore words will be the fundamental process of vocabulary development throughout the rest of their lives (Blachowicz and Fisher, 1994). Research is clear regarding implications for instruction that will ensure this independence: Wide reading plays a critical role in developing knowledge, and teachers facilitate this process by teaching strategies for learning words independently. Teachers should also directly teach important specific words, and they should develop and sustain students' interest in and curiosity about words.

Regarding spelling instruction specifically, we know that learners follow a developmental sequence in which their understanding evolves over the course of the elementary years to understand the three layers of information represented by spelling: **alphabetic**, **pattern**, and **meaning**. Spelling study reinforces word knowledge in general as it is applied in reading and in writing. In the intermediate grades, spelling and vocabulary become two sides of the same instructional coin through the "spelling-meaning connection," in that students recognize that words related in meaning share similar spellings. This visual preservation of meaning becomes a strategy for spelling words correctly as well as for expanding vocabulary knowledge.

Invitations to Literacy provides the literature, guided instruction, and knowledge base for developing a rich understanding of words and strategies for learning about their structure and their meaning.